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碩 士 論 文

股利政策對現金增資公司的長期績效影響

The Impact of Dividend Policy on the Long Term Performance of SEOs Firms

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國立交通大學

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摘要：

學者已證實現金增資公司會有長達三年以上的負報酬現象，而股利增加(減少)也會使得長期報酬有正向(負向)反應。本研究旨在討論股利對現金增資公司的長期績效影響，因此以現金增資公司的股利政策來做分類，發現有發放股利的公司在進行現金增資時，會有較優異的報酬，次為沒發放股利的公司，報酬表現最差的公司為在現金增資後停止發放股利的公司，並且持續發放越久股利的公司會有越好的報酬表現。此結果符合資訊不對稱與股利訊號理論的結論，即現金增資公司會有負長期報酬的效果，但可藉由股利政策來降低負報酬。而有發放股利的公司通常有較高的帳面對股東權益價值與資產價值，並且其公司營運期間也較久，顯示有發放股利的現金增資公司是較為穩定及成熟的公司。

關鍵字：現金增資；資訊不對稱；長期績效；股利

The Impact of Dividend Policy on the Long Term Performance of SEOs Firms

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Abstract

Many scholars indicate that firms after SEOs announcement would sustain long term negative performance for more than three years. However, if firms increase (decreasing) its' dividend payout would result in positive (negative) return in the long run. This paper examines the impact of dividend policy on the long term performance of SEOs firms. Categorizing by dividend policy, if the firms keep paying dividend after SEOs announcement perform best in long term performance, non-dividend-paying firms get the second best result, and the worst is firms paying dividend around SEOs and cut off after SEOs announcement. Moreover, firms continue paying dividend for longer period before SEOs would get less long term negative returns. This result is consistent with asymmetric information and signal theory. The firms paying dividend statistically have higher ROA, market value, total asset, and firm age, which means that most of dividend-paying firms are larger, more stable, and more mature.

Keywords: Seasoned Equity Offering; asymmetric information; Long Term Performance; Dividend

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1. Introduction

Many empirical researches document that when announcing a new equity issue, firms would have a significant decline in stock returns around the announcement day. Asquith and Mullins (1986) show that when firms declared seasoned equity offerings (SEOs), firms' stock price would decline by 2-3%. Loughran and Ritter (1995) calculate the difference in returns between issuers and non-issuers, and find that an investor would have to invest about 44% more money in the issuers than in the non-issuers to get the same rewards after five year.

How do we explain the phenomenon? Myers and Majiluf (1984) attribute it to the asymmetric information between managers and investors. When a firm's stock price is overpriced, the manager would be likely to announce equity offering. When investors found the fact, they would treat SEOs as a bad signal and revise the stock price downward. If managers reduce asymmetric information, the SEOs' negative return might decline.

To reduce the asymmetric information has many kinds of methods. One way is to change dividend policy. Lintner (1956) proposes that managers change dividend by their anticipative profits of firm. Miller and Modigliani's (1961) irrelevance theorems show that in the prefect market, a company's dividend policy does not affect it's value. John and Williams (1985), Miller and Rock (1985) show that declaring dividend is considered a good signal, which are costly for bad firms to mimic. Michaely, Thaler, and Womack (1995) prove that dividend initiation and omission would influence not only the announcement return but the long-run abnormal return.

Loderer and Mauer (1992) investigate whether managers announce dividends before SEOs to decrease negative returns and whether the action can coordinate the stock price. Their result doesn't support the assumptions, but managers appear

reluctant to cut dividends before the SEOs announcement. That is to say, what dividend releases to investors is important to managers. Chang Bin (2006) mentioned that after 1985, the market reacts less negative return to a dividend payer's SEO announcement than to non-dividend payer. Fama and French (2001) found that the proportion of firms paying cash dividends falls from 66.5% in 1978 to 20.8% in 1999.

In this article, we try to examine whether dividend policy has impact on the long term performance of SEO firms. We collect the sample of the SEOs firms with IPOs after 1970. According to firms' dividend policy, dividing SEOs firms into two groups: dividend-paying firms and non-dividend-paying firms. We observe that the dividend-paying firms have longer operating year, larger market value, and higher book to market ratio than non-dividend-paying firms. This means that dividend-paying firms are stable and mature than non-dividend-paying firms.

Next, We further divide the dividend-paying firms into two groups depend on whether they keep paying dividend after SEOs. We find that firms paying dividend both before and after SEOs announcement have the best performance, and firms paying dividend before SEOs announcement but cutting after SEOs have the worst performance. We use the buy-and-hold abnormal return (BHAR) and Fama and French three factor model (1993) to estimate the abnormal return.

we change the definition to categorize dividend-paying firms. The definition of dividend-paying firms is based on how long a firm pay cash dividend before the stock-offering date. We find that firms paying longer dividend before SEOs announcement would get better long term abnormal return. The result shows that the steadier dividend policy, the less negative return after seasoned equity offerings.

The remainder of the paper is organized as follows. Section 2 is a review of previous literature, addressing both theoretical and empirical aspects in the return of SEOs and the asymmetric information between IPO, SEOs, and dividend. In Section 3,

we discuss the sample selection and descriptive statistics. We introduce the methodology of evaluating long-run performance in section 4. Section 5 presents the empirical results about the long run performance of SEOs. Finally, conclusions are provided in the last section.

2. Literature Review

2.1 Dividend

2.1.1. Asymmetric Information and Dividend Signal

Lintner (1956) notes that how many dividends manager want to pay depends on the company's future profitability in the long run and manager would prefer to pay dividend smoothly and steadily. That is to say, if manager pays dividend at the first time or increases dividends, the market will treat it as a good signal. Miller and Modigliani's (1958, 1961) irrelevance theorems show that in the prefect market, company's dividend policy don't affect company's value because managers and investors have symmetric information. Without prefect market, Miller and Rock (1985) think that dividends didn't affect company's value, but dividends would release signals to let investors know the firm's condition.

Easterbrook (1984) finds that the stockholders need to bear monitor cost. After paying dividends, managers may borrow money from banks or lenders. There would be more market power to monitor these firms. Jensen (1986) mentions that the relationship between free cash flow and agency problem. The higher free cash flow would cause the bigger agency problem. So that firms pay dividend to stockholder would lower free cash flow. From the point of views, we can say that paying dividends is good news to investors.

Healy and Palepu (1988) find that when firms announce to pay (omit) dividends, the profits of firms would increase (decrease) obviously in the following year, so do the stock price. But if firms only have the announcement of profits, the stock market wouldn't have such big fluctuation. Denis, Denis, and Sarin (1994) examine the cash flow signaling, overinvestment, and dividend clientele explanations for the information content of dividend change announcement. They

found the announcement returns are positively change to dividend change, dividend yield. Those findings support that cash flow signaling and dividend clientele hypotheses.

2.1.2The Long-Run Performance of Dividends

Different dividend policy would influence the firm's stock return, but how does dividend influence return in the long run? There are three possible aspects.

First, to treat dividend as an earning announcement. Bernard and Thomas (1990) told that when firms make surprising earnings announcements, the return would move in the same direction for the next few quarts. Second, some literatures make a description of overreaction or reversion in price, and the long-run return would go to the opposite direction. Third, changing dividend may cause a change in the type of stockholders. This is what we call clientele effect. Bajaj and Vijh (1990) suggested that the existence of dividend clienteles may partially explain price reactions to dividend change.

