

To Cut or Not to Cut a Dividend*

Laarni T. Bulan
International Business School
Brandeis University
Waltham, MA 02454
lbulan@brandeis.edu

November 2010

JEL Codes: G32, G35

Keywords: Dividend Cut, Dividend Policy, Financial Flexibility

* I thank Michael Goldstein, Jens Hilscher, Blake Le Baron, Carol Osler, Peter Petri, Pegaret Pichler, Elif Sisli-Ciamarra, Narayanan Subramanian, Dan Tortorice, an anonymous referee and seminar participants at the 2010 Boston Area Finance Symposium for helpful comments and suggestions. I acknowledge the excellent research assistance of Michelle Battat, Arina Blechter, Leigh Cohen, Josh Goldfisher, Yayun Pan and Diheng Xiao. Any errors or omissions are my responsibility. Comments welcome.

To Cut or Not to Cut a Dividend

ABSTRACT

Motivated by the argument that managers will cut their dividend only when there are visible signs of poor performance, I revisit the issue of why firms cut their regular cash dividend. I use a propensity score matching methodology to differentiate firms according to their likelihood of cutting a dividend where the likelihood is a function of observable firm characteristics. I have three main findings: First, I find that the market reaction to dividend cut announcements is proportional to the element of surprise. Specifically, for a given magnitude of the dividend cut, I find that the three-day cumulative abnormal return around the dividend cut announcement is more negative for firms with less visible signs of poor performance compared to those that have experienced a more prolonged period of poor performance. Second, while on average firms cut their dividend as a *last resort* response to poor performance as suggested by prior studies, a significant number of firms cut their dividend *pro-actively* even without such visible signs of poor performance. The preservation of a low leverage ratio appears to be of first-order importance to these “pro-active” firms. Third, I find that by and large, firms use their poor performance to justify a dividend cut. Moreover, the absence of *concurrent* poor performance seems to preclude the option of cutting the dividend. Instead, firms may resort to cut back on capital expenditures.

DeAngelo and DeAngelo (2007) argue that an established track record of dividend payment signals the strength of management's commitment to paying future dividends. Investors will discount the firm's stock price if cash retention is deemed to be excessive (Jensen, 1986), but if optimal dividends are paid then the firm's shares will trade more closely to their intrinsic value.¹ If a firm cuts its dividend, investors will also discount the stock price when there are no visible signs of financial distress that warrant the conservation of cash. On the other hand, investors will be more forgiving of a dividend cut if they perceive that the cut is necessary for the firm's turnaround.²

Empirical evidence documents a strong reluctance of managers to cut their regular cash dividend (DeAngelo, DeAngelo and Skinner, 2008). In a survey of chief financial officers (CFOs), Brav, Graham, Harvey and Michaely (2005) find that firm payout policy remains very conservative: managers seek to maintain the existing level of dividends and avoid having to cut dividends except in extreme circumstances. This reluctance to cut the dividend is driven, in part, by the significant negative market reaction to dividend cuts.³ DeAngelo and DeAngelo (1990) and Daniel, Denis and Naveen (2010) have also shown that dividend cuts occur infrequently and when they do occur, they are generally preceded by a period of poor operating performance (Healy and Palepu, 1988; Benartzi, Michaely, and Thaler; 1997; Grullon, Michaely, and Swaminathan, 2002; Lie, 2005). DeAngelo, De Angelo and Skinner (1992) argue that that the dividend reduction "reflect[s] the low level of current and expected future earnings" of the firm. Stepanyan

¹Building on the security valuation problem in Myers and Majluf (1984), the payment of optimal dividends allows for greater financial flexibility since firms would be more willing to issue equity when necessary.

² See also Lintner (1956), Shleifer and Vishny (1997), La Porta et al. (2000), Shleifer (2000) and Gomes (2000).

³See Woolridge (1982, 1983), Dielman and Openheimer (1984), Eades et al. (1985), Healy and Palepu (1988), Benartzi, Michaely and Thaler (1997), Grullon, Michaely, and Swaminathan (2002).

(2009) further shows that dividend-cutting firms lack financial slack (excess cash or excess debt capacity).

Given these observations, a dividend cut should not be much of a surprise if indeed managers cut their dividend only as a last resort. Tell-tale signs of poor performance and deteriorating financial flexibility should affect investors' expectations about the possibility of a dividend cut within a firm. On the other hand, anecdotal evidence also shows that some firms cut their dividend outside of poor performance. A classic example is the case of Florida Power and Light (FPL)⁴. In 1994, FPL reduced its dividend for the first time in 47 years in the midst of uncertainty due to deregulation in the electric utilities industry. FPL declared that the dividend would be cut by 32 % in order to improve the firm's financial flexibility. Far from financial distress, FPL management announced the cut would provide funds for the repurchase of shares and the reduction of debt, actions that would strengthen the company's financial structure. As expected, investor reaction to FPL's cut was negative but analyst reactions were mixed. Some viewed the cut as pro-active, while others viewed the cut more pessimistically.

In this paper, I revisit the question of why firms cut their regular cash dividend. Motivated by the argument that managers will cut their dividend only when there are visible signs of poor performance, I investigate three important questions: First, is the investor reaction to dividend cuts more severe when the cut is not preceded by visible poor performance?⁵ While prior work has shown that the investor reaction to dividend cuts is proportional to the magnitude of the cut, the element of surprise based on past firm performance has largely been ignored. Second, do firms cut their dividend as a *last resort*

⁴ See Schreiber (1995).

⁵ The negative market reaction to dividend cuts is a well documented fact but exactly what investors are reacting to remains subject to debate (Allen and Michaely, 2003).

response to poor performance as suggested by prior studies or are there a significant number of firms that cut their dividend *pro-actively* even without such visible signs of distress? And third, why do some firms cut their dividend and other firms do not, even after a period of poor performance?

To address these questions, I use a propensity score matching methodology to classify firms according to the likelihood that the firm will cut its dividend. This likelihood is a function of observable firm characteristics such as operating and financial performance. Consistent with past studies, the likelihood of a dividend cut is higher when we there are visible signs of distress. On the other hand, the likelihood of a cut is lower when poor performance is not observed. My data covers Compustat firms between 1965 and 2004 and includes 901 occurrences of dividend cuts. I have three main findings.

First, I find that the market reaction to dividend cut announcements is proportional to the element of surprise. Specifically, I find that for a given magnitude of the dividend cut, firms with less visible signs of poor performance before the cut have a more negative three day abnormal return around the dividend cut announcement compared to those firms with more visible signs of poor performance. Thus, while prior work has documented that the investor reaction to dividend cuts is related to the magnitude of the cut, I find that in addition, the investor reaction is more severe when the dividend cut is least likely to occur. Moreover, I also find that among firms that are most likely to cut their dividend but do not end up cutting, the investor reaction to the dividend *maintenance* announcement is positive.

Second, I find that dividend cutting firms with high and low likelihoods of cutting their dividend are two very different types of firms. The first type cuts their dividend after

a prolonged period of poor performance suggesting the cut is a last resort response to operating woes, consistent with conventional wisdom. These firms also experience a significant and persistent increase in their leverage ratios in the year of the dividend cut. The second type cuts their dividend at the early signs of poor performance when the extent of their operating troubles may not yet be fully visible to investors. These “early” cutters also appear to be motivated by the preservation of financial flexibility (a low leverage ratio), suggesting they are more “pro-active” in their response to their poor performance.⁶

Third, I find that by and large, firms use their poor performance (visible or otherwise) to justify a dividend cut. Furthermore, the absence of a *concurrent* decline in operating performance possibly precludes the option of cutting the dividend despite *past* poor performance. Instead, firms choose to cut back on their capital investments. This is consistent with Daniel, Denis and Naveen (2010) who find that dividend maintenance is of first order importance, even at the expense of cutting investments. My finding complements theirs and further provides one possible explanation for why some firms cut capital expenditures and not their dividend.

Overall, this study documents new findings that help explain the motivations behind dividend reductions and furthers our understanding of dividend policy. This paper shows that the market reaction to dividend cut announcements is positively related to the element of surprise. This paper also helps us better understand why firms cut their

⁶ Prior work has shown that dividend reductions are associated with firm restructuring activities (DeAngelo et al. (1992) and Jensen and Johnson (1995). More recently, Jensen, Lundstrum and Miller (2010) argue that a dividend cut signals retrenchment within the firm, which entails the adoption of various cost-cutting measures. Thus, my findings can be interpreted within the context of restructuring strategies – i.e. last resort restructuring versus pro-active restructuring.

dividend, what kinds of firms cut their dividend, and why other firms don't cut their dividend. My findings also have broader implications for firm financial policy and underscore the importance of financial flexibility in investment and financing decisions.

The remainder of the paper is organized as follows: Section I explains the data and variable construction. In Section II, I use a logit model to identify firms that are most likely to cut their dividend and those that are least likely to cut their dividend. Section III relates the market reaction to dividend cut announcements to the likelihood of cutting a dividend. Section IV investigates possible motivations for cutting and not cutting a dividend. I examine the robustness of my results in Section V while Section VI concludes.

