

國立交通大學

財務金融研究所

碩士論文

現金股利變動對股價的宣告效果：中國的實證分析

The Announcement Effect of Cash Dividend Changes on

Share Prices: An Empirical Analysis of China

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中華民國九十六年六月

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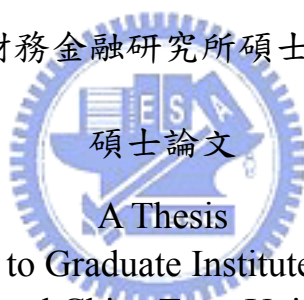
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Submitted to Graduate Institute of Finance
National Chiao Tung University
in Partial Fulfillment of the Requirements
for the Degree of
Master of Science
in
Finance

June 2007

Hsinchu, Taiwan, Republic of China

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2007 年 6 月

摘要

本文採用 2000-2004 年之間所有中國 A 股上市公司的現金股利變動樣本，並且應用事件研究法，以探討現金股利變動的宣告效果，並同時檢驗股利傳訊假說是否可在中國的股票市場成立。實證結果指出，現金股利改變的宣告對股價有正面的影響，但是這樣的結果只部分支持了股利傳訊假說。此外我們也發現，中國不同股票市場之間的現金股利變動宣告效果並沒有重大差異；然而不同樣本期間的現金股利變動宣告效果呈現明顯的差異，這可能與兩條管理性法規的頒布與實施有密切的關聯。橫斷分析也發現，現金股利殖利率及非流通股的比率對現金股利變動的宣告效果有顯著的解釋能力。

關鍵字：現金股利、現金股利變動、宣告效果、異常報酬、事件研究法、市場模型。

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June 2007

ABSTRACT

This paper adopts the sample of cash dividend changes from all listed A-share firms in China over the period 2000 to 2004 and applies an event study in order to investigate the announcement effect of cash dividend changes and to examine simultaneously if the dividend signaling hypothesis holds in China's stock markets. Empirical results indicate that the announcement of cash dividend changes has a positive influence on share prices, but such results only partly support the dividend signaling hypothesis. We also find that there is no great dissimilarity between the announcement effects of cash dividend changes for different stock markets in China. However, the announcement effect of cash dividend changes for different sample periods exhibits distinct differences which may have a close connection with the promulgation and execution of two administrative rules. The cross sectional analysis also shows that both cash dividend yield and the ratio of non-floating shares have explanatory power on the announcement effect of cash dividend changes.

Key words: Cash dividends; Cash dividend changes; Announcement effect, Abnormal returns; Event study; Market model.

致謝辭

交大財金所入學推薦甄試時的緊張情緒還不時在心裡縈繞，兩年的研究所生涯竟在不知不覺中結束了。兩年的研究所歲月或許不是很長的一段過程，但留下的卻是足以伴我一生的難忘回憶。感謝交大財金所師長們的肯定，讓我有此機會進入交大財金所就讀。

在兩年的荏苒光陰之中，我受到無數人的幫助與提攜，我的心中滿溢著感恩的情緒，現在藉著碩士論文的提交，表達我對大家的無盡的感激。首先，要感謝我的指導教授陳達新老師及王淑芬老師，不僅在修課期間竭力的傳授專業知識，更於論文寫作期間常給予指導並提供寶貴的建議，並在職涯規劃上給予我珍貴的意見。此外也感謝口試委員林建榮教授、陳君達教授，在口試時提供寶貴的意見與經驗，使本篇論文能夠更臻於完善。

再來感謝全體的四級財金所同學，讓我充分享受了多采多姿的課業學習、出遊踏青、心情分享等時光，這片片段段的記憶，都將在我人生拼圖的某個角落，散發永恆且耀眼的光芒。也由衷感謝鑑萬、逸民、聖文、嘉瑜在課業、論文寫作及生活起居各方面的協助與照應，使我這兩年的碩士生涯過得平安順遂。此外，我也要感謝財金所的李正福老師、鍾惠民老師、王克陸老師老師，在我修課期間孜孜不倦的講授各類課程，讓我的財金專業知識更為精進。這些日子所遇到的師長、同學、朋友們，感謝你們這兩年以來的陪伴與幫忙，這一份恩惠與情誼，我將深深記在腦海之中。

最後，我要特別感謝我的母親，在我備極艱辛的大學與研究所求學歷程中，給予我最強而有力的支持，沒有妳的鼓舞，今天我勢必無法順利完成碩士學業，謹以此論獻給我敬愛的母親。

黃正霆 謹誌於

交通大學財務金融研究所

民國九十六年六月

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1. Introduction

Dividend policy has been a puzzle in corporate finance for several decades. Among numerous research subjects about dividend policy, the most popular one is the relationship between the dividend level and the share price of a firm. According to the dividend discount model of Gordon (1959), it is feasible to derive that the dividend payment augmentation should be accompanied by the value increase in a firm. Miller and Modigliani (1961), however, point out that the value of a firm is not influenced by current and future dividend decisions, which was well recognized as the dividend irrelevance theory. Later on, several empirical studies were conducted, and the results were inconsistent nevertheless. Several hypotheses were developed sequentially to explain the relation between a firm's dividend policy and the price of its shares. Among those hypotheses, tax effect (tax clientele effect), information asymmetric/dividend signaling, and agency problems are the most famous ones. This paper focuses on the empirical analysis of the dividend signaling hypothesis and investigates the announcement effect of cash dividend changes. According to the dividend signaling hypothesis, cash dividends function as a good signaling vehicle of a firm's future cash flow, thus implying that unanticipated dividend changes should be accompanied by share price changes in the same direction. This paper tries to figure out if this assumption holds in China.

This empirical analysis adopts the sample of cash dividend changes from China-listed A-share stocks. China is a good dividend policy research target at least for the following reasons. First, most of the dividend policy research studies are based on the samples of free economic markets, such as the United States; fewer studies are conducted with a socialistic market sample. Different economic bodies may probably have dissimilar characteristics, and so it is alluring to have dividend policy studies made in a communistic country, such as China. Dividend policy is

hardly related to compulsive cash dividend doctrines. Therefore, it will possibly be a breakthrough to perform dividend policy studies on the listed A-share stocks of China. Only just a few years ago did China set compulsive enactments having a great influence on the cash dividend policy discretion of listed firms. Next, compared to the capital markets of developed countries, China's markets are more fledgling in nature. Two stock exchanges, the Shanghai Stock Exchange and the Shenzhen Stock Exchange, initiated their trading in December 1990 and April 1991, respectively. Both of these two stock exchanges have a much shorter operation history than the major stock exchanges of developed countries.

Stock investors of China are less educated than those in developed countries. According to the 2005 Fact Book published by the Shanghai Stock Exchange, the percentage of investors with a bachelor diploma or above was only 13.03%. Because of the short trading history and the lower education level, Chinese stock investors may show virtually different attitudes and behaviors toward risk-taking, investment, and dividend policy. Lastly, China is showing a greater and greater economic influence in the integrating world nowadays. The economic growth rate, current account surplus, and stock market performance of China all show strong growth, and as such it is worth it to learn more about China's stock markets and the investor behaviors through dividend policy research studies.

According to the results of empirical analysis, for investors, the announcement of a cash dividend increase is an optimistic signal about a firm's future operation and cash flow, and thus a cash dividend increase is followed by positive abnormal returns. On the contrary, the announcement of a cash dividend decrease is a pessimistic signal, and so a cash dividend decrease is followed by negative abnormal returns. Therefore, the dividend signaling hypothesis is well supported by these empirical studies, and investors do adjust their expectation on a firm's cash flow after cash dividend changes.

In this paper, we wonder if the stock markets of China display the same feature and if any announcement effect of cash dividend changes exists.

The main objective of this paper is to investigate the announcement effect of cash dividend changes on share prices with a cash dividend change sample of A-share listed stocks in the Shanghai Stock Exchange and the Shenzhen Stock Exchange. Although we can obtain lots of research results from developed countries, the capital market of China exhibits different investor structures, regulations, and shareholder structures, etc. Thus, the announcement effect of cash dividend changes in China is truly an important research issue. The analysis results of this paper not only can provide the announcement effect of cash dividend changes from an emerging country, but can also serve as a good decision reference for investors and China's government.

The reminder of the paper is organized as follows. Section 2 introduces the dividend policy of listed firms in China. Section 3 reviews the theoretical issues concerning dividend policy and value of a firm. Section 4 describes data sources and research methodology. Section 5 presents the empirical findings. Section 6 summarizes the results of this study and offers some concluding thoughts.

2. Dividend Policy of Listed Firms in China

There are three kinds of dividend policy for listed firms in China to choose. The first one is "the bonus share" (hereinafter referred to as the "BS") that is generally known as stock dividends. In fact, the BS simply transfers a portion of retained earnings to contributed capital. The second one is "the transference of additional paid-in capital to contributed capital" (hereinafter referred to as the "TA"). As its name implies, the TA simply transfers a portion of additional paid-in capital to contributed capital. The last one is cash dividends.

Both the BS and the TA do not reduce or increase a firm's assets and equity.

They simply affect the relative components of equity. On the contrary, cash dividends do pay cash to shareholders. A firm's assets and equity decrease by the amount of cash dividends, and a firm's cash flow and potential investment in the firm's growth are surely curtailed by cash dividend payment. Thus, it is reasonable to briefly conclude that cash dividends have a direct and practical influence on a firm's long-run operation than the BS and the TA do.

Fama and French (2001) point out that, regardless of the earning level, the proportion of all listed firms in the U.S. that paid cash dividends has fallen dramatically from 80% to 20% during the period of the 1960s to 1990s. As data in Table 1 show, publicly traded firms in China echoed this "dividend-disappearing trend" mentioned in Fama and French (2001) over the 1990s. The ratio of cash dividend paying firms fell from 97.3% in 1993 to 36.8% in 1999. Nevertheless, the proportion of cash dividend paying firms rebounded greatly in 2000.

It would be intuitional to attribute this dramatic change to the announcement of two administrative rules about new share offerings on March 28 and May 11, 2001. First, "Administration Rules for New Shares Offering of the Listed Firms" were declared on March 28, 2001. The rules require the lead underwriter to mark out in the underwriting investigation reports any firm that did not have any cash dividend in the past three years and any firm's board of directors who did not reasonably explain why they do not pay cash dividends. Afterward, on May 11, 2001, "The Public Offering Review Committee of China Securities Regulatory Commission Concerning Guidance on New Shares Offering Check and Commission of Listed Firms" was declared and executed. It demands the Public Offering Review Committee to concentrate on the circumstances of a firm's cash dividend payment in the past three years, and to decide independently if such a circumstance will affect the new share offering of a listed firm when the committee is checking and admitting the new share

offering application from this listed firm.