Michaely, Thaler, and Womack (1995) used the data during 1964 to 1988. They find after the announcement of dividend change, price continue to drift in the same direction. They use equally-weighted market index as benchmark, and they proofed the stock price continue to change in the same direction even after the announcement over three years.

2.2 Seasoned equity offerings

2.2.1 Asymmetric Information of Seasoned Equity Offering

By pecking order theory, when managers do financing decisions, they would use internal financing first, and SEOs are the last resort. Asquith and Mullins (1986) prove that when announcing SEOs, the stock returns decline by 2-3%. Myers and

Majluf (1984) explain that it is because of the asymmetric information between managers and stockholders. They contended only if firms' equities are overpriced, managers would issue equities. Consequently, rational investors anticipate this behavior, and they would discount the price of issuing firms. Myers and Majluf (1984) proposed if managers can decrease the asymmetric information, and let investors know the firm's demand of SEOs. The negative return around the announcement day wouldn't so serious.

Korajczyk, Lucas, and McDonald (1992) show that firms time equity issues after some information releases to decrease valuation uncertainty, and the negative return would decrease. The information announcement effect of the return is negative related to time internal. That is to say, the longer time internal between information releases and announcement of offerings, lead to the less effect on return. D'Mello, Tawatnuntachai, and Yaman (2003) found that firms conduct multiple equity issues have less negative announcement return. After conducting more than twice SEOs, the abnormal return isn't different from zero.

Bayless and Chaplinsky (1996) think that without considering the specific of firms, the whole market may affect the abnormal announcement return of SEOs.
The negative returns of firms which offer equities in high volume of circulation market are less than firms which offer equity in low volume of circulation market about 200 basis points.

Brous (1990) researched that whether common stock offering announcements convey information about the level of the firm's future cash flows. The forecasts of the current year earnings are, on average, decreased when firms announce plans to issue additional common stock. The size of the decrease is significantly related to announcement period abnormal stock returns. In contrast, forecasts of the five-year growth rate of earnings are, on average, unchanged. He thinks equity offering

announcement conveys unfavorable information.

What influence would be if we combine with the research of dividend signal and SEOs? Loderer and Mauer (1992) investigate whether managers announce dividends before SEOs to decrease the effect and whether the action can coordinate the stock price. The evidence doesn't support the assumptions, but managers appear reluctant to cut dividends before the SEOs announcement.

2.2.2 The Long-Run Performance of SEOs

Loughran and Ritter (1995) show that the IPOs and SEOs firms during 1970 to 1990 underperform relative to nonissuing firms for five years after the offering date significantly. During the five years after the SEOs, the investors have received average return only 7% per year. There are two possible reasons to explain the phenomenon. First, they found the degree to which issuing firms underperform varies over time. When the offering year with little issuing activity, the issuing firm face slight underperformance. On the other hand, firms selling stock during high-volume periods severely underperform. Secondly, they showed that the issuing firms' risk, beta, is higher than nonissuing firms. That implying issuing firms should have higher return.

Katherine and Affleck (1995) use the data during 1975-1989 to check the underperformance of SEOs firm. They use the matched firms from the same industry and similar size that did not issue equity. Their control variable are issuing year, firm's age, book to market ratio, firm's size, exchange. They found that underperformance is existence with every subgroup, but the most significant severe for the smallest, youngest, lowest book to market ratio, and Nasdaq-traded firms. With those evidences like Ritter's (1990) conclusion with IPOs firm, they concluded that manager is able to take advantage of firm-specific information to issue equity when the firm's stock is overvalued.

Eckbo, Masulis, and Norli (2000) try to adjust risk to find matching firms. They noted that that firms issuing stock makes a little higher market risk than nonissuing firms, but that the less specific risk would arise such as unanticipated inflation, default risk. SEOs firms have lower leverage ratio which means they have less unanticipated inflation and default risk, and they have higher stock liquidity which the nonissuing firms don't change. They thought the reason why issuing firm have lower abnormal return is because of risk-unadjusted.

3. Data and Descriptive Statistics

3.1 Data Selection

The data include seasoned equity offerings (SEOs) by US companies from January 1985 to December 2002, but excludes equity offerings by closed-end funds, real estate investment trusts (REITs), unit investment trusts, and American depositary receipt (ADRs); in other words, the data's share code for 10 or 11.

IPO firms after 1970 with seasoned equity offering during1985 – 2002 are collected from Securities Data Corporation (SDC). In addition, the sample must meet the following criteria:

1. The issuing firms are not utilities (with first two digit SIC code of 49) or financial institutions (with first digit SIC code of 6).
2. The issuing firms have monthly returns which can be obtained from the Center for Research in Security Prices (CRSP). To calculate the long term abnormal returns, we need monthly return at least one year after SEOs.
3. The issuing firm must have enough financial information for analysis from Compustat.
4. To reduce dependence for the statistical tests, we follow Healy and Palepu's (1990) procedure and exclude SEOs by the same firm during the following five years after SEOs in our sample.

In this article, we select the sample of the SEOs firms which had their IPO after 1970, and we observe the firms' dividend policy to divide into two groups: dividend-paying firms and non-dividend-paying firms. To define what firms are dividend payers or non-dividend payers, we follow Loderer and Mauer's (1992) definition. Dividend-paying firms are defined as firms that pay at least one cash dividend during the three quarters preceding or following the SEOs date, and the

others are non-dividend-paying firms. And then, we divide the dividend-paying firms into two groups based on whether they keep paying dividend after SEOs or not: keeping-dividend-paying firms and non-keeping-dividend-paying firms.

3.2 Descriptive Statistics and Sample Characteristics

According to above definition, the full sample contains 1333 SEOs events issuing in the NYSE, AMEX, NASDAQ market from January 1987 to December 2002. Table I is the distribution of SEOs by year and industry. Panel A shows the time distribution of the final sample. From Panel A, we can find that the number of firms increase in 1987, and drop off seriously form 1999. Panel B exhibits the SIC distribution of the SEOs firm. The information in Panel B shows that the SEOs firms are concentration of the Computer Hardware & software, Electric and electronic equipment. The industry of Computer Hardware & software are made 265 of the 1333 total sample offers (19.94%).

Table II display the descriptive statistics of SEOs firm for all sample, dividend-paying firms, and non-dividend-paying firms. From Table II, we can detect the different characteristic between dividend-paying firms and non-dividend-paying firms. In panel B, the dividend payers have higher ROA, market value of equity, total asset, book to market ratio, and firm age[1], which means relative to non-dividend payers, most of dividend-paying firms are large, stable, and mature.

[1] We use pooled T or satterhwaite T to test the difference of mean. We find that DLTT/AT, ROA, MVA, BMK, DAT, AT, logMVA, and AGE are significantly different from dividend-paying firm and non-dividend-paying firms.

4. Methodology

Kothari & Warner (1997), Fama (1998), Loughran & Ritter (2000), Brav (2000), and Mitchell & Stafford (2000) argue that different methodology will affect the long-run abnormal performance. In this paper, we use the buy-and-hold abnormal return method (BHARs) and Fama and French's three factor model (1993) to evaluate robustness of SEOs post performance.