I. Data and Variables

A. Sample

My data comes from the CRSP and Compustat databases for the period 1965-2004. Following previous work on dividends, only non-financial and non-utility firms paying regular cash dividends are included in the analysis, i.e. any distribution recorded in the CRSP database that has share codes equal to 10 or 11, distribution codes equal to 12XY and 4-digit SIC codes not equal to 49YY or 6YYY, where X is equal to 3, 4 or 5 and Y stands for any digit. Next, I identify a sample of *dividend events* consisting of either dividend cuts or non-dividend cuts.

A dividend cut is as a reduction in a firm's regular cash dividend per share in a particular fiscal year. If there is more than one reduction in the fiscal year, I take the first

occurrence of the cut as the *dividend event*.⁷ To ensure that actual reductions in the firm's regular dividend per share are identified, I exclude observations with special dividends, stock splits and mergers occurring in the period before the cut but after the previous regular dividend payment.

Dividend omissions (100 % reductions) are also included in the sample. A potential dividend omission is first identified when a firm has not paid a dividend within 1 quarter, 6 months or 1 year from the previous payment if the firm pays quarterly, semi-annual or annual dividends, respectively. From this pool of potential dividend omissions, *omission announcement dates* are obtained by hand from the *Wall Street Journal Index* and *Lexis-Nexis*. Only those observations with omission announcement dates are retained.

Furthermore, the sample is limited to dividend reductions of 10 % or more⁸ and to firms that have not cut their dividend in the three years preceding the cut. This allows me to focus on firms that are making a significant change in their dividend policy. I also require non-missing values of key firm characteristics described in Section I.B below. This results in a sample of 901 dividend reductions, which includes 247 dividend omissions. In Table I, I provide a breakdown of the number of dividend cuts each year. As expected, I observe a higher frequency of dividend cuts during the US recessions of 1970, 1975, 1980, 1982, 1991 and 2001.⁹

Next, I construct a control sample consisting of *non-dividend cuts*. I identify firms that declare regular cash dividends that are either equal to or greater than the previous regular dividend payment. If there is more than one occurrence of a non-dividend cut in

⁷ Multiple cuts in a fiscal year are aggregated into a single cut.

⁸ Grullon, Michaely and Swaminathan (2002) focus on dividend cuts of 12.5 % or greater. The magnitude of a dividend cut is defined as $(D_j - D_{j-1})/D_{j-1}$ where j corresponds to the current dividend payment period.

⁹ These years correspond to the business cycle troughs according to the NBER website.

a fiscal year, I take the first occurrence as the dividend event. If there is at least one dividend cut occurring in the same fiscal year, the observation is excluded from the control sample. Similar to the dividend reduction sample, this sample is limited to firms that have not cut their dividend in the three years preceding the dividend event and to firms with non-missing values of key firm characteristics. Finally, observations with special dividends, stock splits and mergers occurring in the period before the non-dividend cut but after the previous regular dividend payment are dropped. This results in 22,768 observations of non-dividend cuts.

B. Variables

The main variables that I construct from Compustat are the following: firm size (log of total assets), profitability (ROA or return on assets), sales growth, capital expenditures scaled by total assets, market-to-book ratio, cash holdings scaled by total assets, and book leverage. I calculate industry-adjusted measures of these variables by subtracting the four-digit SIC industry median value of the variable each year. I also calculate the *predicted change in ROA* (following Fama and French, 2000) to account for mean reversion in profitability, the *previous dividend yield* and the *previous dividend change*. The previous dividend yield is defined as the previous period's regular cash dividend divided by the stock price ten trading days prior to the current dividend declaration date reported by CRSP.¹⁰ The previous dividend change is $(D_{j-1} - D_{j-2})/D_{j-2}$ where j-1 is the previous dividend payment period. Further details of these variable

¹⁰ I use the stock price ten trading days prior to the dividend declaration date to preclude any information dissemination related to the dividend event that may have occurred prior to the announcement itself. I have also used the stock price five and three trading days prior to the dividend declaration date and find similar results.

calculations are described in the appendix. I impose standard outlier rules at the 1 % tails of the data.

Next, I calculate risk measures using a firm's daily returns¹¹ from CRSP and estimate the three factor model of Fama and French (1993):

$$r_{it} - r_{ft} = \alpha_i + \beta_M (r_{Mt} - r_{ft}) + \beta_{SMB} r_{SMBt} + \beta_{HML} r_{HMLt} + \varepsilon_{it} \quad (1)$$

where r_{it} is the firm's daily return at time t , r_{ft} is the corresponding risk free rate, r_M is the daily return on the market portfolio, r_{SMB} is the small-minus-big (SMB) factor and r_{HML} is the high-minus low (HML) factor. Data on the factors is obtained from the Fama-French factors database on WRDS. The factor loadings are the market beta, SMB beta and HML beta respectively. The SMB beta captures small firm risk while the HML beta captures earnings distress risk. The annualized standard deviation of residuals is the measure for idiosyncratic risk.

I also calculate the cumulative abnormal returns (CARs) on a stock in the three-days centered around a dividend declaration date as follows:

$$AR_{it+k} = r_{it+k} - r_{ft+k} - b_M (r_{Mt+k} - r_{ft+k}) - b_{SMB} r_{SMBt+k} - b_{HML} r_{HMLt+k} \quad (2)$$

$$CAR_i = \sum_{k=-1}^{+1} AR_{it+k} \quad (3)$$

In equation 2, t is the dividend declaration date from CRSP¹² and AR_{it+k} is the abnormal return on stock i on the k th trading day relative to the announcement date. b_M , b_{SMB} and b_{HML} are the Fama-French three-factor betas. Alternatively, I calculate cumulative excess returns (CER) in the 3-day window around the dividend declaration date according to Michaely, Thaler, Womack (1995):

¹¹ I use daily returns in the one year period before the dividend declaration date, excluding the 60 day window immediately preceding the dividend declaration.

¹² For dividend omissions, this is the omission announcement date that I hand-collected.

$$CER_i = \prod_{-1}^{+1} (1 + r_{it}) - \prod_{-1}^{+1} (1 + r_{Mt}). \quad (4)$$

In equation 4, $t=0$ is the dividend declaration date, r_{it} is the daily return on stock i on day t , and r_M is the daily return on the CRSP value weighted index.¹³

C. Firm Characteristics Around the Dividend Event

Figure 1 shows the median operating and financial characteristics of the dividend cutters and control firms in the seven years centered on the dividend event year. Table II provides more detailed descriptive statistics in the year prior to the dividend event. There is a sharp decline in ROA and sales growth in the three years leading into the year of the dividend cut, where firms achieve their lowest levels below the industry median. ROA and sales growth both bounce back after the cut, although they do not return to their original levels. The market-to-book ratio displays a similar U-shaped pattern suggesting that market valuations reflect firm operating performance over this period. The pattern for predicted change in ROA confirms the mean-reversion in profitability documented by Fama and French (2000). Capital expenditure declines in the year of and after the dividend cut, and then recovers slightly thereafter. Also notable is the constant level of capital expenditures in the three years preceding the cut, suggesting these firms have a trajectory of capital spending that they are scaling back at the same time as the dividend cut. On the financing side, leverage increases significantly in the year of the dividend cut and remains at this higher level thereafter, while cash holdings declines sharply towards the cut and recovers thereafter. The reduction in capital expenditures and the increase in

¹³ For firms with multiple dividend cuts in the same fiscal year, I sum the CERs/CARs from these separate events to obtain an aggregate CER/CAR for the fiscal year.

leverage are consistent with Daniel, Denis and Naveen's (2010) finding that firms finance their cash shortfalls primarily with new debt and investment cutbacks.¹⁴ Moreover, the figure clearly shows that on average, dividend cutters are poorly performing firms with profitability and sales growth levels well below their industry peers. These patterns are consistent with past studies: on average, firms cut their dividend as a "last resort" response to their poor operating performance.

In contrast, non-dividend cutting firms have operating performance levels that are stable and remain at or above industry levels over this seven year period. ROA and capital expenditures remain above industry levels while sales growth, market-to-book ratios, and cash holdings are at industry levels. There is a gradual increase in leverage over this period, which remains at or below industry levels. Compared to the dividend cutters, control firms are clearly better off in terms of operating performance (ROA and sales growth) and financial flexibility (lower leverage and higher cash holdings) in the years leading into and after the dividend event. Furthermore, control firms continue to invest at levels similar to their immediate past suggestive of a stable investment trajectory.