Although both rules do not explicitly forbid those firms that do not pay cash dividends from offering new shares, it is rational for managers in publicly traded firms to figure out that these two rules are set up to implicitly require listed firms to pay cash back to shareholders so as to strengthen the shareholder protection. The Government hopes the listed firms retain less cash flow and to return the cash to their shareholders. Thus, managers in publicly traded firms should strike a balance between an absence of financial flexibility in raising funds by issuing new shares and a shortage of funds for further growth resulting from distributing cash out. Once the firms pay cash dividends to obtain long-run financial flexibility for issuing new shares, a short-run financial resource (cash dividend payment) is the sacrifice. These two rules are not really adequate, because the firms that pay cash dividends to get the chance of offering new shares to raise funds may possibly be the ones deficient in money. The long-term prospect of a firm may possibly be harmed if managers are obedient to these two regulatory rules. However, as the proportion of the firms paying cash dividends has sky-rocketed, most managers have chosen to resign themselves to these two rules.

Table 1 provides detailed information about the trends of the BS and TA. It is obvious that the proportion of BS paying firms fell steadily throughout the whole period. On the other hand, the proportion of firms paying TA attained a maximum in 1996 and then declined. The ratio then kept fluctuating between 11% and 17% in recent years. Thus, comparing to cash dividends, BS and TA are no longer preferred forms of dividend policy in China nowadays.

Listed firms in China have a unique share structure. The share structure of a listed firm in China is divided into two parts: one is floating shares, and the other is non-floating shares. This separation of share structure is known as “the Split Share

Structure”. The Split Share Structure has several features. First, non-floating shares are non-tradable in capital markets, but floating shares are tradable. In other words, the incomes of non-floating shareholders come only from cash dividends, but floating shareholders can profit both through capital gains and cash dividends. Next, the non-floating shares are usually held by issuers of firms, the institutional investors, and the Chinese government, but the floating shares are held by the public.

The proportion of non-floating shares is much higher than that of floating shares. In fact, according to the share structure data from the website of China Securities Regulatory Commission, which is summarized in Table 2, the proportion of non-floating shares for all publicly traded firms is always higher than 60%. Thus, the board of directors is usually dominated by non-floating shareholders. Finally, the holding cost of non-floating shareholders approximates the par value (RMB 1) which is much lower than that of floating-share investors.

The existence of the Split Share Structure leads to severe corporate governance problems. With a view to carrying out “the Guidelines on Promoting Reform, Opening-up and Steady Development of China's Capital Market”, floating the non-floating shares of A-share listed companies, balancing the interests of shareholders, and addressing the problem of listed companies’ split share structure, “the Pilot Reform of Listed Companies Split Share Structure” was formally initiated in 2005. Before the reform of the share structure of listed firms is completed, the controlling non-floating shareholders may distribute cash dividends to themselves. The reason why they tend to do so is as follows. First, because of the relatively lower holding costs, the cash dividend distribution will benefit the non-floating shareholders with a much higher cash dividend yield. Second, the cash dividend payment is the only method for which non-floating shareholders can realize incomes. To sum up, we think that the controlling shareholders (usually non-floating

shareholders) may make dividend policy decisions that hurt the maximum interest of floating shareholders.

Based on the distribution data of cash dividends available on the CSMAR (China Stock Market Accounting Research) which is provided by the GTA Information Technology Limited Company, we calculate and summarize detailed descriptive statistics of the cash dividends of all listed A-share stocks in the Shanghai Stock Exchange and the Shenzhen Stock Exchange in Table 3. As we can see, the cash dividend payment of these two markets has similar features which can be summarized as follows. First, the proportion of firms that paid cash dividends rose dramatically in 2000, and this phenomenon matched the trend of cash dividend distribution just mentioned above. The ratio then fell back gradually in the succeeding years. Second, average cash dividends per share decreased sharply in 2000. Nevertheless, after average cash dividends per share fell to the minimum in 2001, it rebounded back in recent years. Moreover, as the enlarging standard deviation of cash dividends per share shows, the distribution of cash dividends is getting more and more diverse. Last but not least, the distribution of cash dividends is not only more peaked than normal distribution, but also right skewed.

This paper further provides some comparative descriptive statistics about the financial data of listed firms paying cash dividends (hereinafter referred to as “payers”) and of listed firms not paying cash dividends (hereinafter referred to as “non-payers”) in the Shanghai Stock Exchange and the Shenzhen Stock Exchange, respectively, and this information is summarized in Table 4. Referring to Table 4, we can easily conclude that payers tend to be large-sized, value-oriented, low-leveraged, high-operating-performance, and high-profit firms. The share structure of payers is inclined to be more centralized and more state-owned oriented than that of non-payers.

3. Literature Review

Dividend policy has been a popular subject in financial studies, especially the relation between dividend policy and the value of a firm. Gordon (1959) provides a valuation approach of firms which is to discount the dividend streams. According to his argument, we may easily derive that the more cash dividends a firm pays, the more valuable the firm should be. Miller and Modigliani (1961) conclude that what really counts about the valuation of a firm are net profits and investments under ideal economic assumptions and the value of a firm is irrelevant with its dividend policy.

An ideal economy, however, hardly exists in the real world, and the market imperfections are just the normality. The payout literature following that of Miller and Modigliani (1961) tries to justify the value premium relating to the dividend decision after dropping the ideal economic assumption with different perspectives. Among them, three of the theoretical assumptions are the most famous: tax effect, agency problems, and information asymmetric/dividend signaling.

Before entering the main focus of this paper which is the dividend signaling hypothesis, we briefly review the assumption and empirical results of tax effect and agency problems.

The role of taxes has always been emphasized in dividend policy literature and the core is to answer the question: does the tax effect (or tax clientele effect) exist in capital markets? In other words, in the real world where capital gains are taxed less than dividend incomes, are high dividend payout firms less valuable than low dividend payout firms? Are the marginal tax rates of high dividend payout firms' stockholders lower than those of low dividend payout firms' stockholders?

Elton and Gruber (1970) find strong evidence supporting the tax clientele effect. Their paper proves that the dividend level affects the shareholder structure and the higher the dividend yield a firm has, the lower the tax bracket of its investors. When

risk is incorporated in the analysis, Brennan (1970) adopts the extended form of the CAPM model and finds a significantly positive relation between expected returns and dividend yield. Brennan (1970) attributes the high expected return to higher tax rates imposed on dividend incomes than on capital gains. Litzenberger and Ramaswamy (1979, 1980) arrive at the same conclusion with Brennan (1970). Blume (1980) also points out that a positive and significant relation between risk-adjusted returns and anticipated dividend yield does hold. Moreover, Kalay and Michaely (2000) also get the same results. Black and Scholes (1974), however, discover that it is impossible to prove differences in the expected returns in high yield and low yield common stocks.

Except for the tax effect, the agency problem is another important issue when talking about dividend policy. Thanks to the separation of ownership and control, Jensen and Meckling (1976) mention that there may be some conflicts of interest between management (the agent) and shareholders (the principal(s)). Therefore, managers of a listed firm could allocate resources to activities that benefit them, but that will not maximize stockholders' welfare.

Several kinds of solutions for agency problems are suggested by researchers. Except for debt financing, Jensen (1986) believes that increasing dividends to lower free cash flow is another approach to tackle agency problems, which is known as the free cash flow hypothesis. Grossman and Hart (1980) and Easterbrook (1984) have the same viewpoint with Jensen (1986). Two obvious implications of the free cash flow hypothesis can be tested empirically. One is that dividend increases should be accompanied by positive stock price reactions, because it helps lower the agency problem and vice versa. The other one is that the overinvestment problem should be more severe for firms in mature and stable industries lacking profitable investment opportunities. In other words, dividend changes should have greater price impacts

for firms with problems of overinvestment than those without problems of overinvestment. The analysis results of Lang and Litzenberger (1989) match two implications mentioned above well.

Grullon, Michaely, and Swaminathan (2000) find that large dividend increases followed by declining ROA, cash levels, and capital expenditures in the succeeding years imply that the firms anticipating declining high-return investment opportunities are the ones that will probably increase dividends. This finding fits the free cash flow hypothesis perfectly. Lie (2000) presents that firms of dividend increases have more excess funds than peer firms in the same industry. He also concludes that there is a positive relation between excess cash and the announcement of special dividends and a negative relation between investment opportunities and announcement of special dividends. Both of these results are reasonably consistent with the core contention of the free cash flow hypothesis.

Except for the tax effect and the agency problems hypotheses, information asymmetric and signaling hypotheses together explain the dividend policy rationally. When asymmetric information exists between the insiders and outsiders of a firm - insiders know more information including future cash flow about the firm than outsiders - cash dividends might be a costly vehicle to convey a firm's future prospects that are unknown to the market and may alter market perceptions about the firm's future earnings.

Bhattacharya (1979) and Miller and Rock (1985) develop a two-period model. Both of their models conclude that it is unwise for bad-prospect firms to commit high level dividends, and only good-prospect firms can commit high level dividends without hurting long-term operations. Asymmetric information and signaling hypotheses contain an important implication - that is, unanticipated dividend changes should be accompanied by stock price changes in the same direction. This

implication has been tested empirically.

The following research results support the assertion that dividend changes should be followed by stock price changes in the same direction. Pettit (1972) finds that a significant price increase follows announcements of dividend increases, and a significant price drop follows the announcement of cash dividend decreases whether the earnings performance was positive or negative. Similarly, Aharony and Swary (1980) discover that shareholders of firms announcing cash dividend increases realize positive abnormal returns and shareholders of firms decreasing cash dividends sustained negative abnormal returns during the 20 days surrounding the announcement day. Divecha and Morse (1983) show that the announcement effect of the cash dividend increases is positive. Moreover, Grullon, Michaely, and Swaminathan (2002) summarize that the average 3-day abnormal return around a dividend-increase announcement is 1.34%, and the average 3-day abnormal return around a dividend-decrease announcement is -3.71%. When it comes to the extreme dividend changes that are referred to as dividend initiations and dividend omissions, the research results of Asquith and Mullins (1983), Healy and Palepu (1988), and Michaely, Thaler and Womack (1995) indicate that stock prices react positively with dividend initiations and negatively with dividend decreases.

All of the findings of capital market reactions to dividend change announcements mentioned above do support the signaling hypothesis - namely, that unanticipated dividend changes provide information about shifts in management's assessment of a firm's future operational prospects, and unanticipated dividend changes are accompanied by stock price changes in the same direction. Since the investors do not know the current and future levels of earnings, higher-than-anticipated earnings signaled by high dividends would lead to a positive stock price increase.

4. Data Sources and Methodology

4.1. Data

Our sample is drawn from all A-share firms listed on the Shanghai Stock Exchange and the Shenzhen Stock Exchange that have cash dividend announcements over the period 2000 through 2004. The sample firms' cash dividend announcement information, financial data, share structure data, and trading data are obtained from CSMAR (China Stock Market Accounting Research) which is provided by the GTA Information Technology Limited Company. To be included in the sample, each observation must satisfy the following criteria.