4.1 Buy-and-Hold Abnormal Returns (BHARs)

Barber and Lyon (1997) and Lyon et al. (1999) argue that BHARs are important because they precisely measure investor experience from buying and holding securities for a period. However, they also found the common estimated method may bias the estimates. This bias result from the new listing, rebalancing of benchmark portfolio, and skewness of multiyear. In order to solve the skewness problem, we follow Barber and Lyon's (1999) bootstrapped skewness-adjusted t-statistic.

For each firm i, BHR is a investor's holding return from the announcement month to time T, calculating as follows:

$$BHR_{it} = \prod_{t=1}^{T} [1 + R_{it}] \qquad (1)$$

Where R_{it} is the monthly return of firm i

The buy-and-hold abnormal return (BHAR) is defined as follows,

$$BHAR_{it} = \prod_{t=1}^{T} [1 + R_{it}] - \prod_{t=1}^{T} [1 + E(R_{it})] \qquad (2)$$

Where $E(R_{it})$ is the benchmark return. In this paper, we use three different benchmarks: (1) the CRSP equally-weighted market portfolio, (2) the CRSP value-weighted market portfolio, (3) a size and book-to-market matched control sample.

To find the size and book-to-market match control firm, we follow Barber and Lyon's (1999) criterions. First, we identify all the firms in the CRSP database with the market value of common equity between 70% and 130% of the market value of equity of a sample firm. Second, from the size set of firms, we choose the firm with the closest book-to-market ratio to that of the sample firm. Market value of common equity measured on the first day of the issue month. Book-to-market ratio is the firm's book value of equity divided by its market value of equity, measured at the fiscal year end prior to the issue. And the match firm is in the NYSE, AMEX, and NASDAQ market around 1987 to 2002 and we excludes firms involved in IPO or SEO events five years prior.

We use two t-statistics to test the null hypothesis that the mean buy-and-hold abnormal return is equal to zero for a sample of n firms. We first display a conventional t-statistic:

$$t = \frac{\overline{AR_T}}{\sigma(AR_T)/\sqrt{n}} \qquad (3)$$

Where $\overline{AR_T}$ is the sample mean and $\sigma(AR_T)$ is the cross-sectional sample standard deviation of abnormal returns for the sample firm.

The other is the bootstrapped skewness-adjust t-statistic, advocated by Barber and Lyon's (1999):

$$t = \sqrt{n}\left(S + \frac{1}{3}\hat{\gamma}S^2 + \frac{1}{6n}\hat{\gamma}\right) \qquad (4)$$

Where

$$S = \frac{Mean(BHAR)_t}{\sigma(BHAR)_t}, \text{ and } \hat{\gamma} = \frac{\sum_{i=1}^{n}\left(AR_{iT} - \overline{AR_T}\right)^3}{n\sigma(AR_T)^3}$$

Note that $\hat{\gamma}$ is the estimation of the skewness coefficient. Barber and Lyon (1999)

said that the bootstrapped application of the t-statistic should be the better statistic to the t test when the distribution is asymmetrical.

According to Barber and Lyon (1999), the distribution of BHARs is positively skewed and generally doesn't have a zero mean. That why we use the skewness-adjust t-statistic to test the mean. Additionally, the BHAR methodology assumes all observations are independent of one another. Therefore, we use calendar-time Fama and French three-factor model portfolio regressions to fix the problem.

4.2 Calendar-time Fama and French Three-Factor Model Portfolio Regressions

Fama and French (1993) mentioned that firms' market factor, size, and book to market ratio have strong relationship to firms' return. If we want to know the performance of an event portfolio, we can construct an event portfolio in calendar time. The calendar-time portfolio approach was suggested by Fama (1998) and Mitchell and Stafford (2000) which represents an improvement over the BHAR methodology. The equation is as follow:

$$R_{it} - R_{ft} = \alpha_i + \beta_i (R_{mt} - R_{ft}) + s_i SMB_i + h_i HML_i + \varepsilon_{it} \qquad (5)$$

where R_{it} is the return on the portfolio *i* in month *t*, R_{ft} is the return on one-month Treasury bills in month *t*, R_{mt} is the return on a value-weighted market index in month *t*, SMB_t is the difference in the returns of a portfolio of the small and big stocks in months *t*, HML_t is the difference in the returns of a portfolio of high book-to-market stocks and low book-to-market stocks in the month *t*. The intercept, α_i, means the average monthly abnormal return in the holding period.

To construct calendar portfolio, we form an equal-weighted and a value-weighted portfolios each month of all sample firms that participated in the event within the previous 5 years[2]. The calendar time portfolios would rebalance monthly to drop all

companies that reach the end of their 5-year period and add all companies that have just executed a transaction.

The methodology's feature is to form a portfolio by calendar month, and the cross-sectional dependence problem which occurs in BHAR methodology is lower. But in order to form the calendar portfolio, the test power is sacrificed.

4.3 Multiple Regression

The sample consists of 1333 SEOs events which occur during the period between January 1987 and December 2002 that are selected from Securities Data Company's New Issues Database. We find several variables and try to observe the relationship between the abnormal return and firm characteristics. The multiple regression model is described as follows:

$$BHAR = \beta_0 + \beta_1(AGE) + \beta_2(DAT) + \beta_3(BMK) + \beta_4(CAPX / AT) + \beta_5(ROA) + \beta_6(\log MVA) + \beta_7(KDIV) \quad (6)$$

The dependent variable is the buy-and-hold abnormal return (BHAR). BHAR is the average monthly abnormal returns estimated by the benchmarks which of CRSP equally-weighted market portfolio. KDIV is a 0/1 indicator variable equal to 1 for keeping-dividend-paying firms and 0 otherwise.

[2] We exclude multiple observations on the same firm that occur within 5 years of the initial observation.

We place some firm characteristics as the control variables, where AGE is the issuer's operating years; DAT is total debt to total asset; BMK is book value of equity to market value of equity; CAPX/AT is total capital expenditure to total asset; ROA is return on asset; logMVA is log market value of asset, where MVA equals total asset minus total book value of equity pluses total market value of equity.

5. Empirical Result

5.1 Long Term Performance of SEOs Firms

Table III presents the long-term abnormal performance for five years after issuing SEOs during January 1987 to December 2002. Returns are calculated by buy-and-hold abnormal returns with three different benchmarks. The size and B/M ratio matching firms' return pattern is similar to Loughran and Ritter (1995). At first year, the SEO-issuers have slight negative return and then underperform thereafter. The CRSP equally-weighted portfolio and the CRSP value-weighted portfolio are similar result in abnormal return. In Table IV, we use Fama and French three-factor model to test the abnormal return. We find the underperformance is insignificant negative except the second year (-0.4%).[3]

5.2 Long Term Performance Categorized by Dividend-paying firms or not

In this section, we divide our sample into two groups. We classify firms into dividend-paying and non-dividend-paying firms. We follow Loderer and Mauer's (1992) to define dividend payers and non-dividend payers. Dividend-paying firms are defined as firms that pay cash dividend during the three quarters preceding or following the stock-offering date, and the others are non-dividend-paying firms.