II. The Likelihood of a Dividend Cut

In this section, I calculate the likelihood of a dividend cut using logit analysis. My objective here is to relate visible signs of poor performance to the likelihood of a dividend cut. Given the strong reluctance of managers to cut dividends and the argument that managers will choose to cut only when there are visible signs of distress, I want to

¹⁴ Similar to prior work, the evidence in Figure 1 does not support the cash flow signaling or free cash flow/overinvestment theories of dividends. The former predicts earnings should continue to decline after the cut while the latter predicts capital expenditures should increase.

differentiate between firms that cut their dividend as a “last resort” response to operating difficulties from those that cut their dividend more pro-actively. In the former, clear signs of poor performance can justify the dividend cut. In the latter, there is an absence or a lack of such visible signals. Put another way, I want to be able to differentiate between firms for which a dividend cut would be quite surprising from those for which a dividend cut would not be all that surprising, where I expect the element of surprise to be related to the visibility of a firm’s poor performance.

A. Logit Analysis

Using annual data from Compustat, I estimate a logit model of a firm’s propensity to cut a dividend where the explanatory variables are measured in the pre-event period. These variables include one-year lagged operating and financial characteristics (ROA, predicted ROA, sales growth, capital expenditures, market-to-book ratio, book leverage and cash holdings) and risk characteristics (pre-event betas and idiosyncratic risk) as described in Section I. Since the operating and financial characteristics are measured at the end of the previous fiscal year from the time of the dividend event, I also include the firm’s *recent stock return* to capture significant developments in firm performance that occur between the previous fiscal year end and the current dividend declaration date. The *recent stock return* is measured as the change in the firm’s stock price from the date of the previous fiscal year’s end to ten trading days prior to the current dividend declaration date.¹⁵ If the current dividend declaration date occurs within ten trading days of the end of the firm’s fiscal year, then the recent stock return is coded as zero. Finally, the logit

¹⁵ Similar to the calculation of the previous dividend yield, I use the stock price ten trading days prior to the dividend declaration date to preclude any information dissemination related to the dividend event that may have occurred prior to the announcement itself.

model also includes the *previous dividend yield*, the *previous dividend change*, year and two-digit SIC industry fixed effects.¹⁶ In robustness tests (Section V), I use alternative specifications and additional variables in estimating the likelihood of a dividend cut.

Table III shows the regression estimates where the dependent variable equals 1 if the firm is a dividend cutter and 0 if it is a control firm. Recall that the sample only includes firms that did not cut their dividend in the previous three years. Column (1) shows the estimates of a random effects logit model and column (2) shows those of a pooled logit model. Both columns yield similar results that are consistent with prior work.¹⁷ Firms with poor operating performance (low profitability and low sales growth) and poor financial flexibility (low cash holdings and high leverage) are more likely to cut their dividend. It is also interesting that, all else equal, firms with higher market-to-book ratios and higher capital expenditures are also more likely to cut their dividend. Higher HML beta and higher idiosyncratic risk increases the likelihood of a dividend cut, consistent with a deviation from the earnings stability and low-risk profile of mature firms (Hoberg and Prabhala, 2005; Bulan, Subramanian and Tanlu, 2007).

Furthermore, the *recent stock return* is negatively related to the likelihood of a dividend cut. Thus, the occurrence of recent events that negatively impacts the firm's stock price (such as further declines in profitability, for example) increases the likelihood of a dividend cut. I also find that firms are more likely to cut their dividend if the previous dividend yield is higher. This can be interpreted in at least two ways: one, firms that have high dividends may be above their target payout ratios and two, firms with high

¹⁶ I ascertain that each two-digit SIC industry in the sample contains at least 50 observations.

¹⁷Healy and Palepu (1988), Christie (1990), DeAngelo and DeAngelo (1990), DeAngelo, DeAngelo and Skinner (1992), Bernatzi, Michaely and Thaler (1997), Grullon, Michaely and Swaminathan (2002), Lie (2005), Goergen et al. (2005), Stepanyan (2009) and Jensen, et al. (2010)

dividends can save more cash from a dividend cut. In contrast, if the previous change in the dividend is higher (e.g. the firm previously increased its dividend), then the firm is less likely to reduce its dividend.

B. Propensity Score Firm Cohorts

Table IV shows the distribution of propensity scores estimated from the logit analysis above. The propensity score is the estimated probability of a dividend cut conditional on no reductions in the dividend in the previous three years. The propensity scores estimated from the random effects logit model and the pooled logit model are highly correlated (0.9965). Hence, I focus on the former for the remainder of this paper.

Given that the number of dividend cutting firms comprises only 3.8 % of the sample, it is not surprising to find that the propensity scores are very low and that more than 90 % of the estimation sample have propensity scores less than 10 %. One of the objectives of this study is to analyze firms that are most likely to cut a dividend. Thus, I focus on firms with propensity scores that are greater than 50 %. Among these, 258 firms cut their dividend while 131 firms did not. I label these firms *high score cutters* and *high score non-cutters*, respectively. These firms have the highest likelihood of cutting their dividend, based on their characteristics in the previous year or pre-event period. I expect that these firms experienced significant poor performance prior to the dividend event.

I also construct a third cohort of firms called *low score cutters*. This group comprises the 258 dividend cutters in the sample with the lowest propensity scores. I choose 258 observations in order to match the sample size of this cohort to that of the *high score cutters*. These firms have propensity scores of less than 4 %. These are the

ones least likely to cut their dividend based on past performance, but they do so anyway. In particular, I expect that these firms cut their dividend without visible signs of distress.

In the next two sections, I compare these cohorts of firms in terms of the investor reaction to their dividend cut and their operating and financial characteristics. I investigate the possible reasons behind the change (or non-change) in their dividend policies. In robustness tests (Section V), I discuss the possible implications of sample attrition. Attrition is primarily due to firms that are delisted from their exchange within three years after the dividend cut. My main conclusions remain if I focus only on the surviving firms.

III. The Element of Surprise

By construction, the high propensity score and low propensity score cohorts of dividend cutters should differ in the element of surprise in investor reactions to their dividend cut announcements. In this section, I first document the reasons cited by firms when declaring their dividend cut. I find that majority of firms attribute the decision to cut their dividend to poor performance, whether it is clearly visible or not. Second, I find that the negative market reaction to dividend cut announcements of the *low score cutters* is more severe compared to those of the *high score cutters*. Thus, investors are more receptive to a dividend cut if there are visible signs of poor performance.

A. Cited Reasons for the Dividend Cut

Dividend announcements are largely anticipated events. Investors know when dividend meetings take place and they form expectations about the board of directors'

dividend declaration. Since the dividend cuts in my sample have not been preceded by prior cuts in the previous three years, I expect that most of these dividend reductions will be justified or rationalized by the firm's management. Hence, I comb through news items that specifically mention the dividend reduction decision of the *high* and *low score cutters*. I searched the Lexis-Nexis and Pro-Quest News Databases for news articles or newswires that mention the firm's dividend cut based on the firm's dividend declaration date. I classify the cited reasons for the cut as follows: 1) due to poor firm performance or a difficult environment; 2) to conserve cash for operations or for existing projects; 3) to conserve cash for future growth opportunities, to repurchase shares or to reduce debt; and 4) other less frequently cited explanations.

Table V summarizes my findings. In panel A, I show the primary reason cited for the dividend cut. The primary reason cited is defined as either the first reason mentioned in the news article or the reason mentioned in the article's title. In Panel B, I include all the reasons cited by the firm, since firms often cite multiple factors that led to the decision to cut the dividend. For 12.2 % of the sample, I did not find any news item that mentioned why the firm cut its dividend. The vast majority of firms (65.7 %) cut their dividend primarily because of poor performance (earnings decline or loss) or a difficult environment (recession or uncertainty)¹⁸. 13.6 % of the firms primarily cite the need to conserve cash for current operations or projects while only 6.2 % of the firms (32 observations) cite as their primary reason more *strategic objectives* such as the conservation of cash for future growth, to repurchase shares or to reduce debt. In panel B, I find that these strategic objectives are cited a total of only 65 times in the sample,

¹⁸ Included in this classification are firms for which I could not find a news item that mentions the reasons for the cut, but for which I did find a news item (around the dividend declaration) date that reports lower earnings or losses for the company.

whereas poor performance and/or a difficult environment dominate with 386 occurrences. More specifically, among the 65 firms that cite strategic objectives, 45 also cite poor performance or the need to conserve cash, while 18 firms cite strategic objectives as the *only* reason for the cut.

Furthermore, when I differentiate between the *high* and *low score cutters*, the distribution of reasons cited for the dividend cut is very similar between the two groups. The Kolmogorov-Smirnov test of equality of the distributions confirms this. Thus, despite the stark differences in the likelihood of cutting their dividend, both types of firms state the same reasons for their dividend cut. On the one hand, this is surprising since I expect the *low score cutters* to be more pro-active in their defense of the dividend cut. On the other hand, this result is consistent with DeAngelo and DeAngelo's (2007) argument that a dividend cut is only credible if there are visible signs of distress. Thus, *low score cutters* are likely emphasizing their *current* poor operating performance to justify their dividend cut. I explore this further in section IV. Over-all, this analysis shows that by and large, firms attribute the decision to cut their dividend to poor performance, whether it is clearly visible or not.