- a) The listed firms should not be financial firms.
- b) The so-called cash dividend announcements should be purely annual cash dividend announcements. In other words, firms with announcements of mid-term cash dividends and cash dividend announcements together with BS or TA are excluded. Thus, the price impact of purely annual cash dividend changes can be unambiguously examined.
- c) The firm with a purely annual cash dividend announcement should also have a purely annual cash dividend announcement the previous year.
- d) The firms should have trading data on the formal cash dividend declaration day.
- e) The sample firms of cash dividend increases are firms with higher pure cash dividends per share comparing to those of the previous year. The sample firms of cash dividend decreases are firms with lower pure cash dividends per share comparing to those of the previous year.

The final dataset contains 460 firms with announcements of cash dividend increases and 422 firms with announcements of cash dividend decreases. For the 460 cash dividend increasing firms, 287 firms are drawn from the Shanghai Stock Exchange, and 173 firms are drawn from the Shenzhen Stock Exchange. For 422

cash dividend decreasing firms, 253 firms are drawn from the Shanghai Stock Exchange, and 169 firms are from the Shenzhen Stock Exchange. Table 5 summarizes the descriptive statistics about the financial data of the sample firms.

4.2. Research Methodology

An event study is adopted to investigate the announcement effect of cash dividend changes on share prices. The market model is then applied to estimate the abnormal returns of sample firms for different event windows. The market model argues that a linear relationship holds between the return of the individual security and the return of the market, or:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}, \quad t = -120, -119, \dots, -21, \quad (1)$$

where R_{it} is the daily return of the i th security at day t , R_{mt} is the daily return of the market at day t , and ε_{it} is a random error term incorporating the effect of factors that affect only the i th security. We define day “0” as the day of a hypothetical event for a given security. In this thesis, day 0 is the day of formal cash dividend declaration. For each security a maximum of 141 daily return observations for the period around its respective event is used, starting at day -120 and ending at day +20 relative to the event. The first 100 days in this period (-120 through -21) are designated the “estimation window”, and the following 41 days (-20 through +20) are designated the “event window”.

The right-hand side of the first two terms of Equation (1) supplies a conditional expected return for the i th security. In other words, we may use the OLS value of $\hat{\alpha}$ and $\hat{\beta}$ in Equation (1) from the estimation window to estimate the conditional expected returns for the individual security in the event window. The difference between the real return in day t and the conditional expected return in day t is given by:

$$\delta_{it} = R_{it} - (\hat{\alpha}_1 + \hat{\beta}_1 R_{mt}), \quad t = -20, -19, \dots, 20. \quad (2)$$

Here, δ_{it} serves as a measure of the risk-adjusted abnormal returns of the security in the event window. The cross-sectional average abnormal returns for day t are defined as:

$$AR_t = \left\{ \sum_{i=1}^N \delta_{it} \right\} / N, \quad t = -20, -19, \dots, 20, \quad (3)$$

where N is the number of sample observations. The cumulative abnormal returns from day t_1 through day t_2 , CAR_T , are:

$$CAR_T = \sum_{t=t_1}^{t_2} AR_t. \quad (4)$$

As for the test of significance of average abnormal returns and cumulative abnormal returns, two methods are adopted. One is the ordinary cross-sectional method. The other is the standardized residual cross-sectional method which is introduced by Boehmer, Musumeci and Poulsen (1991). The t-value formulae of the ordinary cross-sectional method and the standardized residual cross-sectional method to test the significance of average abnormal returns are illustrated as:

$$t_{OCSM}^{AR} = \frac{\frac{1}{N} \sum_{i=1}^N AR_{ie}}{\sqrt{\frac{1}{N(N-1)} \sum_{i=1}^N (AR_{ie} - \sum_{i=1}^N \frac{AR_{ie}}{N})^2}}, \quad (5)$$

where AR_{ie} is the average abnormal return of i th observation on one certain day in the event window, and:

$$t_{SRCSM}^{AR} = \frac{\frac{1}{N} \sum_{i=1}^N SAR_{ie}}{\sqrt{\frac{1}{N(N-1)} \sum_{i=1}^N (SAR_{ie} - \sum_{i=1}^N \frac{SAR_{ie}}{N})^2}}, \quad (6)$$

where SAR_{ie} is the standardized average abnormal return of i th observation on one certain day in the event window. Similarly, the t-value formulae of the ordinary cross-sectional method and the standardized residual cross-sectional method to test

the significance of cumulative abnormal returns are done by substituting the AR_{ie} and SAR_{ie} with $CAR_{i(T1,T2)}$ and $SCAR_{i(T1,T2)}$ in Equation (5) and Equation (6), respectively.

5. Empirical Results

5.1. Announcement Effect of Cash Dividend Changes on Share Prices

To assess the effect of cash dividend changes on the share prices, we collect a sample consisting of firms that changed their cash dividends during the period 2000 to 2004. Each observation in the sample satisfies the criteria mentioned in Part 4. The resulting sample contains 422 announcements of cash dividend decreases and 460 announcements of cash dividend increases.

Table 6 presents the results of this analysis. For the cash dividend increase sample, there are 16 negative-abnormal-return trading days and only 3 positive-abnormal-return trading days in the 20 days preceding the declaration of cash dividend increases. For the cash dividend decrease sample, there are 13 negative-abnormal-return trading days and only 4 positive-abnormal-return trading days in the 20 days preceding the declaration of cash dividend decreases. Thus, the stock prices tend to perform poorly before the announcement of cash dividend changes. The 20-day cumulative abnormal return before the announcement of cash dividend changes is a negative 0.65% for cash dividend decreasing firms and is a significantly negative 0.75% for dividend increasing firms. This fact can also be gotten by observing the left half of Figure 1.

For the increasing cash dividend sample, the abnormal return is a significantly positive 0.23% at the day of a positive dividend change announcement. The abnormal returns of the 8 days succeeding the announcement of cash dividend increases are all positive, and four of them are even significant. Most of the

abnormal returns of the 20 days after the cash dividend increase announcement are positive. As a result, the cumulative abnormal return starts rebounding at the day of declaration.

For the decreasing cash dividend sample, the abnormal return is negative at the announcing date, but it is not significant. There are 13 positive-abnormal-return trading days and 6 negative-abnormal-return trading days in the 20 days after the announcement of the cash dividend decreases. All of these phenomena can be verified in Figure 1. Therefore, whether the cash dividend increases or decreases, the share prices are inclined to perform better after the announcement of dividend changes. Cash dividend changes have a positive influence on the share prices.

Figure 2 provides the graph of cumulative abnormal returns on days surrounding the announcement of cash dividend changes. Table 7 offers the cumulative abnormal returns for different event windows. As Figure 2 and Table 7 show that stock prices perform poorly before the announcement, but perform well after the announcement. Thus, Figure 2 echoes the viewpoints we have briefly concluded in the last paragraph. Figure 2 clearly shows the main difference in the price impact between the cash dividend increases and decreases. In the left half of Figure 2, two curves almost move synchronously. Nevertheless, the cumulative abnormal return curve of the increasing dividend sample rises much more intensely than that of the decreasing cash dividend sample after the announcement of cash dividend changes. Thus, after the announcement of dividend changes, the positive price impact of the increasing cash dividend sample is more significant than that of the decreasing cash dividend sample. The CAR of (0, 1), (0, 2), (0, 3), (0, 5), (0, 10), and (0, 20) event windows in Table 7 confirm this assertion very well.

In short, the empirical results only partly support the dividend signaling hypothesis. The analysis results of the increasing cash dividend sample are

consistent with the empirical implication of the signaling hypothesis, and the cash dividend increases are accompanied by the stock prices moving in the same direction. However, the empirical results of the decreasing cash dividend sample do not comply with the signaling hypothesis, and the cash dividend decreases are accompanied by the stock prices moving in the opposite direction. Therefore, it is feasible to conclude that investors in China respond positively to the cash dividend announcement whether it is increasing or decreasing. In other words, cash dividends are welcome in China nowadays according to the results of our analysis.

5.2. Price Impact of Cash Dividend Changes on Different Markets

After assessing the effect of cash dividend changes on the market price, we try to compare the price impact of cash dividend changes on different markets. China has only two stock exchanges, one is the Shanghai Stock Exchange and the other is the Shenzhen Stock Exchange. The sample firms are all collected from the listed firms of these two exchanges. For the 460 increasing cash dividend firms, 287 firms are drawn from the Shanghai Stock Exchange and 173 firms are drawn from the Shenzhen Stock Exchange. For the 422 decreasing cash dividend firms, 253 firms are drawn from the Shanghai Stock Exchange and 169 firms are from the Shenzhen Stock Exchange. The results of this analysis are summarized in Figure 3, Table 8, and Table 9.

For the increasing cash dividend sample, most abnormal returns preceding the cash dividend change declaration are negative both for the Shanghai subsample and the Shenzhen subsample, but the negative abnormal returns of the Shenzhen subsample are more intense than that of the Shanghai subsample. On the day of dividend increase announcement, significantly positive abnormal returns occur for both subsamples. After the cash dividend increase announcement, the cumulative abnormal returns of both markets exhibit upward-moving trends. On the other hand,

the cumulative abnormal returns of the Shenzhen subsample increase more fiercely than that of the Shanghai subsample in a shorter time period, but the cumulative abnormal returns of the Shanghai subsample increase more steadily than that of the Shenzhen subsample in a longer time period. Generally speaking, although the overall abnormal return features of the Shanghai subsample and the Shenzhen subsample are slightly different, they are roughly the same with the pattern of full cash dividend increase sample as explained in Section 5.1.

For the cash dividend decrease case, the abnormal return pattern of the Shanghai subsample has a distinct difference from that of the Shenzhen subsample - that is, most of the abnormal returns of the Shenzhen subsample are negative before the announcement of the cash dividend decrease, but the abnormal returns of the Shanghai subsample show a comparatively positive performance before the announcement of cash dividend decrease. On the day of cash dividend decrease declaration, the abnormal return of the Shanghai subsample is negative, but that of the Shenzhen subsample is zero. After the announcement of cash dividend decreases, the cumulative abnormal returns of both markets display upward-moving trends.

On the right-hand side of Figure 3, we can easily see that all of the four cumulative abnormal return curves move upward. We thus conclude that, on the whole, the announcement effect of cash dividend changes is positive for both markets, and there is no great difference between the announcement effects of the two markets.