Table V reports the average buy-and-hold abnormal month return for five year after SEOs for dividend-paying firms and non-dividend-paying firms. Based on the size and B/M ratio benchmark, we compare the difference between dividend-paying firms and non-dividend-paying firms. At the first year after issuing, both Panel A and

[3] The dependent variable is the equally-weighted month portfolio return. We use equally-weight and value- weight month portfolio return, and the return pattern is similar.

Panel B have slight negative abnormal return. we find the negative abnormal return is insignificant during issuing after five years in Panel A range from -4.12% to 4.6%. On the contrary, Panel B shows the significant negative abnormal return range from -0.19% to -13.07%. Under the CRSP equally-weighted portfolio and CRSP value-weighted portfolio, both Panel A and Panel B have similar return pattern that dividend-paying firms have less negative return.

The negative return is more significantly in CRSP equally-weighted portfolio, and the phenomenon is more obvious in Panel A. This result is similar to Loughran & Ritter (1995) and Mitchell & Stafford (2000). The result reflect that the pattern that smaller offerings underperformance more than larger offerings, and the small issues can't drive the abnormal return in the CRSP value-weighted portfolio.

Table VI reports the Fama and French three-factor model. We can find that non-dividend-paying firms have significant negative abnormal returns (-0.49%) at the 5% level in the second year after issue offerings. In other years, both the dividend-paying firms and the non-dividend-paying firms have insignificant abnormal returns.

In this classification, we use BHAR methodology and Fama and French three-factor model. We find that the result of BHAR is significant, but the result is consistent with the three factor model. That what we mention before the test power would be decreased by forming the calendar month portfolio.

5.3 Long Term Performance Categorized by Keeping Paying Dividend or Not and Regression

In this section, we focus on the dividend-paying firms. We further divide those firms into two groups: keeping-dividend-paying firms define as firms keeping paying

dividend at least one year and non-keeping-dividend-paying firms.

5.3.1 Long Term Performance

Table VII shows the result of buy-and-hold abnormal returns for keeping-dividend-paying firms and non-keeping-dividend-paying firms after SEOs. Panel A shows insignificant abnormal return of keeping-dividend-paying firms. Based on the three different benchmarks, there are positive abnormal returns in the first two year. The worst negative return displays mean abnormal return -18.56% at a quite insignificant level under a CRSP equally-weighted index in the fifth year. On the other hand, non-keeping-dividend-paying firms display mean abnormal return -92.07% at 1% significant level in the same period which show the extreme different abnormal return relative to keeping-dividend-paying firms.

In panel B, except the first year after issuing, every mean abnormal return is negative and significant. Same as previous section, the CRSP equally-weighted portfolio has higher negative abnormal return than the CRSP value-weighted portfolio. It means that the small issue offerings have higher negative abnormal return.

Table VIII is the Fama and French three-factor model (1993) for keeping-dividend-paying firms and non-keeping-dividend-paying firms after SEOs announcement. The keeping-dividend-paying firms have slight positive return in the first three year and worse in the fourth and fifth year. The t-statistic of keeping-dividend-paying firm is not significant during the five year after SEOs announcement. The non-keeping-dividend-paying firms have significantly negative abnormal return in the following five year after equity issue. We compare the difference between keeping-dividend-paying firms, non-keeping-dividend-paying firms, and non-dividend-paying firms (Panel B of table V). Using CRSP equally-weighted portfolio as benchmark, we find that the keeping-dividend-paying firms have the highest abnormal return ranged from 2.91% to -18.56%. The

non-dividend-paying firms is in the middle ranged from -3.45% to -31.86%. The non-keeping-dividend-paying firms are the worst abnormal return ranged from -6.01% to -92.07%.

By Loderer and Mauer's (1992), the managers have the motive not to stop paying dividend before SEOs because investors treat cutting dividend as a bad signal. Loderer and Mauer's (1992) find that relative to non-dividend-paying firm, the dividend-paying firms don't have better abnormal return around the announcement date. Myers and Majiluf (1984) attribute the SEOs negative return arising from the asymmetric information between manages and investors, and paying dividend give out good signal. The non-keeping-dividend-paying firms pay dividend before the SEOs announcement and try to imitate good firms and lower the asymmetric information to get better return, and then cut it off. In the long run, the investors become aware of the fact. That is why the non-keeping-dividend-paying firms would have the worst abnormal returns. The result is also identical with Michaely, Thaler, and Womack's (1995) conclusion that the dividend change would make stock price continue to change in the same direction even after the announcement over three years.

5.3.2 Ordinary Least Squares Regression Results

Table IX shows the ordinary least squares regression of post-issue stock return in the issue year for various holding periods. The dependent variable is the equally-weighted portfolio BHARs. KDIV is a dummy variable which equal to 1 for keeping-dividend-paying firms. We use the firm's operating year (AGE), total debt to total asset (DAT), book to market ratio (BMK), capital expenditure to total asset (CAPX/AT), return on asset (ROA), and logged market value of asset (logMVA) as the control variables.

The result in Table IX indicates the coefficients of KDIV are all positive, with

significantly positive coefficients at 5% or better for two-, three-, four-,and five-year holding periods. With the time goes by, the non-keeping-dividend-paying firms increase the weight of negative return. We also can detect that market value of asset has a negative relationship with long term abnormal return, and the book to market value has a positive relationship with long term abnormal return. Our overall evidence in Table IX suggests that keeping-dividend-paying firms perform significantly better the non-keeping-dividend-paying firms, consistent with the results in Table VII.

5.4 Long Term Performance Categorized of Dividend-Paying Firms by Different Definition

In section 5.2, dividend-paying firms are the firms which pay cash dividend during the three quarters preceding or following the stock-offering date. In this section, we use different definition to category dividend-paying firms. The definition of dividend-paying firms is based on how long a firm pay cash dividend before the stock-offering date.

Table X is the result of long term performance by different definition. Panel A is the same definition as section 5.2. In Panel A, the BHARs range from 0.9% to -28.36% for under the CRSP equally-weighted portfolio, and in the last two years BHARs reach the significant standard. Panel B is the definition of paying dividend for two years, and the BHARs range from 1.31% to -25.39% under the CRSP equally-weighted portfolio. Panel C is the definition of paying dividend for three years, and the BHARs range from 1.13% to -22.31% under the CRSP equally-weighted portfolio. We find that from table X, the negative returns get worse for longer time. The phenomenon is same as different definition, but the negative returns is slight in Panel B and Panel C, especially in Panel C. In Panel C, the

negative returns even do not reach the significant standard. The empirical result shows that the steadier dividend policy, the less negative return after seasoned equity offerings.

6. Conclusion

In the study, we examine the long term performance of SEOs firms with regard to different dividend policy. Many previous studies show the long term return of seasoned equity offerings issuers and dividend payers or not. They found that issuing SEOs and cutting dividend would lead to the significant long term negative returns[4]. But they seldom combine the effect of SEOs and dividend policy to see the long term return. We use 1331 SEOs issuing during from 1987 to 2002 collected from Securities Data Corporation to see the outcome.