B. Investor Reaction

I investigate the investor reaction to the dividend announcements of the three firm cohorts. Table VI shows their cumulative excess returns and cumulative abnormal returns (CER and CAR) measured over the three-day period around the announcement date. CERs and CARs in both means and medians are significantly positive for the *high score non-cutters* indicating that the dividend maintenance decision of firms largely

expected to cut is viewed positively by investors. On the other hand, abnormal returns are significantly negative for the dividend cutting firms. Moreover, there is no significant difference in announcement effects between *high score cutters* and *low score cutters*. On average, it appears the negative market reaction to dividend cuts is similar between the two types of cutters. Next, I examine whether this similarity persists after controlling for factors that have been shown to be related to abnormal returns around dividend announcements.

Both conventional wisdom and prior studies suggest that the investor reaction to a dividend cut is proportional to the unexpected change in the dividend.¹⁹ I follow prior work (Aharony and Swary (1980), Firth (1996)) and assume a naïve model where the expected dividend is the previous period's dividend.²⁰ Thus, the magnitude of the dividend cut represents the unexpected change in the dividend. Furthermore, for a given change in the dividend, the extent of investor reaction should also be related to the perceived likelihood that the firm will cut its dividend. Hence, I expect a more severe investor reaction to the announcements of *low score cutters* as these firms are least likely to cut their dividend based on observable firm performance. I estimate these effects in the following empirical model:

$$CR_i = \alpha_0 + \beta_1 |\Delta DIV_i| / P_i + \beta_2 |\Delta DIV_i| / P_i [I_{low}] + \varepsilon_i \quad (5)$$

where CR is the cumulative excess/abnormal return around the dividend cut announcement, $|\Delta DIV_i| / P_i$ is the magnitude of the dividend cut per share scaled by the

¹⁹ Linter (1956), Christie (1987), Asquith and Mullins (1983), Denis, Denis and Sarin (1994), Firth (1996) and Amihud and Li (2006)

²⁰ This naïve model is reasonable given managers' strong reluctance to cut their dividend and the rarity of dividend cuts in practice. Similarly, Daniel, Denis and Naveen (2010) assume expected [annual] dividends equals the dividends paid in the previous year. The Bray, et al. (2005) survey finds that maintaining the existing level of dividends is a priority among chief financial officers.

stock price ten trading days prior to the announcement date²¹ and I_{low} is an indicator function to denote the *low score cutters*. Consistent with prior work, I expect β_1 to be negative and significant. In addition, if the dividend cut of the *low score cutters* is more of a surprise than that of the *high score cutters*, then I expect β_2 to be negative and significant as well.

In related studies, several factors have also been associated with the abnormal returns surrounding dividend announcements. Bajaj and Vijh (1990) and Denis, Denis and Sarin (1994) use the previous dividend yield (or pre-announcement dividend yield) to control for the dividend preferences of the marginal investor in the firm. Under the dividend clientele hypothesis, dividend cuts will produce more severe stock price reactions among high-dividend paying firms.²² Thus, I include the previous dividend yield in this specification.

Fuller and Goldstein (2005) find that there is investor preference for dividend-paying stocks in declining markets and an asymmetric investor response to dividend cuts depending on market conditions. More specifically, they find that the maintenance of a dividend in declining markets is viewed more favorably. Following Fuller and Goldstein (2005), I create a down market dummy variable that equals one when the monthly S&P 500 return is negative. In addition to the general direction of the stock market, Baker and Wurgler (2004) have shown that investor preference for dividend paying stocks varies over time. I include their measure of the dividend premium to capture this market

²¹ I negate the sign of the dividend change for ease of interpretation since the average CERs/CARs are negative. Thus, a negative coefficient on the standardized dividend cut denotes a negative market reaction to the cut, while a larger coefficient in absolute value denotes a positive correlation between the size of the cut and the investor reaction. Normalizing the dividend cut by the pre-event stock price is consistent with prior work (Christie, 1987; Denis, Denis and Sarin, 1994; Firth, 1996; Amihud and Li, 2006).

²² Clientele effects could stem from a preference for dividend income versus capital gains (Shefrin and Statman, 1984; Bajaj and Vijh, 1990; Allen, Bernardo and Welch, 2000).

sentiment. Firms that cut their dividend when the dividend premium is high (denoting a stronger preference for dividend-paying stocks) could also generate a more negative investor reaction.

Table VII shows these announcement effect regressions estimated using ordinary least squares (OLS) with bootstrapped standard errors adjusted to allow for correlation within the two-digit SIC industry group. I find that both β_1 and β_2 are negative and significant confirming that the dividend cut of the *low score cutters* was more of a surprise. Including the other factors, I find that only the dividend premium is significant whose negative coefficient is consistent with Baker and Wurgler (2004). Finally, I include dummy variables for the different reasons cited by firms when announcing the dividend cut (from Table V). Firms citing multiple reasons for the cut will have more than one dummy variable taking on non-zero values. Poor performance generates an additional negative market reaction while more strategic reasons (for future growth, to repurchase shares or to reduce debt) reduces the extent of the negative reaction.²³

Amihud and Li (2006) show that the information content of dividend announcements has declined over time due to the increase in institutional investor holdings. Assuming institutional investors are (more) sophisticated and informed traders, firms with high institutional holdings are less likely to use dividends as a costly signal. On the other hand, Grullon and Michaely (2002) find that share repurchases and dividends are substitutes and that the incidence of share repurchases increased significantly after an SEC rule change in 1982. In unreported analysis, I include in the regression either a time trend or a dummy variable to indicate the post-1982 period. I find

²³ Ghosh and Woolridge (1988) find that despite attempts by firms to explicitly convince investors that the cash saved from the dividend cut will be used to fund new profitable growth opportunities, the negative reaction to the dividend cut announcement remains.

a positive coefficient on the time trend, consistent with Amihud and Li (2006), and an insignificant coefficient on the post-1982 dummy.

Controlling for all these factors, there is a larger element of surprise for *low score cutters* for a given magnitude of the dividend cut. This evidence supports DeAngelo and DeAngelo (2007) who argue that a dividend cut is more credible when investors observe the firm experiencing operating and financial difficulties. However, despite the visible signs of poor performance of *high score cutters*, investors still react negatively to their dividend cut announcement (β_1 is negative and significant). Jensen, et. al (2010) provide a potential explanation for this: they argue that a dividend cut signals retrenchment within the firm. Cost-cutting measures from retrenchment policies results in firms allowing some of their growth options to expire. Thus, the investor reaction to the *high score cutters'* dividend cut announcements would be consistent with a decline in the value of these firms' growth options. For *low score cutters*, the investor reaction could be to *both* poor performance and the lost opportunities for growth. I discuss this further in the following section.

IV. To Cut or Not to Cut?

I analyze the dividend policy decisions of the three types of firms described in Section II. *High [propensity] score firms* (cutters and non-cutters alike) are firms most likely to cut their dividend based on their observable poor performance. *Low [propensity] score cutters* cut their dividend although they are least expected to cut due to their lack of visible poor performance. I find that the *high score cutters* cut their dividend after a

prolonged period of poor performance suggesting that the cut is a “last resort” response to their operating difficulties. *Low score cutters* cut their dividend at the early signs of trouble and can be described as being more “pro-active” in their response to their operating woes, and this is further evidenced by their preservation of financial flexibility. Moreover, I find that the absence of a *concurrent* decline in operating performance seems to preclude the option of cutting the dividend. Instead, the *high score non-cutters* choose to cut back on their capital investments.

A. Firm Characteristics Around the Dividend Event

Table VIII provides descriptive statistics for these three firm types in the year prior to the dividend event. Figure 2 shows the median operating and financial characteristics of these firms in the seven years centered on the dividend event year (year 0). Consistent with my expectations, the high propensity score firms exhibit a “visible” period of poor performance in the year prior to the dividend event. *High score cutters* experience a large decline in industry adjusted ROA and sales growth in year -1 while *high score non-cutters* experience even larger declines. In year 0, profitability and sales growth of *high score cutters* continues to deteriorate while that of the *high score non-cutters* starts to rebound. Quite notable is the sharp rebound in sales growth of the *high score non-cutters*. These results suggest that the improvement in operating performance of *high score non-cutters* in year 0 is one possible reason why these firms did not reduce their dividend: the negative shock to their cash flows appears to have been temporary. On the other hand, the continued poor performance of *high score cutters* may have necessitated the dividend cut. These findings are consistent with the notion of dividend

smoothing (Lintner, 1956) in that some managers are reluctant to cut their dividend at the first signs of distress.²⁴

Low score cutters have ROA above or at industry levels, albeit declining gradually, in the three years leading into the dividend cut. In looking only at profits, these firms do not exhibit signs of poor performance during this pre-event period. They cut their dividend in year 0, the first time their ROA drops (sharply) to below the industry median. However in year 0, ROA for *low score cutters* remains significantly higher than that of the *high score cutters*, while it is not significantly different from that of the *high score non-cutters*. On the other hand, the sales growth pattern of the *low score cutters* is not significantly different from that of the *high score cutters*. Thus, although the decline in their operating performance may not have been immediately visible from looking at profits, it could partially have been detected from their declining sales growth.²⁵

These findings also show that the profitability (in levels) of the *low score cutters* “lags” the profitability of the *high score cutters* by one year relative to the dividend cut. Thus, one interpretation of these results is that the *low score cutters* are reducing their dividend in the first year they underperform their industry peers, which is a year sooner than the *high score cutters*. Consequently, for *high score cutters*, the dividend cut appears to be more of a “last resort” response to continued poor operating performance while for the *low score cutters*, it is an immediate or “pro-active” policy response to their under-performance.