5.3. Announcement Effect of Different Sample Period

The empirical results from above are completely derived from the sample of the period 2000-04. We wonder whether the announcement effect of a dividend change on share prices alters with time. Hence, we analyze the announcement effect with the sample year 1999 and cash dividend changes. The announcement effect of cash dividend changes in 1999 is quite important, because it provides the announcement

effect of a quite different cash dividend distribution situation. We have pointed out that, in 1999, the ratio of cash-dividend-paying firms was low (36.78%) and the rules which severely influence the cash dividend payment decision were not promulgated then. Nevertheless, in 2001 the rules compelling listed firms to distribute cash dividends were announced and executed, and the ratio of cash-dividend-paying firms increased dramatically.

Figure 4 and Table 10 present the results of this analysis. Figure 4 and Table 10 clearly show the facts that the announcement effect of a cash dividend decrease is significantly positive, and the announcement effect of a cash dividend increase is insignificantly negative. The absolute value of cumulative abnormal returns for (0, 20) the event window of the 1999 sample is more than that of the 2000-04 sample. These empirical results are not only totally opposed to the dividend signaling hypothesis, but are also different from the analysis findings we got from 2000-04 dividend change sample.

The announcement effects of dividend changes before and after year 2000 present an immense variation. We think the promulgation and execution of two administrative rules may reasonably explain the variation. Before these two laws were declared, the ratio of cash-dividend-paying firms was lower, and capital gains were the main source of income for investors. Therefore, investors may look down upon cash dividends and react negatively to cash dividend increases and positively to cash dividend decreases. However, when the ratio of cash-dividend-paying firms increased sharply after these two rules were announced, except for capital gains, cash dividends became another major source of income. Thus, investors' attitudes towards cash dividends may become positive, and react positively to all cash-dividend-paying firms.

5.4. Affecting Factors Analysis of the Announcement Effect

To further investigate factors that may affect the market reaction around the announcement of cash dividend changes, we estimate the following cross sectional regression using the OLS regression methodology:

$$CAR_{it} = \beta_0 + \beta_1 DC_{it} + \beta_2 DY_{it} + \beta_3 DP_{it} + \beta_4 ASSETS_{it} + \beta_5 PB_{it} + \beta_6 DEBT_{it} + \beta_7 TATR_{it} + \beta_8 ROA_{it} + \beta_9 NF_{it} + \varepsilon_{it}, \quad (7)$$

where CAR is the cumulative abnormal returns for different event windows around the announcement of the dividend changes; DC is the percentage change in the cash dividend payment; DY is the dividend yield at the time of the announcement of the cash dividend changes; DP is the dividend payout ratio (cash dividend per share / earnings per share); ASSETS is the logarithm of the book value of the total assets at the time of the announcement of the cash dividend changes; P/B is the price-to-book ratio at the end of the year; DEBT is the debt ratio (book value of total liabilities / book value of total assets); TATR is the total assets turnover rate; ROA is the return on assets; NF is proportion of non-floating shares. Table 11 summarizes the investigation results.

Table 11 indicates that only four financial variables have a significant impact on the announcement effect of cash dividend changes. First, dividend yield has a significantly positive relation with CAR, but the significance disappears gradually with the time interval extension of event windows. In other words, the high dividend yield stocks are inclined to perform better than the low dividend yield ones. Next, for the event window of a longer time interval, P/B has a significantly negative impact on cumulative abnormal returns. In other words, value-oriented (low P/B) firms tend to have higher cumulative abnormal returns in a longer time interval, and the intrinsic value of a firm may be reflected on the longer cumulative abnormal returns. Third, market investors react positively to the profit index ROA for the (0, 10) event window, but the significance of this positive connection disappears with the extension or

curtailment of the event window. Fourth, the ratio of non-floating shares has a negative impact on the cumulative abnormal returns of (0, 3), (0, 5) event windows. We have concluded that non-floating shareholders usually occupy the majority of the shareholder structure and dominate the board of directors. Because the holding costs of non-floating shareholders are lower (dividend yields are higher), and the dividend distribution is the only mechanism they can realize incomes, the controlling shareholders (usually non-floating shareholders) may make an over-lavish cash dividend policy that hurts the interest of floating shareholders. Therefore, the negative relation between the ratio of non-floating shares and cumulative abnormal returns does make great sense.

6. Conclusions and Summary

This paper adopts a sample of cash dividend changes from all listed A-share firms in China over the period 2000 to 2004 and applies an event study in order to investigate the impact of cash dividend changes on share prices and to examine simultaneously if the dividend signaling hypothesis holds in China's stock markets. We find that the cash dividend changes do have a considerable influence on share prices. The share prices react significantly positive to both cash dividend increases and cash dividend decreases, but the share prices respond more severe to cash dividend increases than to cash dividend decreases. These results only half support the signaling hypothesis. In fact, only the positive announcement effect for cash dividend increases fits the dividend signaling hypothesis. Cash dividend decreases, on the other hand, also have a positive announcement effect. Such a market reaction to dividend changes implies that cash dividends are welcome they are whether cash dividend increases or cash dividend decreases.

The announcement effect of cash dividend changes is positive for the sample of

different stock exchanges, but the significance alters with sources of the sample and the event window selection. Therefore, there is no great dissimilarity between the announcement effect of cash dividend changes for different markets in China. However, the empirical result of the 1999 cash dividend change sample reveals that the cash dividend changes are accompanied by stock price changes in the opposite direction. This analysis result is completely opposite to the dividend signaling hypothesis. This result is also different from that of the 2000-2004 cash dividend change sample. Thus, the announcement effect of cash dividend changes and investors' attitude toward cash dividend changes may shift with time.

We further investigate factors which may probably have a close connection with the cumulative abnormal returns. We find that the dividend yield has a significantly positive relationship with short-term cumulative abnormal returns, but the significance disappears with the prolongation of event window for cumulative abnormal returns. Thus, high-dividend-yield stocks are inclined to experience higher positive abnormal returns. The ratio of non-floating shares, however, has a significantly negative connection with short-term cumulative abnormal returns. In other words, the existence of the Split Share Structure does have an undesirable influence on cash dividends. We expect that the implementation of “the Pilot Reform of Listed Companies Split Share Structure” not only can float the non-floating shares of A-share listed firms, but can also partly eliminate the negative impact of non-floating shares on cash dividend declaration.

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Figure 1.
Average Abnormal Returns Surrounding the Announcement
of Cash Dividend Changes

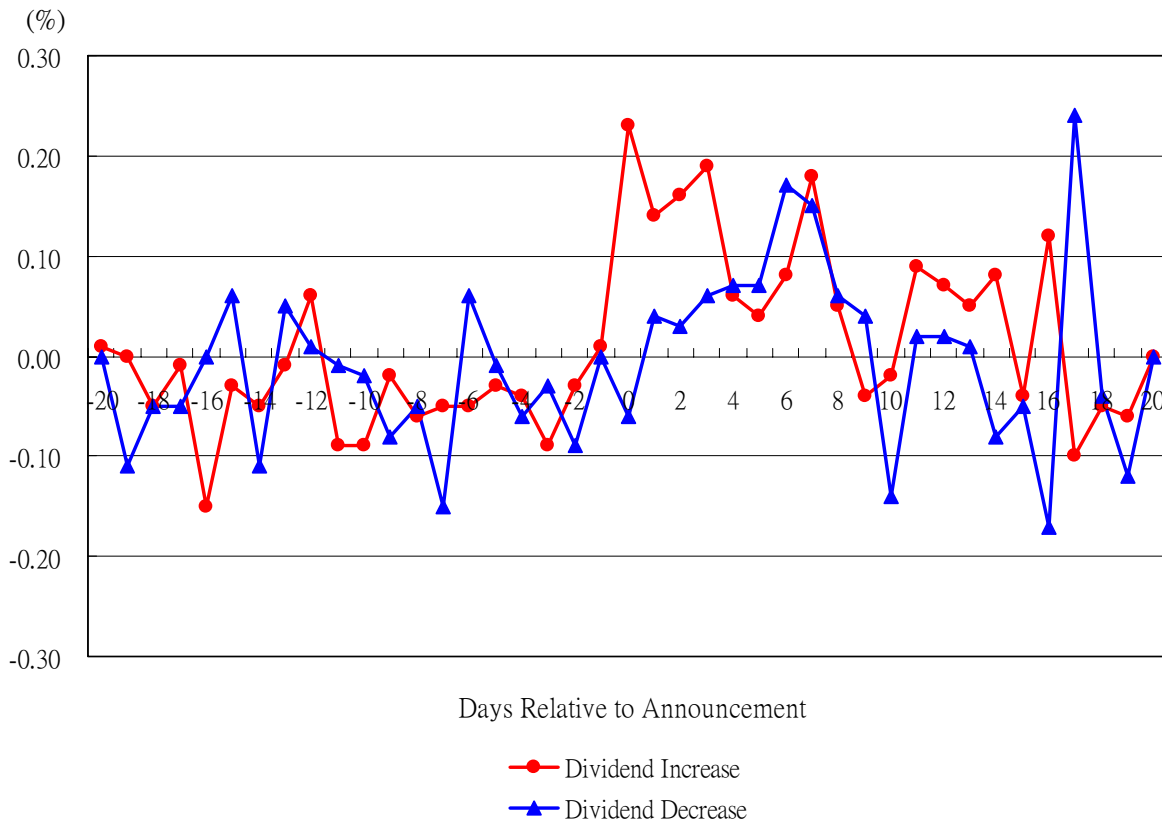
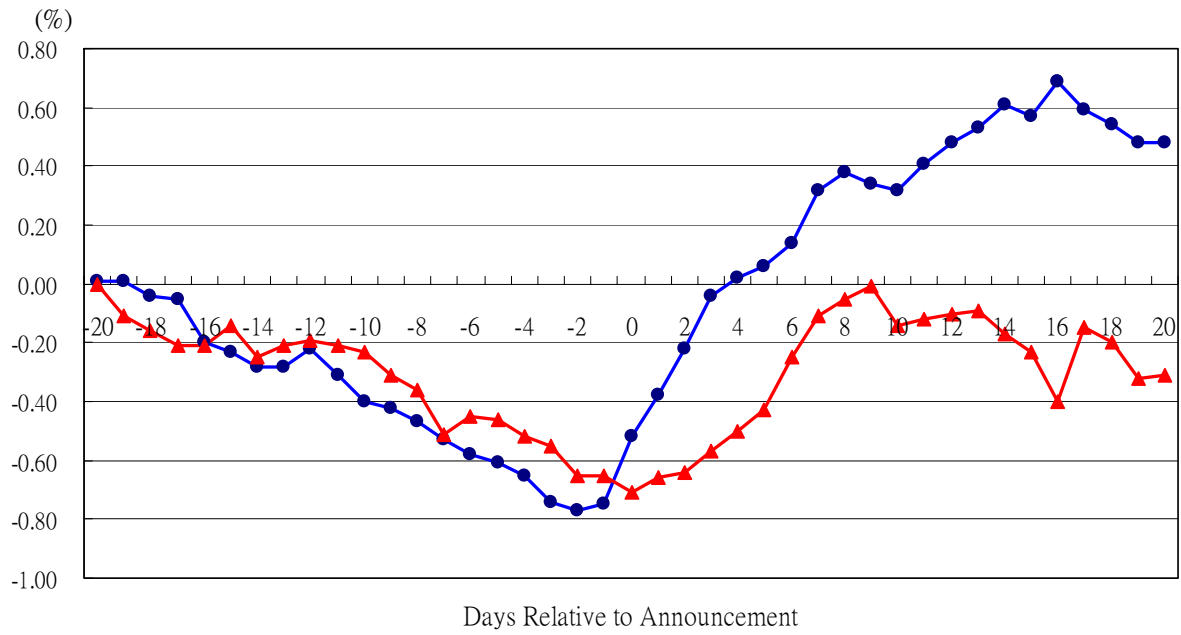