The main conclusions are as follow:

1. The Dividend-paying firms have larger firm size, higher return on asset, higher book to market ratio, and longer operating year.
2. The Dividend-paying firms have less long term negative returns than the Non-dividend-paying firms.
3. The firms which continue paying dividend after SEOs announcement would have the best long term performance regardless of using BHARs or calendar-time Fama and French three-factor model portfolio regressions. The second is the Non-dividend-paying firms. The worst is the firm which pay dividend around SEOs announcement and cut after SEOs announcement.
4. The firms who continue paying dividend for longer time before SEOs announcement would get less long term negative returns. The steadier dividend policy gets the better long term return.

This finding is consistent with asymmetric information and signal theory that dividend does imply some information and the long term return would be affected.

[4] Michaely, Richard, and Thaler (1995) proofed that dividend omissions would cause long term negative return. Loughran and Ritter (1995), Katherine and Affleck (1995), Brav, Geczy, and Paul (2000), Mitchell and Stafford (2000) proofed that issuing seasoned equity offering would long term negative return.

The result admits the signaling model presumption that dividend s convey information which can reduce the valuation uncertainty. Firms who execute steady dividend policy would have less asymmetric information. Consequently, this kind of firms would receive less negative returns by issuing SEOs.

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Table I

Distribution of Seasoned Equity Offerings by Year and Industry

The sample consists of 1333 SEOs events which occur during the period between 1987 and 2002 that are selected from Securities Data Company's New Issues Database. The share code in CRSP must be 10 or 11 means the sample excludes equity offerings by closed-end funds, real estate investment trusts (REITs), unit investment trusts, and American depositary receipt (ADRs). Panel A is the time distribution of the sample by event year. Panel B reports the SIC distribution of the sample by two-digit SIC code.

Panel A. Time Distribution

Fiscal Year End	Number	Percentage(%)
1987	17	1.28
1988	42	3.16
1989	37	2.78
1990	77	5.79
1991	72	5.42
1992	100	7.52
1993	117	8.8
1994	105	7.9
1995	156	11.74
1996	140	10.53
1997	119	8.95
1998	93	7
1999	128	9.63
2000	60	4.51
2001	61	4.59
2002	9	0.68
total	1333	100%

Panel B. SIC Distribution

Industry	Two-digit SIC codes	Number	Percentage (%)
agriculture, forestry, and fishing	01-09, 20	17	1.28
mining	10-14	34	2.56
construction	15, 16, 17	12	0.9
manufacturing	29, 30, 31, 32,33, 34	57	4.29
wholesale trade	50, 51	70	5.27
retail trade	52-59	126	9.48
services	70-79	107	8.05
Health services	80	55	4.14
communication	48	54	4.06
Scientific Instruments	38	99	7.45
Transportation	37, 39, 40-42,44 ,45	66	4.97
Electric and electronic equipment	36	167	12.57
Paper and Paper Products	24, 25, 26, 27	27	2.03
Computer Hardware & software	35, 73	265	19.94
chemical products	28	146	10.99
the others	22, 23, 46, 47	14	1.53
total		1333	100

Table II

Variable Characteristic of SEOs Firm

The table shows the descriptive statistics of the SEOs firms. The sample consists of 1333 SEOs events which occur during the period between 1987 and 2002 that are selected from Securities Data Company's New Issues Database. Dividend-paying firms are defined as that pay cash dividend during the three quarters prior and current quarter on the seasonal equity offerings announcement, and the others are non-dividend payers. Panel A reports summary statistic of all sample events. Panel B is the summary statistic of dividend-paying firms, and Panel C is the summary statistic of non-dividend-paying firms. CAPX/TA is defined as capital expenditure divide into total asset. DLTT/TA is defined as long term debt divide into total asset. MV is defined as (total asset – book value of equity + market value of equity). BMK is defined as (book value of equity / market value of equity). DTA is defined as (total debt / total asset). TA is defined as total asset. AGE is defined as the firm's operating years.

Panel A. All SEOs Firm

	Mean	Standard Dev.	Q1	Median	Q3
CAPX/TA(%)	8.2985	9.8053	2.7756	5.3309	9.7837
DLTT/TA(%)	17.1254	22.814	0.2487	7.2507	28.2704
ROA(%)	-3.8261	26.5842	-4.543	4.234	8.897
MV($ milloin)	1027.84	6363.5992	110.3149	232.6005	671.2586
BMK	0.3011	0.3916	0.1445	0.261	0.4126
DTA(%)	20.8894	24.1798	1.171	13.094	33.274
TA($ million)	382.076	1504.0632	36.404	82.045	236.906
logMV	2.4439	0.6043	2.0426	2.3666	2.8269
AGE	2.0539	2.3705	0	1	3

Panel B. Dividend-Paying Firms

	Mean	Standard Dev.	Q1	Median	Q3
CAPX/TA(%)	8.167	9.8607	2.9518	5.4488	9.9266
DLTT/TA(%)	22.9829	18.8159	8.0387	21.641	34.2432
ROA(%)	7.1186	5.3915	3.812	6.4065	9.839
MV($ millions)	1903.198	6909.2936	239.2845	533.0445	1336.457
BMK	0.4518	0.3026	0.2689	0.4063	0.5871
DTA(%)	27.8475	19.4089	12.947	27.605	39.692
TA($ millions)	997.0705	2981.2505	124.355	318.4075	835.781
logMV	2.7714	0.5774	2.3789	2.7267	3.126
AGE	3.162	2.5561	1	3	5

Panel C. Non-Dividend-Paying Firms

	Mean	Standard Dev.	Q1	Median	Q3
CAPX/TA(%)	8.3142	9.8028	2.7689	5.3201	9.7706
DLTT/TA(%)	16.4283	23.1523	0.1443	5.9221	25.8643
ROA(%)	-5.1289	27.7759	-7.436	3.889	8.703
MV($ millions)	923.6444	6290.5058	102.8938	208.5375	599.9948
BMK	0.2831	0.3972	0.1364	0.2476	0.3903
DTA(%)	20.0664	24.5599	0.916	11.38	31.331
TA($ millions)	308.8747	1195.8035	33.392	71.071	185.62
logMV	2.405	0.5958	2.0124	2.3192	2.7781
AGE	1.922	2.3135	0	1	3

Table III

Five Year Buy-and-Hold Abnormal Returns for All SEOs Firms

The table shows the buy-and-hold abnormal returns (BHARs) of all SEOs firms during from 1987 to 2002. The five-year abnormal returns are calculated by three different benchmarks; one is size and B/M ratio matching firm, one is CRSP equally-weighted Index, and the other is CRSP value-weighted Index. We use the Cross-sectional t-statistic and Skewness-adjusted t-statistic to test the significance of the mean value of BHARs. T-statistics are reported with ***, **, and * represent significance at the 1%, 5%, and 10% level each.