²⁴ Managers might also worry about implementing such drastic actions outside of extreme circumstances. For example, in 1992 Sierra Pacific Resources cut its dividend during a year of record profits for the company. Shareholders responded by filing a class action suit against the company for issuing false and misleading statements (Schreiber, 1995).

²⁵ This suggests ROA is an important factor affecting a dividend cut, consistent with Lintner (1956) who finds that the level of earnings is a primary factor in the consideration of a change in dividend policy.

I gain further insight into these dividend policy decisions by looking at the firms' investment and financial policies in the years leading into the dividend event.²⁶ In terms of capital expenditures, there appears to be two distinct phases. First, capital expenditures for all firm types is at or above industry levels²⁷ for the first half of this seven-year period. Second, there is a clear shift in the level of capital expenditures as it declines to below that of the industry median. The timing of this decline, however, differs across firms. *High score cutters* scale back on their capital spending in the same year as the dividend cut, and this decline continues in the year after the cut. *Low score cutters* scale back capital spending in the year after the dividend cut, with no further declines. *High score non-cutters* scale back in year 0, which is the year after their lowest levels of ROA. Thus, it appears the *high score non-cutters* reduced their capital expenditures instead of cutting their dividend. However, recall from Table V that most firms justify their dividend cut with their poor performance. In year 0, ROA and sales growth improve for *high-score non-cutters* which also suggests that these firms could not credibly cut their dividend, i.e. the absence of *concurrent* poor performance may have precluded the option of cutting their dividend.

Next, the figure shows that firms are drawing down on their cash holdings during the period(s) of their poor operating performance. Cash-to-total assets declined significantly in year -1 for *high score non-cutters*. For both *high* and *low score cutters*, it is significantly below industry levels in the three years centered around the dividend cut. Interestingly, it is only the *high score cutters* that increase their leverage ratios over this

²⁶ The predicted change in ROA once again confirms mean-reversion in profits. The U-shaped patterns for the market-to-book ratio are consistent with the variation in ROA and sales growth for all three cohorts, suggesting market values reflect firm operating performance.

²⁷ Industry-adjusted capital expenditures is either significantly positive or not significantly different from zero.

period.²⁸ They increase their leverage substantially in the same year as their dividend cut, and this higher leverage ratio persists for at least three more years. *High score non-cutters* and *low score cutters* maintain their leverage ratios at industry levels. The preservation of debt capacity (financial flexibility) appears to be a key feature that differentiates the *low score cutters* from the *high score cutters*. It is also consistent with the *low score cutter's* “pro-active” response of cutting their dividend at the early signs of poor performance, which is contrary to previous studies that argue firms will cut dividends only as a last resort or in extreme circumstances.

Over-all, these results show that all three firm types experience a deterioration in their operating performance. This deterioration is accompanied by a reduction in both cash holdings and capital spending, and in the case of *high-score cutters*, an increase in leverage. The nature of the decline in performance and of the policy responses to this decline is what differentiates one type of firm from the other.

Low score cutters experience a decline in profitability to below industry levels. This under-performance results in a dividend cut and a reduction in cash holdings, suggestive of a need to conserve cash. Capital expenditures declines in the succeeding years while leverage ratios are kept at industry levels, consistent with the preservation of debt capacity. These actions indicate that the dividend cut is part of a pro-active policy response to address the onset of poor operating performance.

The *high score cutters* undergo a longer period of poor performance before cutting their dividend, which is more consistent with the reluctance to cut dividends documented in prior work. They cut their dividend when their ROA is well below their

²⁸ The exception is *low score cutters* have significantly positive leverage in year +1. However, compared to the leverage ratio of *high score cutters*, it is significantly lower.

industry peers. In addition to scaling back their capital expenditures and drawing down on their cash holdings, these firms borrow much more heavily. Their leverage ratio remains high after the dividend cut, which is a period of improved operating performance. One interpretation of these actions is that these firms waited “too long” before responding to their problems. Thus, their dividend cut is part of a “last resort” response to address their financial troubles.

High score non-cutters experience a large decline in profitability and sales growth in year -1. They do not cut their dividend and instead, their need for cash is met by drawing down on their cash holdings. In year 0, their profitability and sales growth bounce back at the same time that they significantly reduce their capital spending. These actions suggest these firms were reluctant to cut their dividend at the early signs of trouble. The immediate improvement in operating performance may have precluded the option of cutting their dividend since a dividend cut could no longer be justified by poor performance. Instead, they reduced their capital spending.

B. Discussion

The extant literature on dividend policy is rich and voluminous. For decades, much of the focus has been to reconcile empirical regularities with the theoretical models. Consistent with past studies,²⁹ my findings do not support the traditional signaling models (Bhattacharya, 1979; John and Williams, 1985; Miller and Rock, 1985) or the free cash flow/over-investment hypothesis (Jensen, 1986). In the former, a dividend cut signals further declines in earnings while in the latter, a dividend cut is expected to be

²⁹Benartzi, Michaely and Thaler (1997), Lang and Litzenberger (1989), Yoon and Starks (1995)

followed by increased capital spending. In both cases, I find exactly the reverse occurs: a dividend cut is followed by increased profitability and lower capital spending.

My findings are more supportive of Jensen, et al. (2010) who argue that a dividend cut signals a decline in the value of a firm's growth options. The rebound in earnings that follow a dividend cut is due to cost savings from allowing growth options to expire. More specifically, they argue that a dividend cut signals retrenchment within the firm, which is viewed unfavorably by investors. Consistent with retrenchment, they find that firms scale back expenditures in fixed assets and research and development, as well as reduce their number of employees. Moreover, the decline in the value of a firm's growth options due to retrenchment is also consistent with the negative investor reaction to dividend cuts. Recall that I find this negative reaction exists for both *high score cutters* and *low score cutters*. The difference is that, for a given magnitude of the dividend cut, the investor reaction is more severe among the *low score cutters*. This is consistent with my research design in that the *low score cutters* are firms with the larger element of surprise due to less visible signs of poor performance prior to the cut. In this case, investors are reacting to both poor performance and the lost value of growth options upon the announcement of a dividend cut.

My findings are also related to the literature on financial flexibility. Daniel, Denis and Naveen (2010) define financial flexibility as "the ability to respond in a timely and value-maximizing manner to unexpected changes in cash flows and investment opportunities." In many studies, financial flexibility has been more narrowly interpreted as having excess debt capacity and/or excess cash. DeAngelo and DeAngelo (2007) propose a theory of capital structure and payout policy where (mature) firms pay

dividends in order to obtain future financial flexibility. In their model, a firm's shares will trade more closely to its intrinsic value when optimal dividends are paid. Together with low leverage ratios, this provides greater financial flexibility since firms can easily tap external financing sources when necessary³⁰. My results regarding the *low score cutters* underscore the importance of maintaining financial flexibility. In the context of DeAngelo and DeAngelo (2007), *low score cutters* are trading off one source of financial flexibility (external equity) for another (debt capacity).

Finally, my findings are also related to Daniel, Denis and Naveen (2010) who find that among firms that experience cash shortfalls, i.e. whose cash flow from operations is less than the expected levels of dividends and investments, majority cover the shortfall with new debt and investment cutbacks. They find that very few firms cut their dividend to cover the shortfall indicating that dividend maintenance is of first order importance, even at the expense of cutting investments. My results regarding the *high score non-cutters* provide one possible explanation for why some firms cut capital expenditures and not their dividend: the absence of a *concurrent* decline in operating performance precludes the option of cutting the dividend despite *past* poor performance. This is further supported by the fact that both *high* and *low score cutters* justify their dividend cut with their poor performance (Table V). Interestingly, Daniel, Denis and Naveen (2010) find that on average, a dividend cut could have “saved” the investment cutbacks. However, the rebound in ROA and sales growth of the *high score non-cutters* could not justify a dividend cut. Instead, we observe these firms cutting back on their capital expenditures.

³⁰ In a related paper, Blau and Fuller (2008) focus specifically on the tradeoff between dividend payment and cash conservation (financial flexibility). The payment of dividends reduces a firm's financial flexibility, but the non-payment of dividends negatively affects its stock price.