Figure 2.
Cumulative Abnormal Return on Days Surrounding the Announcement
of Cash Dividend Changes



● Dividend Increase
▲ Dividend Decrease



Figure 3.
Cumulative Abnormal Return on Days Surrounding the Announcement
of Cash Dividend Changes for Different Markets

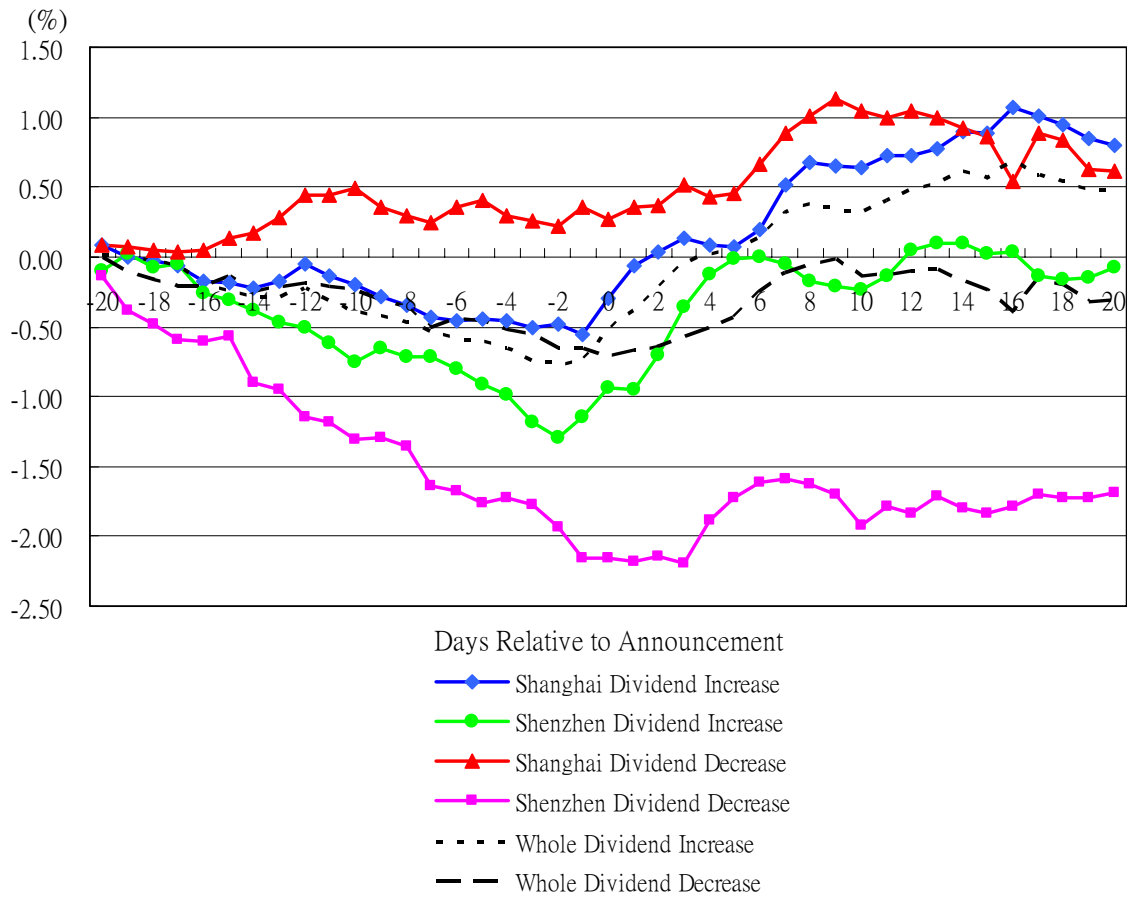


Figure 4.
Cumulative Abnormal Return on Days Surrounding the Announcement
of Cash Dividend Changes: Evidence of Year 1999

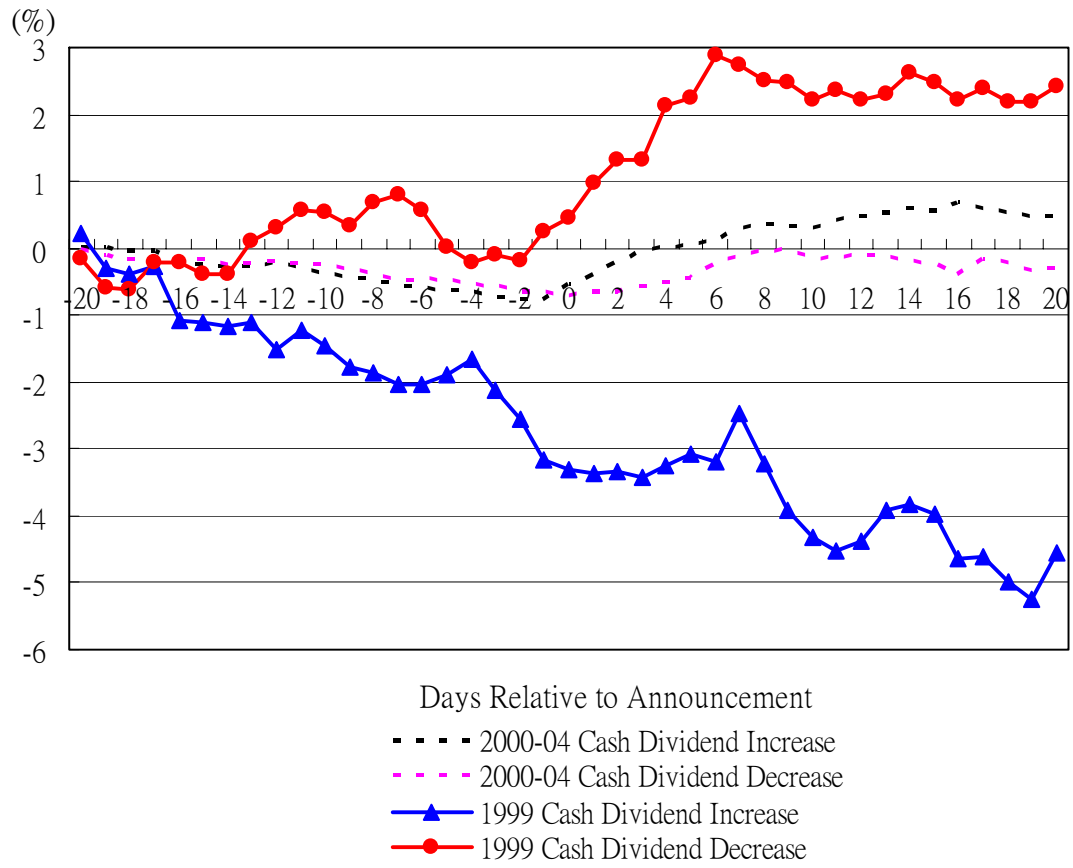


Table 1.
Trend of Dividend Policy in China

This table reports the annual dividend information for a sample of China-listed stocks. The data sample consists of all listed stocks on the Shanghai Stock Exchange and the Shenzhen Stock Exchange over the period 1992 through 2004 that have dividend announcement data on CSMAR (China Stock Market Accounting Research). N is the quantity of the listed firms on the two stock exchanges of China at the end of the year. CD is the quantity of the listed stocks (including both A-share and B-share stocks) that pay cash dividends in the corresponding year. BS is the quantity of the listed stocks paying bonus shares in the corresponding year. TA is the quantity of listed stocks that pay the transference of additional paid-in capital to contributed capital. It is important to note that a firm may simultaneously issue A-share and B-share stocks traded in the Shanghai Stock Exchange or the Shenzhen Stock Exchange. Therefore, $BS/N > 1$ is possible in 1992 and 1993.

Year	N	CD	CD/N (%)	BS	BS/N (%)	TA	TA/N (%)
1992	53	42	79.25	74	139.62	9	16.98
1993	183	178	97.27	189	103.28	27	14.75
1994	291	265	91.07	179	61.51	8	2.75
1995	323	242	74.92	197	60.99	33	10.22
1996	530	221	41.70	273	51.51	228	43.02
1997	745	268	35.97	200	26.85	202	27.11
1998	851	298	35.02	178	20.92	184	21.62
1999	949	349	36.78	132	13.91	153	16.12
2000	1088	756	69.49	121	11.12	173	15.90
2001	1160	759	65.43	98	8.45	130	11.21
2002	1224	676	55.23	68	5.56	140	11.44
2003	1287	653	50.74	107	8.31	200	15.54
2004	1377	784	56.94	64	4.65	179	13.00

Source: CSMAR (China Stock Market Accounting Research).

Table 2.
Share Structure of Listed Firms in China

This table summarizes the share structure of listed firms in China. The source of the data is the website of China Securities Regulatory Commission. T is the total shares of all listed firms. NF is the non-floating shares of all listed stocks. F is the floating shares of all listed stocks. All information provided below is year-end data.

Year	T (million shares)	NF (million shares)	NF/T (%)	F (million shares)	F/T (%)
1999	308,895	200,929	65.05	107,965	34.95
2000	379,170	243,743	64.28	135,427	35.72
2001	521,801	340,485	65.25	181,316	34.75
2002	587,546	383,868	65.33	203,677	34.67
2003	642,846	414,423	64.47	226,758	35.27
2004	714,943	454,291	63.54	257,719	36.05
2005	762,951	471,474	61.80	291,477	38.20
2006	1,489,757	925,978	62.16	563,800	37.84

Source: <http://www.csrc.gov.cn/n575458/n775121/index.html>



Table 3.**Cash Dividend Characteristics of the Listed A-Share Stocks**

This table reports descriptive statistics of cash dividends for a sample of China-listed A-share stocks. The data sample consists of all listed non-financial A-share stocks of the Shanghai Stock exchange and the Shenzhen Stock exchange over the period 1998 through 2004 that have cash dividend announcement data on CSMAR (China Stock Market Accounting Research). The cash dividends here mean the summation of medium-term and annual cash dividends. N is the quantity of the listed firms on the corresponding stock exchange of China. CD is the quantity of the listed A-share stocks that pay cash dividends in the corresponding year. CD/N is the ratio of cash-dividend-paying stocks which is shown in percentage. AVG is the arithmetic mean of cash dividends per share of the cash-dividend-paying stocks. MED is the median of cash dividends per share of the cash-dividend-paying stocks. STD is the standard deviation of cash dividends per share of the cash-dividend-paying stocks. KUR is the kurtosis of cash dividends per share of the cash-dividend-paying stocks. SKE is the skewness of cash dividends per share of the cash-dividend-paying stocks.