	1 year	2 year	3 year	4 year	5 year
A. based on size and B/M ratio matching firm					
Abnormal return (Mean)	-0.28%	-5.32%	-6.17%	-11.60%	-11.57%
Cross-sectional t-stat	-0.185	-2.298*	-0.984	-2.637**	-2.383**
Skewness-adjusted t-stat	-0.186	-2.049*	-0.777	-2.135*	-2.357**
B. based on CRSP equally-weighted Index					
Abnormal return (Mean)	-2.99%	-16.70%	-23.37%	-31.55%	-30.06%
Cross-sectional t-stat	-1.377	-5.778***	-6.078***	-7.013***	-4.741***
Skewness-adjusted t-stat	-1.314	-4.733***	-4.461***	-5.081***	-3.513***
C. based on CRSP value-weighted Index					
Abnormal return (Mean)	-3.41%	-16.52%	-22.56%	-26.02%	-19.11%
Cross-sectional t-stat	-1.55	-5.675***	-5.823***	-5.734***	-3.027**
Skewness-adjusted t-stat	-1.469	-4.721***	-4.434***	-4.515***	-2.525*

Table IV

Calendar-Time Fama and French Three-Factor Model Portfolio Regression for All SEOs Firms

This table shows the portfolio abnormal returns for all SEOs firms which are based on the three-factor model of Fama and French (1993). The equation is as follow:

$$R_{pt} - R_{ft} = \alpha_i + \beta_i (R_{mt} - R_{ft}) + s_i SMB_i + h_i HML_i + \varepsilon_{it}$$

Where dependent variable, *Rpt*, is the equally-weighted event portfolio return. *Rft* is the return on one-month Treasury bills in month *t*, R_{mt} is the return on a value-weighted market index in month *t*, SMB_t is the difference in the returns of a portfolio of the small and big stocks in months *t*, HML_t is the difference in the returns of a portfolio of high book-to-market stocks and low book-to-market stocks in the month *t*. Newey West t-statistics are reported in parentheses. ***, **, and * represent significance at the 1%, 5%, and 10% level each.

Holding Period	Intercept (α)	RMRF	SMB	HML	R-squared
1 year	-0.0016	1.253	1.057	-0.6051	0.8371
	(-0.58)	(16.20)***	(10.33)***	(-6.20)***	
2 year	-0.0041	1.3056	1.0003	-0.3961	0.8321
	(-1.54)	(19.53)***	(10.07)***	(-4.60)***	
3 year	-0.0019	1.3408	0.9623	-0.2734	0.8233
	(-0.76)	(19.97)***	(10.46)***	(-3.45)***	
4 year	-0.0023	1.3291	0.9725	-0.1839	0.8276
	(-0.99)	(20.24)***	(11.71)***	(-2.46)**	
5 year	-0.0021	1.3204	0.9883	-0.1413	0.8317
	(-0.9)	(20.26)***	(12.13)***	(-1.92)*	

Table V

Five Year Buy-and-Hold Abnormal Returns for Dividend-Paying Firms and non-Dividend-Paying Firms

The table shows the buy-and-hold abnormal returns (BHAR) of dividend-paying firms and non-dividend-paying firms during from 1987 to 2002. Panel A presents the dividend-paying firms, and Panel B presents the non-dividend-paying firms. The five-year abnormal returns are calculated by three different benchmarks; one is size and B/M ratio matching firm, one is CRSP equally-weighted portfolio, and the other is CRSP value-weighted portfolio. We use the Cross-sectional t-statistic and Skewness-adjusted t-statistic to test the significance of the mean value of BHARs. T-statistics are reported with ***, **, and * represent significance at the 1%, 5%, and 10% level each.

Panel A. Dividend-Paying Firms

	1 year	2 year	3 year	4 year	5 year
A. based on size and B/M ratio matching firm					
Abnormal return (Mean)	-0.21%	-2.59%	2.29%	-4.12%	4.60%
Cross-sectional t-stat	-0.088	-0.742	0.395	-0.54	0.287
Skewness-adjusted t-stat	-0.088	-0.726	0.41	-0.528	0.308
B. based on CRSP equally-weighted portfolio					
Abnormal return (Mean)	0.90%	-5.35%	-16.53%	-28.96%	-35.13%
Cross-sectional t-stat	0.24	-0.899	-1.823*	-3.029**	-2.824**
Skewness-adjusted t-stat	0.242	-0.859	-1.452	-2.436**	-2.167**
C. based on CRSP value-weighted portfolio					
Abnormal return (Mean)	1.30%	-2.58%	-11.50%	-21.53%	-23.62%
Cross-sectional t-stat	0.331	-0.415	-1.228	-2.133**	-1.814*
Skewness-adjusted t-stat	0.334	-0.408	-1.077	-1.883*	-1.574*

Panel B. Non-Dividend-Paying Firms

	1 year	2 year	3 year	4 year	5 year
A. based on size and B/M ratio matching firm					
Abnormal return (Mean)	-0.19%	-6.43%	-7.56%	-13.07%	-12.99%
Cross-sectional t-stat	-0.121	-2.736**	-1.204	-2.958**	-2.669**
Skewness-adjusted t-stat	-0.121	-2.395**	-0.9	-2.337**	-2.637**
B. based on CRSP equally-weighted Index					
Abnormal return (Mean)	-3.45%	-18.05%	-24.19%	-31.86%	-29.46%
Cross-sectional t-stat	-1.446	-5.723***	-5.806***	-6.494***	-4.244***
Skewness-adjusted t-stat	-1.373	-4.633***	-4.244***	-4.731***	-3.201**
C. based on CRSP value-weighted Index					
Abnormal return (Mean)	-3.97%	-18.18%	-23.88%	-26.55%	-18.57%
Cross-sectional t-stat	-1.643*	-5.736***	-5.700***	-5.380***	-2.693**
Skewness-adjusted t-stat	-1.547*	-4.693***	-4.287***	-4.232***	-2.271**

Table VI

Calendar-Time Fama and French Three-Factor Model Portfolio Regression for Dividend-Paying Firms and non-Dividend-Paying Firms

This table shows the portfolio abnormal returns for the dividend-paying firms and the non-dividend-paying firms which are based on the three-factor model of Fama and French (1993). The equation is $R_{pt} - R_{ft} = \alpha_i + \beta_i (R_{mt} - R_{ft}) + s_i SMB_i + h_i HML_i + \varepsilon_{it}$, Where dependent variable, *Rpt*, is the equally-weighted event portfolio return. *Rft* is the return on one-month Treasury bills in month *t*, R_{mt} is the return on a value-weighted market index in month *t*, SMB_t is the difference in the returns of a portfolio of the small and big stocks in months *t*,HML_t is the difference in the returns of a portfolio of high book-to-market stocks and low book-to-market stocks in the month t. Newey West t-statistics are reported in parentheses. ***, **, and * represent significance at the 1%, 5%, and 10% level each.