An important caveat here is that the reduction in capital expenditures could also be due to the decline in growth opportunities (market-to-book ratio) as seen in Figure 2. However, even as market-to-book ratios recovered to their original levels within three years from the dividend event, capital expenditure remained significantly lower than its original levels, which suggests a cut back in investments.

V. Robustness Tests

A. Survivorship Bias

Given that this study is focused on dividend-cutting firms, it is not surprising to find a high rate of sample attrition after the dividend cut. In fact, nineteen percent of the firms (from Table VIII) are delisted from their exchange within three years from the dividend event (year 0). Table IX shows the delisting codes obtained from CRSP for each of the three firm cohorts. Majority of the firms drop out due to a merger, while one-third are dropped because certain exchange requirements are not met. The distribution of delisting codes is consistent across each of the three cohorts – among cutters and non-cutters alike. (The Kolmogorov-Smirnov test does not reject the null hypothesis of equality of delisting code distributions.) Furthermore, the conclusions of this paper remain if I exclude these delisted firms from my analysis.

B. Full Sample of Dividend Cutters

The analysis in the previous section focused on firms that were most likely to cut their dividend based on estimated propensity scores of 50 % or greater and the corresponding matching sample of dividend cutting firms that were least likely to cut

their dividend. On the one hand, focusing on the tails of the propensity score distribution is desirable since it is precisely in the tails that I expect to find salient differences between the two cohorts of dividend cutting firms. On the other hand, it is of interest to know whether these differences will still manifest themselves, albeit to a lesser degree, if the entire sample of dividend cutters is included.

Thus, I split the sample of 901 dividend cutters at their median propensity score (22 %). The *high (low) score cutters* consist of 451 (450) firms that cut their dividend with a mean propensity score of 57 % (7.7 %). I then construct a sample of *high-score non-cutters* which consists of 482 firms that did not cut their dividend and have propensity scores that are greater than the dividend cutters' median propensity score (22 %). The mean propensity score of this cohort is 42 %.

In unreported analysis, I find that both mean and median CER and CAR are negative and significantly different from zero for this larger sample of *high and low score cutters*, and these are not significantly different between the two groups. The mean and median CER and CAR for *high score non-cutters* is small but significantly positive. Next, I repeat the announcement effect regressions (equation 5) for this larger sample of firms. Table X shows that both β_1 and β_2 remains negative and significant consistent with earlier results. Thus, even among this larger sample of dividend cutting firms, I find that the element of surprise remains larger among firms least likely to cut their dividend.

In Table XI, I provide descriptive statistics for these three firm cohorts in the year prior to the dividend event. Figure 3 shows the median operating and financial characteristics of these firms in the seven years centered on the dividend event year (year 0). The patterns for ROA and sales growth of *high and low score cutters* are very similar.

There is no significant difference in sales growth between the two groups over this seven year period. The level of ROA remains higher for the *low score cutters* in the years around the dividend cut. What is different compared to Figure 2 is that ROA is significantly below industry levels in year -1 for the *low score cutters*, although it is still much higher than that of the *high score cutters*. Thus, for both *high* and *low score cutters*, the decline in operating performance begins in the year prior to the dividend cut. The difference between the two firms is the level of their ROA when their dividend is cut – *low score cutters* cut at much higher levels of ROA compared to the *high score cutters*. The *high score non-cutters* experience more modest declines in ROA and sales growth that are short-lived and they do not end up cutting their dividend.

For all three firm types, I continue to observe a shift in capital spending from industry levels for the first half of this period to below industry levels in the second half. Compared to Figure 2, *high score non-cutters* show much more modest cut backs in capital spending. Market-to-book ratios and cash holdings continue to reflect the U-shaped patterns of ROA and sales growth, with significantly more variation in cash holdings compared to Figure 2. Preserving leverage ratios at industry levels continues to be important for *low score cutters* while the high leverage ratios of high score cutters remains significant from year 0 onwards. Over-all, these results remain consistent with my earlier findings.

C. Alternative Logit Models

The logit model used to estimate propensity scores is a function of industry-adjusted firm characteristics (in levels) lagged one year, the recent stock return, the pre-

event dividend yield, the change in the previous dividend, industry and year fixed effects. I tried alternative specifications to examine if the results might be sensitive to this choice of explanatory variables. First, I estimate separate coefficients for all firm-specific explanatory variables for the post-1982 period to correspond to the adoption of SEC Rule 10b-18 in 1982. I do this to capture a possible “structural shift” in the propensity to pay dividends that is consistent with the surge in stock repurchases in this latter period. I find very little evidence of a “structural shift” in that the coefficients on most of the post-1982 terms are not significantly different from zero. Second, in addition to the above variables, I also include the change in operating and financial characteristics from year -3 to -1 or from year -2 to -1. This is motivated by Figure 1 which shows a general decline in most firm characteristics in the pre-event years for all dividend cutters. In this specification, I find that many of the change variables are significant while the variables in levels retain their signs and significance from Table III. Third, I include the firm’s Altman z-score as an additional explanatory variable. Arguably, firms that cut their dividend are closer to financial distress. I find that indeed, a firm’s lagged Altman z-score is negatively related to the likelihood of a dividend cut. Lower z-scores denote a higher probability of bankruptcy.

Using these alternative logit models, the estimated propensity scores have a correlation coefficient of at least 0.985 with the original propensity scores estimated from Section III. I further construct cohorts of *high* and *low-score cutters* and *high score non-cutters* using the propensity scores from these alternative models following the same methodology outlined in Section III. For both *high* and *low score cutter* cohorts, over 93 % of the observations also belong to the original groups. For the *high score non-cutter*

cohort over 83 % of the observations belong to the original group. These results indicate the alternative logit specifications do not significantly alter the distribution of propensity scores and the allocation of firms into the different propensity score cohorts.

VI. Conclusion

Motivated by the argument that managers will cut their dividend only when there are visible signs of poor performance, I revisit the issue of why firms cut their regular cash dividend. I have three main findings: First, I find that the three-day cumulative abnormal return around a dividend cut announcement is more negative for firms with less visible signs of poor performance compared to those that have experienced a more prolonged period of poor performance. Thus, the investor reaction to dividend cut announcements is related to the element of surprise. Second, while on average firms cut their dividend as a *last resort* response to poor performance as suggested by prior studies, there are firms that cut their dividend *pro-actively* even without such visible signs of distress. These firms cut at the onset of poor performance and the preservation of a low leverage ratio (financial flexibility) is of first-order importance to these pro-active firms. Third, I find that by and large, firms use their poor performance to justify a dividend cut. Moreover, the absence of *concurrent* poor performance seems to preclude the option of cutting the dividend. Instead, firms may resort to cutting capital expenditures.

Appendix A: Variable Definitions (Compustat data item number)

Total Assets = data6

ROA = data13/data6 (where data13 = operating income before depreciation)

Sales Growth = (data12 - L.data12)/L.data12

Capital Expenditure Ratio = data128/data6

Cash Ratio = data1/data6

Book debt = data181+data10-data35-data79 (total liabilities + preferred stock - deferred taxes - convertible debt)

Book equity = data6 - book debt

Market equity = data25*data199 (shares outstanding*fiscal year end share price)

Market to Book ratio = (data6-book equity + market equity)/data6

Book Leverage = book debt/data6

R&D/Sales = data46/data12

Selling Expense/Sales = data189/data12

L is the lag operator. When data199 is missing, I replace it with the fiscal year end closing price obtained from CRSP.

References

- Aharony, Joseph and Itzhak Swary, 1980, "Quarterly Dividend and Earnings Announcements and Stockholders' Returns: An Empirical Analysis," *Journal of Finance* 35(1), 1-12.
- Allen, Franklin and Roni Michaely, 2003, Payout policy, North-Holland Handbooks of Economics. G. Constantinides, M. Harris and R. Stulz, eds.
- Allen, Franklin, Antonio E. Bernardo, and Ivo Welch, 2000, "A Theory of Dividends Based on Tax Clienteles," *Journal of Finance* 55, 2499-2536.
- Amihud, Yakov and Kefei Li, 2006, "The Declining Information Content of Dividend Announcements and the Effects of Institutional Holdings," *Journal of Financial and Quantitative Analysis* 41(3), 637-660.
- Asquith, Paul, and David W. Mullins, Jr., 1983, "The Impact of Initiating Dividend Payments on Shareholders' Wealth," *Journal of Business* 56, 77-96.
- Bajaj, M. and A.M. Vijh, 1990, "Dividend Clienteles and the Information Content of Dividend Changes," *Journal of Financial Economics* 26, 193-219.
- Baker, Malcolm, and Jeffrey Wurgler, 2004, "A Catering Theory of Dividends," *Journal of Finance* 59(3), 1125-65
- Benartzi, Shlomo, Roni Michaely, and Richard Thaler, 1997, "Do changes in dividends signal the future or the past?" *Journal of Finance* 52, 1007-1034.
- Bhattacharya. S., 1979, "Imperfect Information, Dividend Policy, and The Bird in the Hand Fallacy," *Bell Journal of Economics* 10, 25-270.
- Blau, Benjamin M. and Kathleen P. Fuller, 2008, "Flexibility and dividends," *Journal of Corporate Finance* 14, 133-152.
- Brav, Alon, John R. Graham, Campbell R. Harvey and Roni Michaely, 2005, "Payout Policy in the 21st Century," *Journal of Financial Economics* 77(3), 483-527.
- Bulan, Laarni, Narayanan Subramanian and Lloyd Tanlu, 2007, "On the Timing of Dividend Initiations." *Financial Management* 36:4, 31-65.
- Christie, A. A., 1987, "On Cross-Sectional Analysis in Accounting Research," *Journal of Accounting and Economics* 9, 231-258.
- Christie, William G., 1990, "Dividend Yield and Expected Returns: The zero-dividend puzzle," *Journal of Financial Economics* 28, 95-125.