Panel A: The Shanghai Stock Exchange							
Year	1998	1999	2000	2001	2002	2003	2004
N	438	484	572	646	715	780	837
CD	127	160	400	427	410	406	492
CD/N (%)	33.06	33.06	69.93	66.10	57.34	52.05	58.78
AVG	0.16	0.16	0.13	0.12	0.14	0.14	0.14
MED	0.15	0.13	0.10	0.10	0.10	0.10	0.10
STD	0.11	0.11	0.09	0.09	0.10	0.11	0.11
KUR	9.14	7.97	5.40	6.87	3.09	6.40	16.03
SKE	2.19	2.17	1.95	2.01	1.55	2.00	2.66
Panel B: The Shenzhen Stock Exchange							
Year	1998	1999	2000	2001	2002	2003	2004
N	413	463	514	508	508	505	536
CD	136	148	293	275	218	199	240
CD/N (%)	32.93	31.97	57.00	54.13	42.91	39.41	44.78
AVG	0.21	0.16	0.14	0.13	0.13	0.14	0.17
MED	0.19	0.13	0.10	0.10	0.10	0.10	0.10
STD	0.16	0.11	0.10	0.12	0.12	0.13	0.16
KUR	12.64	3.38	5.04	17.87	6.85	10.98	6.39
SKE	2.59	1.49	1.82	3.13	2.32	2.73	2.13

Table 4.**The Comparison of Financial Characteristics for Cash Dividend Paying and Non-Cash Dividend Paying Firms**

This table compares descriptive statistics of cash dividend paying and non-cash dividend paying listed A-share stocks in China. The data sample consists of all cash dividend paying and non-cash dividend paying listed A-share stocks on the Shanghai stock exchange and the Shenzhen stock exchange over the period 2000 to 2004 that have available financial information on the CSMAR (China Stock Market Accounting Research) on the following variable: ASSETS, P/B, P/E, D/A, TATR, ROA, ROE, CR5. MEAN is the mathematic mean of 5 firm-year observations for each financial variable. MEDIAN is the median of 5 firm-year observations for each financial variable. N is the total quantity of 5 firm-year observations for each financial variable. ASSETS is the book value of assets. P/B is the price-to-book ratio at the end of the year. P/E is the price-to-earning ratio at the end of the year. DEBT is the debit ratio. TATR is the total assets turnover rate. ROA is the return on assets. CR5 is five-stockholder concentration ratio that is the percentage of total shares held by the five largest stockholders of the firm. NF is the proportion of non-floating shares. SS is the proportion of shares held by the State. P/B and P/E are truncated at the 5th and 95th percentiles. DA, TATR, ROA, and ROE are truncated at the 1st and 99th percentiles.

Panel A: Shanghai Stock Exchange						
Variable	Cash-Dividend-Paying Firm			Non-Cash-Dividend-Paying Firm		
	MEAN	MEDIAN	N	MEAN	MEDIAN	N
ASSETS (million)	3,785.25	1,485.89	2086	1,687.88	1,076.66	1386
P/B	3.37	2.99	1878	4.39	3.47	1239
P/E	45.72	39.11	1878	113.05	62.21	1238
DEBT (%)	40.65	40.17	2043	56.98	54.18	1358
TATR (%)	61.62	51.04	2044	48.53	39.82	1349
ROA (%)	4.78	4.35	2044	-2.55	0.87	1358
CR5 (%)	61.88	63.27	2086	56.63	57.60	1386
NF (%)	63.01	64.36	2086	58.81	60.84	1386
SS (%)	34.20	37.24	2086	28.56	29.19	1386

Panel B: Shenzhen Stock Exchange						
Variable	Cash-Dividend-Paying Firm			Non-Cash-Dividend-Paying Firm		
	MEAN	MEDIAN	N	MEAN	MEDIAN	N
ASSETS (million)	2,511.91	1,549.31	1,220	1,510.60	1,023.63	1,227
P/B	3.58	3.10	1,098	4.29	3.37	1,143
P/E	49.36	40.92	1,098	111.32	57.82	1,143
DEBT (%)	40.95	41.40	1,196	58.04	54.46	1,251
TATR (%)	58.38	48.55	1,196	43.25	35.32	1,242
ROA (%)	4.69	4.24	1,196	-3.27	0.71	1,264
CR5 (%)	59.55	61.99	1,220	55.35	55.80	1,277
NF (%)	60.57	62.73	1,220	59.03	60.61	1,277
SS (%)	33.29	36.54	1,220	29.08	29.89	1,277

Source: CSMAR (China Stock Market Accounting Research).

Table 5.**Descriptive Statistics of the Financial Characteristics of the Sample Firms**

This table reports the descriptive statistics of financial characteristics for the sample of firms that change their cash dividends over the period 2000 through 2004. To be included in the sample, the observation must satisfy the sample selection criterion mentioned in Part 4. DC is the percentage change in the cash dividend payment. DY is the dividend yield at the time of the announcement of cash dividend change. DP is the cash dividend payout ratio (cash dividend per share / earnings per share). ASSETS is the book value of total assets at the end of the year. EPS is the earnings per share. P/B is the price-to-book ratio at the end of the year. P/E is the price-to-earning ratio at the end of the year. DEBT is the debt ratio. PM is the net profit margin. ROA is the return on assets. ROE is the return on equity. HH5 and HH10 is the Herfindahl-Hirschman Index of the firm's top-5 and top-10 largest shareholders, respectively. F is the proportion of floating shares. NF is the proportion of non-floating shares. SS is the proportion of shares held by the State.

Variable	Cash Dividend Increases			Cash Dividend Decreases		
	MEAN	MEDIAN	N	MEAN	MEDIAN	N
DC (%)	75.66	42.86	460	-39.01	-37.50	422
DY (%)	2.11	1.68	460	1.27	1.05	422
DP (%)	60.33	57.35	460	56.55	46.58	422
ASSETS (million)	4,416.59	2,039.26	460	2,965.72	1,732.50	422
EPS	0.34	0.29	460	0.22	0.20	422
P/B	3.25	2.70	460	2.97	2.54	422
P/E	37.95	32.19	460	69.63	43.87	422
DEBT (%)	40.17	40.22	460	40.13	40.48	422
TATR (%)	67.56	56.53	460	58.60	49.23	422
PM (%)	12.94	8.52	460	10.71	6.29	422
ROA (%)	5.53	4.96	460	3.68	3.22	422
CR5 (%)	64.66	66.81	460	62.23	64.04	422
CR10 (%)	66.02	68.80	460	63.55	65.31	422
HH5	3055	2953	460	2824	2750	422
HH10	3136	2974	460	2869	2759	422
F (%)	36.25	34.02	460	37.41	35.85	422
NF (%)	63.75	65.98	460	62.59	64.15	422
SS (%)	36.89	39.37	460	35.24	39.31	422

Table 6.
Effect of Dividend Changes on the Market Price

This table examines the effect of dividend changes on the market price for stocks that change their dividends during the period 2000 to 2004. Each observation in the sample satisfies the criteria mentioned in Data Sources and Sample Selection. AR is the average abnormal return surrounding announcements of cash dividend changes. CAR is the cumulative abnormal return on days surrounding the announcement of cash dividend changes. T is the t-value of the ordinary cross-sectional method. Z is the t-value of standardized residual cross-sectional method.

Day	Panel A: Cash Dividend Increases						Panel B: Cash Dividend Decreases					
	AR (%)	T (AR)	Z (AR)	CAR (%)	T (CAR)	Z (CAR)	AR (%)	T (AR)	Z (AR)	CAR (%)	T (CAR)	Z (CAR)
-20	0.01	0.16	-0.26	0.01	0.16	-0.26	0.00	-0.02	0.51	0.00	-0.02	0.51
-19	0.00	-0.03	0.39	0.01	0.08	0.13	-0.11	-1.19	-0.66	-0.11	-0.85	-0.15
-18	-0.05	-0.65	-0.72	-0.04	-0.31	-0.32	-0.05	-0.53	-0.27	-0.16	-0.95	-0.27
-17	-0.01	-0.13	0.18	-0.05	-0.34	-0.19	-0.05	-0.61	-0.28	-0.21	-1.11	-0.35
-16	-0.15	-1.81	-1.62	-0.20	-1.15	-0.94	0.00	0.00	0.05	-0.21	-0.96	-0.30
-15	-0.03	-0.44	-0.07	-0.23	-1.20	-0.86	0.06	0.71	0.78	-0.14	-0.58	0.02
-14	-0.05	-0.60	-0.45	-0.28	-1.39	-0.98	-0.11	-1.46	-0.81	-0.25	-0.95	-0.24
-13	-0.01	-0.07	0.18	-0.28	-1.31	-0.84	0.05	0.62	0.90	-0.21	-0.73	0.03
-12	0.06	0.88	0.45	-0.22	-0.95	-0.67	0.01	0.17	0.33	-0.19	-0.63	0.11
-11	-0.09	-1.18	-0.52	-0.31	-1.29	-0.79	-0.01	-0.16	-0.40	-0.21	-0.67	0.00
-10	-0.09	-1.08	-0.81	-0.40	-1.52	-0.98	-0.02	-0.32	-0.12	-0.23	-0.70	-0.04
-9	-0.02	-0.22	0.05	-0.42	-1.52	-0.93	-0.08	-1.01	-0.72	-0.31	-0.89	-0.22
-8	-0.06	-0.76	-0.05	-0.47	-1.64	-0.89	-0.05	-0.70	-0.83	-0.36	-0.98	-0.41
-7	-0.05	-0.76	-0.57	-0.53	-1.74	-0.98	-0.15	-2.04*	-2.06*	-0.51	-1.30	-0.83
-6	-0.05	-0.70	-0.55	-0.58	-1.84	-1.09	0.06	0.66	0.66	-0.45	-1.09	-0.64
-5	-0.03	-0.42	-0.76	-0.61	-1.89	-1.25	-0.01	-0.21	0.01	-0.46	-1.08	-0.60
-4	-0.04	-0.50	-0.89	-0.65	-1.94	-1.43	-0.06	-0.70	-0.19	-0.52	-1.15	-0.61
-3	-0.09	-1.29	-1.22	-0.74	-2.13*	-1.64	-0.03	-0.47	-0.65	-0.55	-1.20	-0.69
-2	-0.03	-0.37	0.11	-0.77	-2.16*	-1.58	-0.09	-1.18	-1.17	-0.65	-1.34	-0.85
-1	0.01	0.16	-0.26	-0.75	-2.13*	-1.64	0.00	-0.06	-0.02	-0.65	-1.29	-0.80
0	0.23	3.05**	3.66***	-0.52	-1.46	-0.80	-0.06	-0.79	-0.39	-0.71	-1.36	-0.83
1	0.14	2.12*	2.22*	-0.38	-1.03	-0.38	0.04	0.51	1.15	-0.66	-1.27	-0.63
2	0.16	2.39*	2.80**	-0.22	-0.59	0.12	0.03	0.39	0.40	-0.64	-1.18	-0.57
3	0.19	2.77**	2.69**	-0.04	-0.09	0.57	0.06	0.84	1.25	-0.57	-1.02	-0.38
4	0.06	0.75	0.63	0.02	0.05	0.70	0.07	0.95	1.37	-0.50	-0.86	-0.19
5	0.04	0.50	0.28	0.06	0.14	0.72	0.07	0.88	1.21	-0.43	-0.72	-0.02
6	0.08	1.22	1.53	0.14	0.35	0.98	0.17	2.48*	2.23*	-0.25	-0.42	0.24
7	0.18	2.80**	2.87**	0.32	0.78	1.41	0.15	2.01*	2.08*	-0.11	-0.17	0.50