	Dividend-Paying Firms						Non-Dividend-Paying Firms				
Holding Period	α (t-statistic)	β_i (t-statistic)	S_i (t-statistic)	H_i (t-statistic)	R square	Holding Period	α (t-statistic)	β_i (t-statistic)	S_i (t-statistic)	H_i (t-statistic)	R square
1 year	-0.0006	1.026	0.445	0.7867	0.3693	1 year	-0.0014	1.2789	1.1033	-0.6859	0.8394
	(-0.14)	(10.24)***	(2.59)*	(5.15)***			(-0.47)	(16.45)***	(10.62)***	(-6.93)***	
2 year	-0.0004	1.0095	0.4582	0.6165	0.5252	2 year	-0.0049	1.3312	1.0593	-0.473	0.8358
	(-0.14)	(13.06)***	(3.53)***	(4.86)***			(-1.78)*	(19.61)***	(10.71)***	(-5.44)***	
3 year	-0.0022	1.0476	0.558	0.5871	0.6038	3 year	-0.0022	1.3665	1.0135	-0.3443	0.8211
	(-0.87)	(15.69)***	(5.21)***	(5.84)***			(-0.82)	(19.74)***	(10.74)***	(-4.21)***	
4 year	-0.0033	1.0285	0.5442	0.511	0.6462	4 year	-0.0022	1.3579	1.0243	-0.2394	0.8214
	(-1.44)	(17.50)***	(5.39)***	(5.81)***			(-0.89)	(20.14)***	(11.91)***	(-3.11)**	
5 year	-0.0022	1.0248	0.5774	0.5061	0.6567	5 year	-0.0022	1.3514	1.0392	-0.1947	0.829
	(-0.97)	(17.88)***	(5.80)***	(5.77)***			(-0.91)	(20.18)***	(12.24)***	(-2.55)**	

Table VII

Five Year Buy-and-Hold Abnormal Returns for Keeping-Dividend-Paying Firms and Non-Keeping-Dividend-Paying Firms after SEOs

The table shows the buy-and-hold abnormal returns (BHARs) of keeping-dividend-paying firms and non-keeping-dividend-paying firm during from 1987 to 2002. Keeping-dividend-paying firms are defined as firms that pay cash dividend during the three quarters prior or on the seasonal equity offerings announcement, and keep paying dividend after SEOs. Non-keeping-dividend-paying firms are that pay dividend at SEOs period and cease paying dividend after SEOs. The five-year abnormal returns are calculated by three different benchmarks; one is size and B/M ratio matching firm, one is CRSP equally-weighted portfolio, and the other is CRSP value-weighted portfolio. We use the cross-sectional t-statistic and skewness-adjusted t-statistic to test the significance of the mean value of BHARs. T-statistics are reported with ***, **, and * represent significance at the 1%, 5%, and 10% level each.

Panel A. Keeping-Dividend-Paying Firms

	1 year	2 year	3 year	4 year	5 year
A. based on size and B/M ratio matching firm					
Abnormal return (Mean)	1.57%	3.40%	10.33%	2.19%	16.70%
Cross-sectional t-stat	0.558	0.853	1.468	0.233	0.818
Skewness-adjusted t-stat	0.569	0.883	1.679*	0.236	0.983
B. based on CRSP equally-weighted Index					
Abnormal return (Mean)	2.91%	4.18%	-2.80%	-13.99%	-18.56%
Cross-sectional t-stat	0.684	0.581	-0.252	-1.213	-1.225
Skewness-adjusted t-stat	0.702	0.602	-0.245	-1.106	-1.083
C. based on CRSP value-weighted Index					
Abnormal return (Mean)	3.24%	6.65%	0.54%	-8.29%	-7.69%
Cross-sectional t-stat	0.729	0.885	0.047	-0.671	-0.482
Skewness-adjusted t-stat	0.749	0.925	0.047	-0.646	-0.465

Panel B. Non-Keeping-Dividend-Paying Firms

	1 year	2 year	3 year	4 year	5 year
A. based on size and B/M ratio matching firm					
Abnormal return (Mean)	-6.33%	-23.19%	-25.34%	-25.81%	-36.96%
Cross-sectional t-stat	-1.428*	-3.858***	-3.667***	-2.899**	-4.269***
Skewness-adjusted t-stat	-1.347	-3.560***	-2.830**	-2.110**	-2.371**
B. based on CRSP equally-weighted Index					
Abnormal return (Mean)	-6.01%	-38.10%	-63.71%	-80.45%	-92.07%
Cross-sectional t-stat	-0.742	-5.576***	-7.428***	-7.108***	-6.330***
Skewness-adjusted t-stat	-0.723	-5.393***	-7.057***	-5.817***	-6.107***
C. based on CRSP value-weighted Index					
Abnormal return (Mean)	-5.39%	-34.33%	-52.89%	-67.04%	-78.40%
Cross-sectional t-stat	-0.644	-4.543***	-6.077***	-5.990***	-5.228***
Skewness-adjusted t-stat	-0.63	-4.871***	-6.420***	-6.170***	-5.503***

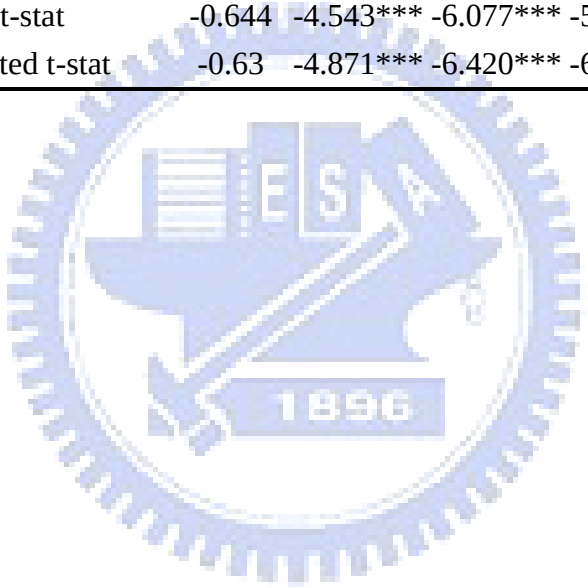

Table VIII

Calendar-Time Fama and French Three-Factor Model Portfolio Regression for Keeping-Dividend-Paying Firms and Non-Keeping-Dividend-Paying Firms after SEOs

This table shows the portfolio abnormal returns for keeping-dividend-paying firms and non-keeping-dividend-paying firms during from 1987 to 2002. which are based on the three-factor model of Fama and French (1993). The equation is $R_{pt} - R_{ft} = \alpha_i + \beta_i (R_{mt} - R_{ft}) + s_i SMB_i + h_i HML_i + \varepsilon_{it}$, Where dependent variable, *Rpt*, is the equally-weighted event portfolio return. *Rft* is the return on one-month Treasury bills in month *t*, R_{mt} is the return on a value-weighted market index in month *t*, SMB_t is the difference in the returns of a portfolio of the small and big stocks in months *t*, HML_t is the difference in the returns of a portfolio of high book-to-market stocks and low book-to-market stocks in the month *t*.. Newey West t-statistics are reported in parentheses. ***, **, and * represent significance at the 1%, 5%, and 10% level each.