- Christie, William G., 1994, "Are Dividend Omissions Truly the Cruellest Cut of All?" *Journal of Financial and Quantitative Analysis* 29(3), 459-480.
- Daniel, Naveen D., David J. Denis, and Lalitha Naveen, 2010, "Sources of Financial Flexibility: Evidence from Cash Flow Shortfalls," working paper, *Purdue University*.
- DeAngelo, Harry, and Linda DeAngelo, 1990, "Dividend Policy and Financial Distress: An Empirical Investigation of Troubled NYSE Firms," *Journal of Finance* 45, 1415-1431.
- DeAngelo, Harry, and Linda DeAngelo, 2007, "Capital Structure, Payout Policy, and Financial Flexibility," working paper, *University of Southern California*.
- DeAngelo, Harry, Linda DeAngelo, and Douglas J. Skinner, 1992, "Dividends and Losses," *Journal of Finance* 47(5), 1837-1863.
- DeAngelo, Harry, Linda DeAngelo, and Douglas J. Skinner, 2008, "Corporate Payout Policy," *Foundations and Trends in Finance*, Vol. 3, Nos. 2-3, 95-287.
- Denis, David J., Diane K. Denis, and Atulya Sarin, 1994, "The Information Content of Dividend Changes: Cash Flow Signaling, Overinvestment and Dividend Clienteles," *Journal of Financial and Quantitative Analysis* 29(4), 567-587.
- Dielman, T. E. and H. R. Openheimer, 1984, "An examination of investor behavior during periods of large dividend changes," *Journal of Financial and Quantitative Analysis* 19(20), 197-216.
- Eades, K. M., P. Hess, and E. H. Kim, 1985, 'Market rationality and dividend announcements'. *Journal of Financial Economics* 15, 581-604.
- Fama, Eugene G. and Kenneth R. French, 1993, "Common Risk Factors in the Returns on Stocks and Bonds Dividends," *Journal of Financial Economics* 33, 3-56.
- Fama, Eugene G. and Kenneth R. French, 2000, "Forecasting Profitability and Earnings," *Journal of Business* 73(2), 161-175.
- Firth, M., 1996, "Dividend Changes, Abnormal Returns, and Intra-Industry Firm Valuations," *Journal of Financial and Quantitative Analysis* 31(2), 189-212.
- Fuller, Kathleen P. and Michael A. Goldstein, 2005, "Do Dividends Matter More in Declining Markets?" working paper, Babson College.
- Goergen, M., L. Renneboog, and L. Correia da Silva, 2005, "When do German firms change their dividends?" *Journal of Corporate Finance* 11, 375-399.

- Ghosh, C. and R. Woolridge, 1988 “An Analysis of Shareholder Reaction, Reaction to Dividend Cuts and Omissions,” *Journal of Financial Research* 9, 281-294.
- Gomes, A., 2000, “Going public without governance: Managerial reputation effects,” *Journal of Finance* 55, 1901–1941.
- Grullon, Gustavo and Roni Michaely, 2002, “Dividends, Share Repurchases and the Substitution Hypothesis,” *Journal of Finance* 57, 1649-1684.
- Grullon, Gustavo, Roni Michaely and Bhaskaran Swaminathan, 2002, “Are Dividend Changes a Sign of Firm Maturity?” *Journal of Business* 75(3), 387-424.
- Healy, Paul M., and Krishna G. Palepu, 1988, “Earnings information conveyed by dividend initiations and omissions,” *Journal of Financial Economics* 21, 149-176.
- Hoberg, Gerard and Prabhala, Nagpurnanand R., 2005, “Disappearing Dividends: The Importance of Idiosyncratic Risk and the Irrelevance of Catering,” working paper, *University of Maryland*.
- Jensen, Gerald R., Leonard L. Lundstrum and Robert E. Miller, 2010, “What do dividend reductions signal?” *Journal of Corporate Finance* 16(5), 736-747.
- Jensen, Gerald R. and James M. Johnson, 1995, “The Dynamics of Corporate Dividend Reductions,” *Financial Management* 24(4), 31-51.
- Jensen, Michael C, 1986, “Agency Cost Of Free Cash Flow, Corporate Finance, and Takeovers,” *American Economic Review* 76(2), 323-329.
- John, K. and J. Williams, 1985, “Dividends, dilution, and taxes: A signaling equilibrium,” *Journal of Finance* 49, 1053–1070.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, 2000, “Agency problems and dividend policies around the world,” *Journal of Finance* 55, 1–33.
- Lang, L. H. P. and R. H. Litzenberger, 1989, “Dividend announcements: Cash flow signaling vs. free cash flow hypothesis,” *Journal of Financial Economics* 24, 181–192.
- Lie, Erik, 2005, “Operating Performance Following Dividend Decreases and Omissions,” *Journal of Corporate Finance* 12, 27-53.
- Lintner, J., 1956, “Distribution of incomes of corporations among dividends, retained earnings, and taxes,” *American Economic Review* 46, 97–113.

- Michaely, Roni, Richard Thaler, and Kent Womack, 1995, "Price Reactions to Dividend Initiations and Omissions: Overreaction and Drift?" *Journal of Finance* 50, 573-608.
- Miller, M. and K. Rock, 1985, "Dividend policy under asymmetric information," *Journal of Finance* 40, 1031-1051.
- Myers, S. and N. Majluf, 1984, "Corporate financing and investment decisions when firms have information that investors do not have," *Journal of Financial Economics* 12, 187-221.
- Schreiber, Craig F., 1995, "Dividend Policy at FPL Group, Inc., Harvard Business School Case # 9-295-059.
- Shefrin, Hersh M., and Meir Statman, 1984, "Explaining investor preference for cash dividends," *Journal of Financial Economics* 13, 253-282.
- Shleifer, A., 2000, Inefficient Markets: An Introduction to Behavioral Finance, New York, NY: Oxford University Press.
- Shleifer, A. and R. Vishny, 1997, "A survey of corporate governance," *Journal of Finance* 52, 737-783.
- Stepanyan, Gohar, 2009, "Do Managers Cut Dividends Because They "Have To?" *working paper*, Catholic University of Portugal.
- Woolridge, J. R., 1982, 'The information content of dividend changes,' *Journal of Financial Research* 5, 237-247.
- Woolridge, J. R., 1983, 'Dividend changes and security prices,' *Journal of Finance* 38, 1607-1615.
- Yoon, Pyung Sig and Laura T. Starks, 1995, "Signaling, Investment Opportunities, and Dividend Announcements," *Review of Financial Studies* 8 (4), 995-1018.

Figure 1: Full Sample Characteristics Around the Dividend Event

Median operating and financial characteristics of dividend cutters and control firms in the seven years centered around the dividend event year. A dividend event is either a reduction or a non-reduction in the regular cash dividend. Dividend cutters are firms that reduced their regular cash dividend by 10 % or more in a fiscal year. Control firms are firms that did not reduce their dividend in a fiscal year, i.e. either there is an increase in the dividend or no change in the dividend. A firm is included in the sample if it did not reduce its regular cash dividend in the three years prior to the dividend event, it pays dividends quarterly, semi-annually or annually, its share code is 10 or 11, and SIC code is not in the 4900-4999 or 6000-6999 range. The sample period is from 1965-2004. Industry adjusted variables are calculated by subtracting the variable's annual 4-digit SIC median value from the actual firm value. Predicted change in ROA is calculated according to Fama and French (2000). Capital expenditures and cash holdings are both scaled by total assets.