8	0.05	0.71	0.65	0.38	0.88	1.48	0.06	0.77	1.02	-0.05	-0.08	0.61
9	-0.04	-0.50	0.13	0.34	0.78	1.48	0.04	0.56	0.87	-0.01	-0.01	0.69
10	-0.02	-0.23	0.19	0.32	0.71	1.46	-0.14	-1.61	-1.10	-0.14	-0.22	0.54
11	0.09	1.18	1.45	0.41	0.90	1.68	0.02	0.25	0.59	-0.12	-0.18	0.61
12	0.07	0.98	1.48	0.48	1.02	1.88	0.02	0.28	0.21	-0.10	-0.16	0.63
13	0.05	0.75	0.78	0.53	1.10	1.92	0.01	0.14	0.58	-0.09	-0.14	0.69
14	0.08	1.12	1.19	0.61	1.26	2.09*	-0.08	-0.99	-0.78	-0.17	-0.25	0.57
15	-0.04	-0.56	-0.37	0.57	1.17	2.04*	-0.05	-0.85	-0.86	-0.23	-0.32	0.48
16	0.12	1.43	1.44	0.69	1.39	2.25*	-0.17	-2.26*	-2.24*	-0.40	-0.56	0.26
17	-0.10	-1.30	-1.22	0.59	1.17	2.04*	0.24	2.96**	2.84**	-0.15	-0.22	0.58
18	-0.05	-0.71	-0.33	0.54	1.05	1.96*	-0.04	-0.55	0.01	-0.20	-0.28	0.57
19	-0.06	-0.82	0.13	0.48	0.92	1.94	-0.12	-1.74	-1.14	-0.32	-0.44	0.46
20	0.00	-0.03	-0.22	0.48	0.91	1.92	0.00	0.02	0.18	-0.31	-0.44	0.47

The symbols *, **, and *** denote statistical significance at the 5%, 1% and 0.1% levels, respectively, using a 2-tail test.



Table 7.**Cumulative Abnormal Returns for Different Event Windows**

This table presents cumulative abnormal returns of different event windows for stocks that change their dividends during the period 2000 to 2004. Each observation in the sample satisfies the criteria mentioned in Data Sources and Sample Selection. CAR is the cumulative abnormal return on days surrounding the announcement of cash dividend changes. T is the t-value of the ordinary cross-sectional method. Z is the t-value of standardized residual cross-sectional method.

Event Window	Cash Dividend Increase			Cash Dividend Decrease		
	CAR	T(CAR)	Z(CAR)	CAR	T(CAR)	Z(CAR)
(-20,0)	-0.52%	-1.46	-0.80	-0.71%	-1.36	-0.83
(-10,0)	-0.21%	-0.88	-0.38	-0.50%	-1.41	-1.10
(-5,0)	0.06%	0.33	0.30	-0.25%	-1.19	-0.79
(-3,0)	0.12%	0.89	1.36	-0.18%	-1.11	-0.98
(-2,0)	0.22%	1.80	2.26*	-0.15%	-1.10	-0.88
(-1,0)	0.24%	2.47*	2.72**	-0.06%	-0.57	-0.28
(0,+1)	0.38%	3.75***	4.40***	-0.02%	-0.15	0.69
(0,+2)	0.53%	4.30***	5.07***	0.01%	0.11	0.79
(0,+3)	0.72%	4.75***	5.54***	0.08%	0.51	1.24
(0,+5)	0.81%	4.72***	5.17***	0.22%	1.11	2.03*
(0,+10)	1.08%	4.41***	4.98***	0.51%	1.81	2.78**
(0,+20)	1.23%	3.45***	4.48***	0.34%	0.87	1.98*
(-1,+1)	0.39%	3.28**	3.52***	-0.02%	-0.16	0.55
(-3,+3)	0.61%	3.20**	3.81***	-0.05%	-0.24	0.20
(-10,+10)	0.63%	1.80	2.45*	0.06%	0.13	0.68
(-20,+20)	0.48%	0.91	1.92	-0.31%	-0.44	0.47

The symbols *, **, and *** denote statistical significance at the 5%, 1% and 0.1% levels, respectively, using a 2-tail test.

Table 8.**Effect of Dividend Changes on the Market Price for Different Markets**

This table examines the effect of dividend changes on the market price for stocks listed on the Shanghai Stock Exchange and the Shenzhen Stock Exchange that change their dividends during the period 2000 to 2004. Each observation in the sample satisfies the criteria mentioned in Data Sources and Sample Selection. AR is the average abnormal return surrounding announcements of cash dividend changes. CAR is the cumulative abnormal return on days surrounding the announcement of cash dividend changes. T is the t-value of the ordinary cross-sectional method. Z is the t-value of standardized residual cross-sectional method.

Day	Panel A: Cash Dividend Increase						Panel B: Cash Dividend Decrease					
	Shanghai			Shenzhen			Shanghai			Shenzhen		
	AR (%)	T (AR)	Z (AR)	AR (%)	T (AR)	Z (AR)	AR (%)	T (AR)	Z (AR)	AR (%)	T (AR)	Z (AR)
-20	0.08	0.94	0.65	-0.10	-0.86	-1.25	0.09	0.94	1.63	-0.14	-0.96	-0.94
-19	-0.08	-0.79	-0.26	0.12	1.03	1.01	-0.02	-0.16	-0.03	-0.24	-1.68	-1.04
-18	-0.03	-0.26	-0.05	-0.09	-0.78	-1.19	-0.02	-0.16	0.20	-0.10	-0.65	-0.68
-17	-0.03	-0.28	-0.03	0.02	0.18	0.38	-0.01	-0.08	-0.12	-0.11	-1.05	-0.34
-16	-0.11	-1.17	-1.15	-0.21	-1.40	-1.15	0.01	0.11	0.37	-0.02	-0.15	-0.45
-15	-0.02	-0.18	0.06	-0.05	-0.50	-0.21	0.08	0.67	0.62	0.04	0.30	0.47
-14	-0.03	-0.34	-0.56	-0.07	-0.55	0.01	0.04	0.35	0.90	-0.33	-3.00**	-2.94**
-13	0.05	0.46	0.50	-0.09	-0.84	-0.50	0.11	1.13	1.34	-0.05	-0.44	-0.26
-12	0.12	1.24	0.65	-0.04	-0.37	-0.22	0.16	1.61	1.39	-0.20	-1.41	-1.00
-11	-0.09	-0.89	-0.53	-0.11	-0.78	-0.20	0.00	-0.03	-0.31	-0.03	-0.20	-0.25
-10	-0.06	-0.57	-0.24	-0.13	-1.10	-1.09	0.05	0.52	0.60	-0.13	-0.97	-0.75
-9	-0.09	-0.81	-0.34	0.10	0.89	0.63	-0.14	-1.55	-1.36	0.02	0.14	0.25
-8	-0.05	-0.56	-0.36	-0.07	-0.51	0.28	-0.05	-0.47	-0.55	-0.06	-0.53	-0.62
-7	-0.09	-1.06	-1.26	0.01	0.04	0.51	-0.05	-0.53	-0.74	-0.29	-2.49*	-2.26*
-6	-0.03	-0.28	-0.27	-0.09	-0.77	-0.54	0.11	0.97	0.74	-0.03	-0.22	0.12
-5	0.01	0.18	-0.18	-0.11	-0.78	-0.92	0.04	0.44	0.82	-0.09	-0.87	-0.90
-4	-0.01	-0.08	-0.41	-0.08	-0.71	-0.90	-0.11	-1.11	-0.67	0.03	0.23	0.45
-3	-0.04	-0.40	-0.42	-0.19	-1.71	-1.63	-0.03	-0.33	-0.33	-0.04	-0.34	-0.62
-2	0.02	0.22	0.92	-0.11	-1.02	-1.08	-0.04	-0.42	-0.51	-0.17	-1.30	-1.18
-1	-0.07	-0.78	-0.83	0.14	1.26	0.65	0.14	1.58	1.83	-0.22	-2.15*	-2.19*
0	0.25	2.80**	3.15**	0.21	1.48	1.99*	-0.09	-1.09	-0.67	0.00	-0.01	0.10
1	0.24	2.72**	2.59**	-0.01	-0.12	0.19	0.08	0.78	1.09	-0.02	-0.15	0.44
2	0.10	1.24	1.49	0.25	2.21*	2.55*	0.02	0.24	0.35	0.04	0.32	0.21
3	0.10	1.19	1.01	0.34	2.87**	2.97**	0.14	1.48	1.66	-0.05	-0.41	0.03
4	-0.06	-0.59	-0.75	0.24	1.88	2.00*	-0.08	-0.93	-0.93	0.30	2.27*	2.86**

5	-0.01	-0.07	-0.13	0.11	0.86	0.55	0.02	0.17	0.23	0.16	1.19	1.62
6	0.13	1.47	1.90	0.01	0.11	0.14	0.21	2.22*	1.92	0.12	1.16	1.17
7	0.32	3.69***	3.78***	-0.05	-0.56	-0.61	0.23	2.30*	2.27*	0.02	0.20	0.24
8	0.16	1.58	1.39	-0.12	-1.25	-1.06	0.12	1.09	1.36	-0.03	-0.31	-0.21
9	-0.03	-0.35	0.12	-0.04	-0.38	0.04	0.12	1.29	1.41	-0.08	-0.69	-0.30
10	-0.01	-0.10	0.13	-0.03	-0.26	0.14	-0.08	-0.74	-0.07	-0.22	-1.64	-1.75
11	0.09	0.88	1.32	0.10	0.79	0.65	-0.06	-0.50	-0.26	0.14	1.08	1.34
12	0.00	-0.03	-0.14	0.19	1.60	2.47*	0.06	0.70	0.60	-0.05	-0.54	-0.51
13	0.05	0.57	0.57	0.05	0.49	0.53	-0.06	-0.64	-0.04	0.12	0.94	0.98
14	0.12	1.36	1.39	0.00	0.03	0.11	-0.07	-0.66	-0.95	-0.09	-0.75	-0.12
15	-0.01	-0.15	0.03	-0.08	-0.77	-0.63	-0.06	-0.68	-0.47	-0.04	-0.52	-0.87
16	0.18	1.72	1.93	0.01	0.11	-0.12	-0.32	-2.97**	-2.74**	0.05	0.49	0.15
17	-0.06	-0.58	-0.38	-0.17	-1.57	-1.69	0.34	2.99**	2.81**	0.09	0.82	0.87
18	-0.06	-0.77	-0.64	-0.02	-0.19	0.29	-0.05	-0.48	-0.08	-0.03	-0.26	0.16
19	-0.10	-1.16	-0.71	0.01	0.04	0.95	-0.20	-2.18*	-1.93	0.01	0.06	0.65
20	-0.05	-0.57	-0.74	0.08	0.89	0.83	-0.02	-0.20	0.03	0.03	0.27	0.25

The symbols *, **, and *** denote statistical significance at the 5%, 1% and 0.1% levels, respectively, using a 2-tail test.