	Keeping-dividend-paying firms						Non-Keep-Paying Dividend Firms				
Holding Period	α (t-statstic)	β_i (t-statstic)	S_i (t-statstic)	H_i (t-statstic)	R square	Holding Period	α (t-statstic)	β_i (t-statstic)	S_i (t-statstic)	H_i (t-statstic)	R square
1 year	0.0015	1.0266	0.5593	0.9468	0.299	1 year	-0.0113	1.3313	0.2394	0.7012	0.1965
	(0.35)	(8.04)***	(2.75)**	(3.34)**			(-1.45)	(6.71)***	(0.97)	(2.64)**	
2 year	0.0027	0.941	0.49	0.6147	0.478	2 year	-0.0144	1.3443	0.3379	0.7608	0.2949
	(0.91)	(10.87)***	(3.61)***	(4.36)***			(-2.40)**	(8.35)***	(1.81)*	(3.40)***	
3 year	0.0002	0.9769	0.5482	0.6181	0.5792	3 year	-0.0119	1.3775	0.6411	0.5697	0.3953
	(0.08)	(13.68)***	(4.75)***	(6.03)***			(-2.27)**	(9.85)***	(3.86)***	(2.97)**	
4 year	-0.0011	0.9465	0.5394	0.536	0.6212	4 year	-0.0114	1.3748	0.5927	0.4441	0.4146
	(-0.5)	(15.40)***	(5.13)***	(5.91)***			(-2.30)**	(10.02)***	(3.57)***	(2.50)**	
5 year	-0.0003	0.951	0.5677	0.5298	0.6294	5 year	-0.0072	1.3229	0.6886	0.46	0.4593
	(-0.14)	(15.83)***	(5.35)***	(5.81)***			(-1.61)*	(10.87)***	(5.00)***	(2.85)**	

Table IX

Ordinary Least Squares Regressions of Abnormal Stock Returns to Keeping-Dividend-Paying Firms and Non-Keeping-Dividend-Paying Firms after SEOs

The table shows the ordinary least squares regressions result of abnormal returns on keeping-dividend-paying firms and non-keeping-dividend-paying firms after the five year over the issue year. The dependent variable is the buy-and-hold abnormal returns which calculate by the CRSP equally-weighted benchmark. The control variables include the issuer's operating years (AGE), total debt to total asset (DTA), book to market ratio(BMK), capital expenditure to total asset(CAPX/TA), return on asset (ROA), logged market value of asset (logMV), and KDIV which is a 0/1 indicator variable equal to 1 for keeping-dividend-paying firms. White's (1980) heteroskedasticity consistent t-statistics are reported in parentheses. ***, **, and * represent significance at the 1%, 5%, and 10% level.

	1 year	2 year	3 year	4 year	5 year
Intercept	-0.97522	1.40253	0.3346	-1.3183	-0.50387
	(-0.459)	(0.727)	(0.296)	(-0.724)	(-0.247)
AGE	0.02341	-0.05612	0.01027	0.07497	0.1082
	(0.171)*	(-0.660)	(0.271)	(1.021)	(1.477)
DTA	-0.01259	-0.02398	-0.01025	-0.01845	-0.01093
	(-0.742)	(-1.188)	(-1.079)	(-1.39)	(-0.710)
BMK	-0.28812	-0.45764	0.01705	0.56981	0.37005
	(-0.262)	(-0.623)	(0.045)	(0.679)	(0.427)
CAPX/TA	0.04179	0.02078	-0.00905	0.00302	-0.00702
	(1.263)	(0.942)	(-0.983)	(0.109)	(-0.325)
ROA	-0.00091818	-0.07981	-0.03111	-0.01792	-0.02626
	(-0.016)	(-1.099)	(-0.972)	(-0.366)	(-0.546)
logMV	0.02127	-0.63114	-0.21513	-0.29759	-0.51872
	(0.035)	(-1.354)	(-0.784)	(-0.660)	(-0.937)
KDIV	1.25514	1.83291	0.7686	1.92095	1.46469
	(1.665)*	(4.105)***	(3.358)***	(4.807)***	(2.784)**
Adj-R square	0.0305	0.0566	0.0389	0.085	0.0814
F-statistic	0.6	2.19	1.77	2.66	1.21
Prob.(F-stat.)	0.7586	0.0389	0.098	0.0137	0.3023

Table X

Five Year Buy-and-Hold Abnormal Returns for Different Definition of Dividend-Paying Firms

The table shows the buy-and-hold abnormal returns (BHARs) of dividend-paying firms of different definition. Panel A is the definition of paying dividend for one year before SEOs announcement, Panel B is the definition of paying dividend for two years before SEOs announcement, and Panel C is the definition of paying dividend for three years before SEOs announcement. The five-year abnormal returns are calculated by three different benchmarks; one is size and B/M ratio matching firm, one is CRSP equally-weighted Index, and the other is CRSP value-weighted Index. We use the cross-sectional t-statistic and skewness-adjusted t-statistic to test the significance of the mean value of BHARs. T-statistics are reported with ***, **, and * represent significance at the 1%, 5%, and 10% level each.

Panel A. Dividend-Paying Firms for One Year

	1 year	2 year	3 year	4 year	5 year
A. based on size and B/M ratio matching firm					
Abnormal return (Mean)	-0.21%	-2.59%	2.29%	-4.12%	4.60%
Cross-sectional t-stat	-0.088	-0.742	0.395	-0.54	0.287
Skewness-adjusted t-stat	-0.088	-0.726	0.41	-0.528	0.308
B. based on CRSP equally-weighted portfolio					
Abnormal return (Mean)	0.90%	-5.35%	-16.53%	-28.96%	-35.13%
Cross-sectional t-stat	0.24	-0.899	-1.823*	-3.029**	-2.824**
Skewness-adjusted t-stat	0.242	-0.859	-1.452	-2.436**	-2.167**
C. based on CRSP value-weighted portfolio					
Abnormal return (Mean)	1.30%	-2.58%	-11.50%	-21.53%	-23.62%
Cross-sectional t-stat	0.331	-0.415	-1.228	-2.133**	-1.814*
Skewness-adjusted t-stat	0.334	-0.408	-1.077	-1.883*	-1.574*

Panel B. Dividend-Paying Firms for Two Years

	1 year	2 year	3 year	4 year	5 year
A. based on size and B/M ratio matching firm					
Abnormal return (Mean)	0.69%	2.03%	10.14%	-0.52%	18.26%
Cross-sectional t-stat	0.246	0.484	1.195	-0.046	0.687
Skewness-adjusted t-stat	0.25	0.497	1.372	-0.046	0.812
B. based on CRSP equally-weighted Index					
Abnormal return (Mean)	1.31%	0.24%	-11.88%	-21.72%	-25.39%
Cross-sectional t-stat	0.29	0.033	-1.457	-2.109**	-1.737*
Skewness-adjusted t-stat	0.294	0.033	-1.399	-1.908*	-1.497*
C. based on CRSP value-weighted Index					
Abnormal return (Mean)	1.78%	3.00%	-8.54%	-14.47%	-11.54%
Cross-sectional t-stat	0.372	0.391	-0.926	-1.257	-0.712
Skewness-adjusted t-stat	0.379	0.396	-0.908	-1.213	-0.672

Panel C. Dividend-Paying Firms for Three Years

	1 year	2 year	3 year	4 year	5 year
A. based on size and B/M ratio matching firm					
Abnormal return (Mean)	1.03%	0.88%	9.47%	-4.26%	0.40%
Cross-sectional t-stat	0.321	0.197	1.163	-0.393	0.027
Skewness-adjusted t-stat	0.328	0.199	1.313	-0.403	0.027
B. based on CRSP equally-weighted Index					
Abnormal return (Mean)	1.13%	4.19%	-5.44%	-16.48%	-22.31%
Cross-sectional t-stat	0.235	0.511	-0.604	-1.449	-1.482
Skewness-adjusted t-stat	0.238	0.522	-0.592	-1.326	-1.294
C. based on CRSP value-weighted Index					
Abnormal return (Mean)	3.34%	9.86%	1.61%	-5.00%	-4.11%
Cross-sectional t-stat	0.64	1.107	0.161	-0.396	-0.246
Skewness-adjusted t-stat	0.66	1.149	0.162	-0.39	-0.241