Table 9.
Cumulative Abnormal Returns of Different Event Windows
for Different Markets

This table presents cumulative abnormal returns of different event windows for stocks listed on the Shanghai Stock Exchange and the Shenzhen Stock Exchange that change their dividends during the period 2000 to 2004. Each observation in the sample satisfies the criteria mentioned in Data Sources and Sample Selection. CAR is the cumulative abnormal return on days surrounding the announcement of cash dividend changes. T is the t-value of the ordinary cross-sectional method. Z is the t-value of standardized residual cross-sectional method.

Event Window	Shanghai Cash Dividend Increase			Shenzhen Cash Dividend Increase			Shanghai Cash Dividend Decrease			Shenzhen Cash Dividend Decrease		
	CAR (%)	T (CAR)	Z (CAR)	CAR (%)	T (CAR)	Z (CAR)	CAR (%)	T (CAR)	Z (CAR)	CAR (%)	T (CAR)	Z (CAR)
(-20,0)	-0.28	-0.62	-0.27	-0.93	-1.54	-0.93	0.26	0.53	0.96	-2.15	-2.03*	-1.64
(-10,0)	-0.14	-0.47	-0.09	-0.32	-0.83	-0.49	-0.17	-0.54	-0.33	-0.98	-1.33	-1.08
(-5,0)	0.17	0.83	0.98	-0.14	-0.48	-0.59	-0.10	-0.44	0.06	-0.49	-1.17	-1.04
(-3,0)	0.16	0.97	1.56	0.05	0.23	0.28	-0.03	-0.14	0.08	-0.42	-1.36	-1.33
(-1,0)	0.20	1.36	2.10*	0.24	1.17	1.06	0.05	0.36	0.81	-0.22	-1.22	-1.16
(-2,0)	0.18	1.57	1.93	0.35	1.93	1.91	0.01	0.04	0.31	-0.38	-1.54	-1.40
(0,+1)	0.49	3.98***	4.23***	0.19	1.12	1.81	-0.01	-0.09	0.51	-0.02	-0.13	0.47
(0,+2)	0.58	4.02***	4.34***	0.45	1.99*	2.75**	0.01	0.06	0.65	0.02	0.10	0.46
(0,+3)	0.68	3.97***	4.25***	0.78	2.75**	3.56***	0.15	0.85	1.41	-0.03	-0.12	0.35
(0,+5)	0.62	3.02**	3.07**	1.14	3.70***	4.40***	0.08	0.38	0.90	0.43	1.14	1.91
(0,+10)	1.18	3.81***	4.08***	0.90	2.28*	2.86**	0.68	2.04*	2.71**	0.25	0.50	1.20
(0,+20)	1.32	3.15**	3.77***	1.08	1.67	2.50*	0.25	0.52	1.31	0.47	0.73	1.52
(-1,+1)	0.42	2.88**	3.02**	0.33	1.66	1.87	0.13	0.76	1.30	-0.24	-1.32	-0.90
(-3,+3)	0.59	2.61**	3.11**	0.63	1.88	2.22*	0.21	0.90	1.31	-0.45	-1.08	-0.81
(-10,+10)	0.79	1.80	2.30*	0.38	0.64	1.08	0.60	1.28	1.77	-0.74	-0.71	-0.30
(-20,+20)	0.80	1.31	1.90	-0.05	-0.05	0.77	0.60	0.87	1.68	-1.69	-1.16	-0.59

The symbols *, **, and *** denote statistical significance at the 5%, 1% and 0.1% levels, respectively, using a 2-tail test.

Table 10
Cumulative Abnormal Returns for Different Event Windows:
Evidence of Year 1999

Event Windows	Cash Dividend Increase			Cash Dividend Decrease		
	CAR	T(CAR)	Z(CAR)	CAR	T(CAR)	Z(CAR)
(-20,0)	-3.32%	-1.80	-1.38	0.44%	0.26	1.14
(-10,0)	-2.08%	-1.54	-1.32	-0.13%	-0.11	0.32
(-5,0)	-1.27%	-1.23	-1.02	-0.13%	-0.16	0.30
(-3,0)	-1.64%	-1.37	-1.40	0.65%	0.92	1.36
(-2,0)	-1.19%	-1.27	-1.20	0.55%	0.98	1.47
(-1,0)	-0.75%	-1.09	-1.00	0.62%	1.22	1.61
(0,+1)	-0.21%	-0.30	0.15	0.73%	1.35	1.80
(0,+2)	-0.18%	-0.22	0.22	1.06%	1.46	1.95
(0,+3)	-0.27%	-0.31	0.21	1.06%	1.41	1.79
(0,+5)	0.09%	0.10	0.75	1.99%	1.75	2.03*
(0,+10)	-1.15%	-0.84	-0.26	1.98%	1.31	1.83
(0,+20)	-1.40%	-0.67	0.04	2.16%	1.14	1.64
(-1,+1)	-0.81%	-0.95	-0.51	1.16%	1.81	2.40*
(-3,+3)	-1.75%	-1.19	-0.91	1.51%	1.50	2.07*
(-10,+10)	-3.08%	-1.51	-0.98	1.65%	0.84	1.56
(-20,+20)	-4.56%	-1.39	-0.69	2.40%	0.83	1.63

The symbols *, **, and *** denote statistical significance at the 10%, 5%, 1% and 0.1% levels, respectively, using a 2-tail test.

Table 11.**Effect of Cash Dividend Changes on the Share Prices: A Multivariate Analysis**

This table reports the average estimated coefficients of the following cross-sectional regression:

$$CAR_{it} = \beta_0 + \beta_1 DC_{it} + \beta_2 DY_{it} + \beta_3 DP_{it} + \beta_4 SIZE_{it} + \beta_5 PB_{it} + \beta_6 DEBT_{it} + \beta_7 TATR_{it} + \beta_8 ROA_{it} + \beta_9 NF_{it} + \varepsilon_{it}.$$

The sample consists of stocks that change their cash dividends during the period 2000 to 2004. Each observation in the sample satisfies the criteria mentioned in Data Sources and Sample Selection. CAR is the cumulative abnormal return for different event windows around the announcement of the dividend changes. DC is the percentage change in the cash dividend payment. DY is the dividend yield at the time of the announcement of the cash dividend changes. DP is the dividend payout ratio (cash dividend per share/ earnings per share). ASSETS is the logarithm of the book value of the total assets at the time of the announcement of the cash dividend changes. P/B is the price-to-book ratio at the end of the year. DEBT is the debt ratio (book value of total liabilities/ book value of total assets). TATR is the total assets turnover rate. ROA is the return on assets. NF is proportion of non-floating shares. The F-statistics test the joint hypotheses that both the intercept and the slope coefficients are insignificantly different from zero. Finally, t-statistics are in parentheses.

Variable	Dependent Variable= CAR					
	$CAR_{(-1,1)}$	$CAR_{(0,1)}$	$CAR_{(0,3)}$	$CAR_{(0,5)}$	$CAR_{(0,10)}$	$CAR_{(0,20)}$
Intercept	-0.0066 (-0.28)	-0.0151 (-0.78)	-0.0393 (-1.36)	-0.0424 (-1.18)	0.0081 (0.16)	-0.0383 (-0.53)
DC	0.0005 (0.55)	0.0004 (0.54)	0.0014 (1.29)	0.0016 (1.24)	0.0016 (0.87)	-0.0020 (-0.75)
DY	0.2657 ** (3.15)	0.3353 *** (4.79)	0.3116 ** (2.98)	0.2195 (1.70)	0.1655 (0.91)	0.2487 (0.96)
DP	0.0018 (1.36)	0.0019 (1.71)	0.0018 (1.10)	0.0030 (1.47)	0.0016 (0.54)	-0.0038 (-0.92)
ASSETS	0.0003 (0.29)	0.0006 (0.65)	0.0022 (1.65)	0.0028 (1.70)	0.0003 (0.11)	0.0029 (0.87)
PB	-0.0005 (-0.79)	0.0002 (0.38)	-0.0004 (-0.58)	-0.0006 (-0.69)	-0.0022 (-1.72)	-0.0037 * (-2.02)
DEBT	0.0056 (0.88)	0.0040 (0.76)	0.0025 (0.31)	0.0039 (0.40)	0.0129 (0.93)	0.0028 (0.14)
TATR	-0.0003 (-0.16)	-0.0013 (-0.71)	-0.0001 (-0.04)	0.0005 (0.16)	0.0019 (0.41)	0.0029 (0.44)
ROA	0.0415 (1.19)	-0.0004 (-0.01)	0.0609 (1.42)	0.0755 (1.42)	0.2044 ** (2.71)	0.1636 (1.53)
NF	-0.0103 (-1.33)	-0.0062 (-0.96)	-0.0210 * (-2.20)	-0.0356 ** (-3.01)	-0.0294 (-1.76)	-0.0267 (-1.13)
F-Test (P-Value)	3.88 *** (0.000)	5.62 *** (0.000)	5.20 *** (0.000)	3.96 *** (0.000)	2.78 ** (0.003)	2.40 * (0.010)
Adj. R ²	2.86%	4.51%	4.12%	2.94%	1.79%	1.41%

The symbols *, **, and *** denote statistical significance at the 5%, 1% and 0.1% levels, respectively, using a 2-tail test.