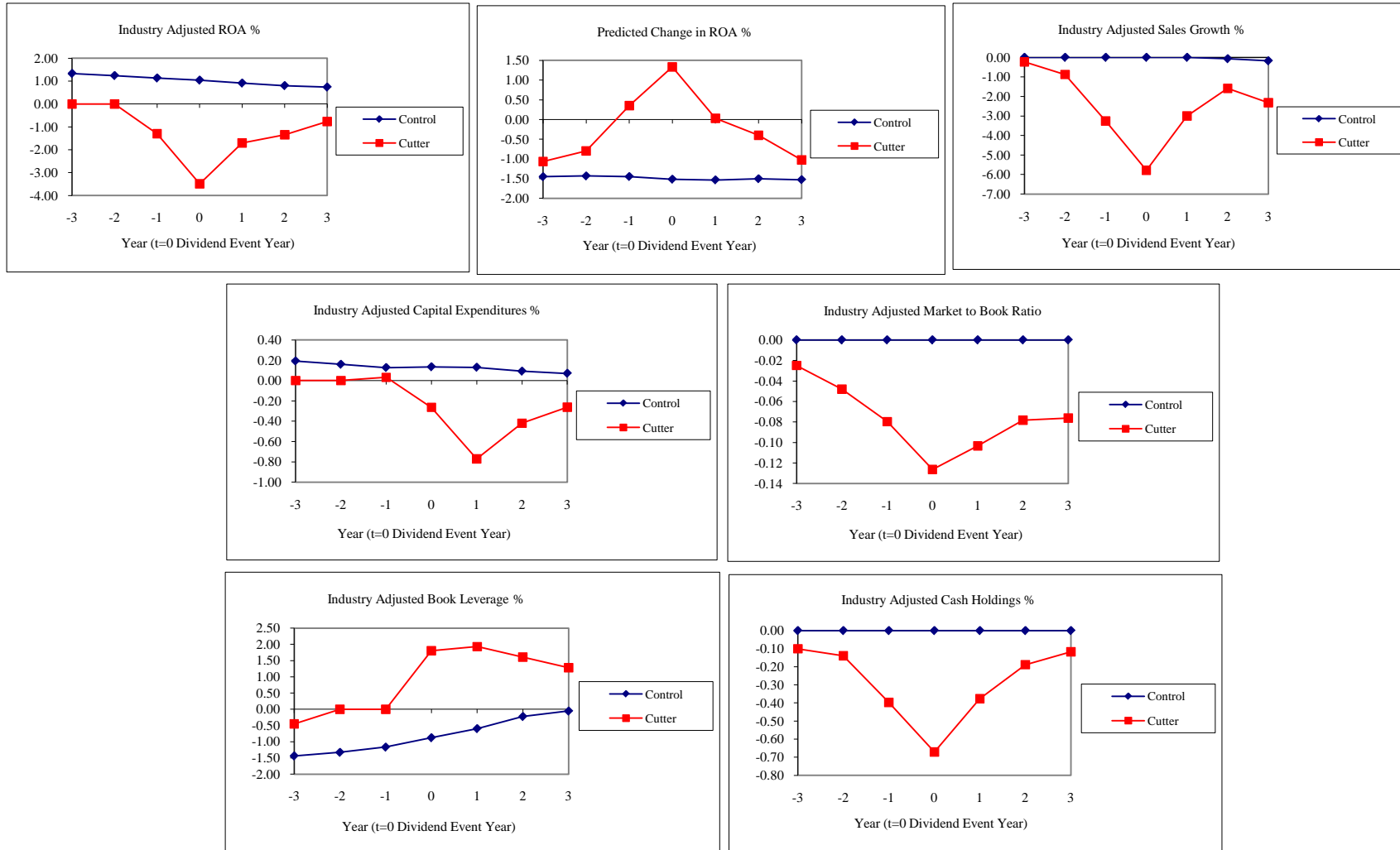


Figure 2: Firm Characteristics Around the Dividend Event for Propensity Score Cohorts

Median operating and financial characteristics of selected firms in the seven years centered around the dividend event year. A dividend event is either a reduction or a non-reduction in the firm's regular cash dividend. High [Score] Cutters are firms that cut their dividend with propensity scores greater than 50 %. High [Score] Non-Cutters are firms that did not cut their dividend with propensity scores greater than 50 %. Low [Score] Cutters are the matching dividend cutters with the lowest propensity scores. The propensity score is the estimated probability of a dividend cut in the current year (t=0), given that the firm did not reduce its regular cash dividend in the previous three years. The sample period is from 1965-2004. Industry adjusted variables are calculated by subtracting the variable's annual 4-digit SIC median value from the actual firm value. Predicted Change in ROA is calculated according to Fama and French (2000). Capital expenditures and cash holdings are both scaled by total assets.

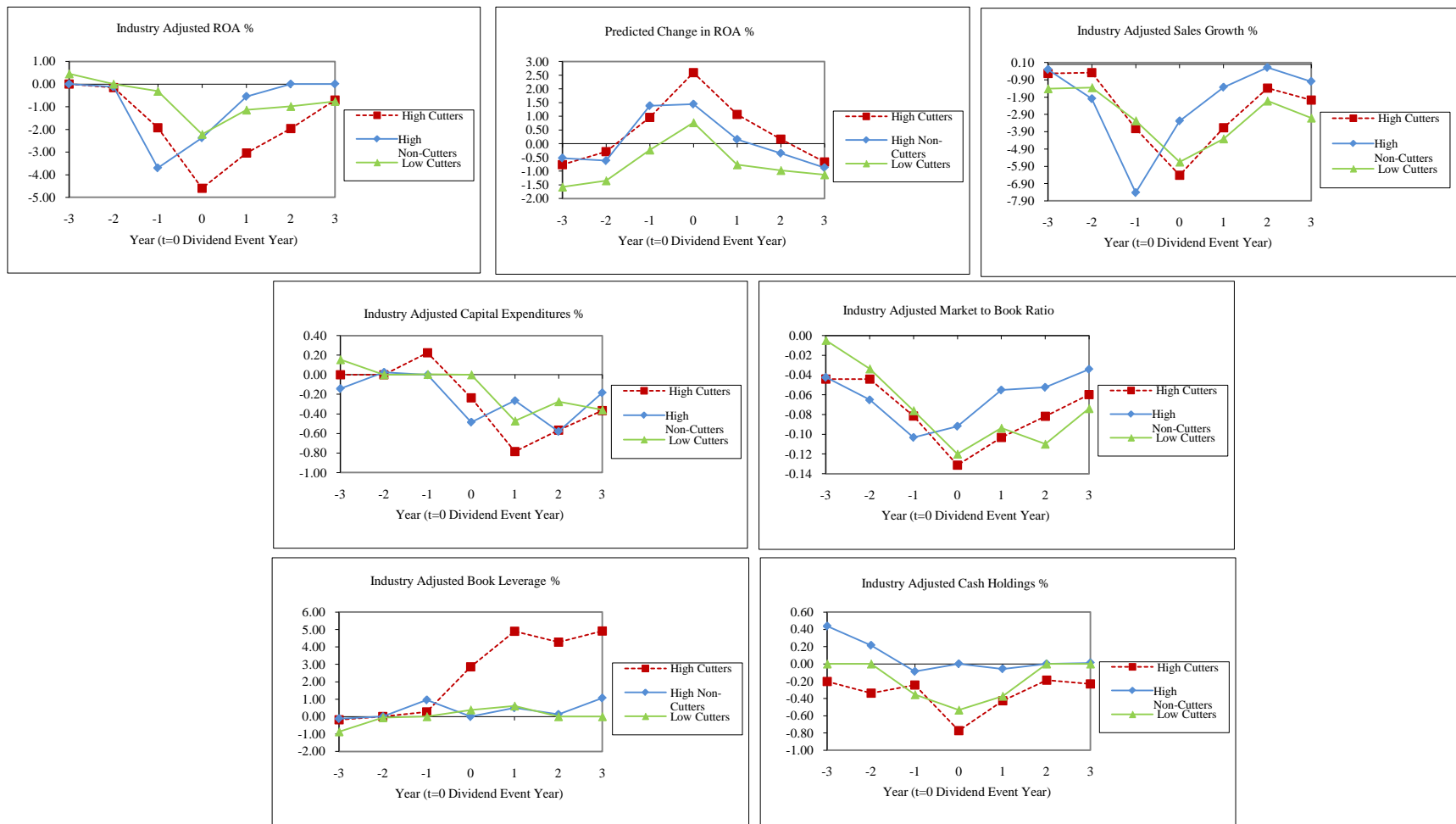


Figure 3: Firm Characteristics Around the Dividend Event for Propensity Score Cohorts Including All Dividend Cutters

Median operating and financial characteristics of selected firms in the seven years centered around the dividend event year. A dividend event is either a reduction or a non-reduction in the firm's regular cash dividend. High/Low [Score] Cutters are firms that cut their dividend with propensity scores greater/less than the median dividend cutter's propensity score. High [Score] Non-Cutters are firms that did not cut their dividend with propensity scores greater than the median dividend cutter's propensity score. The propensity score is the estimated probability of a dividend cut in the current year ($t=0$), given that the firm did not reduce its regular cash dividend in the previous three years. The sample period is from 1965-2004. Industry adjusted variables are calculated by subtracting the variable's annual 4-digit SIC median value from the actual firm value. Predicted Change in ROA is calculated according to Fama and French (2000). Capital expenditures and cash holdings are both scaled by total assets.

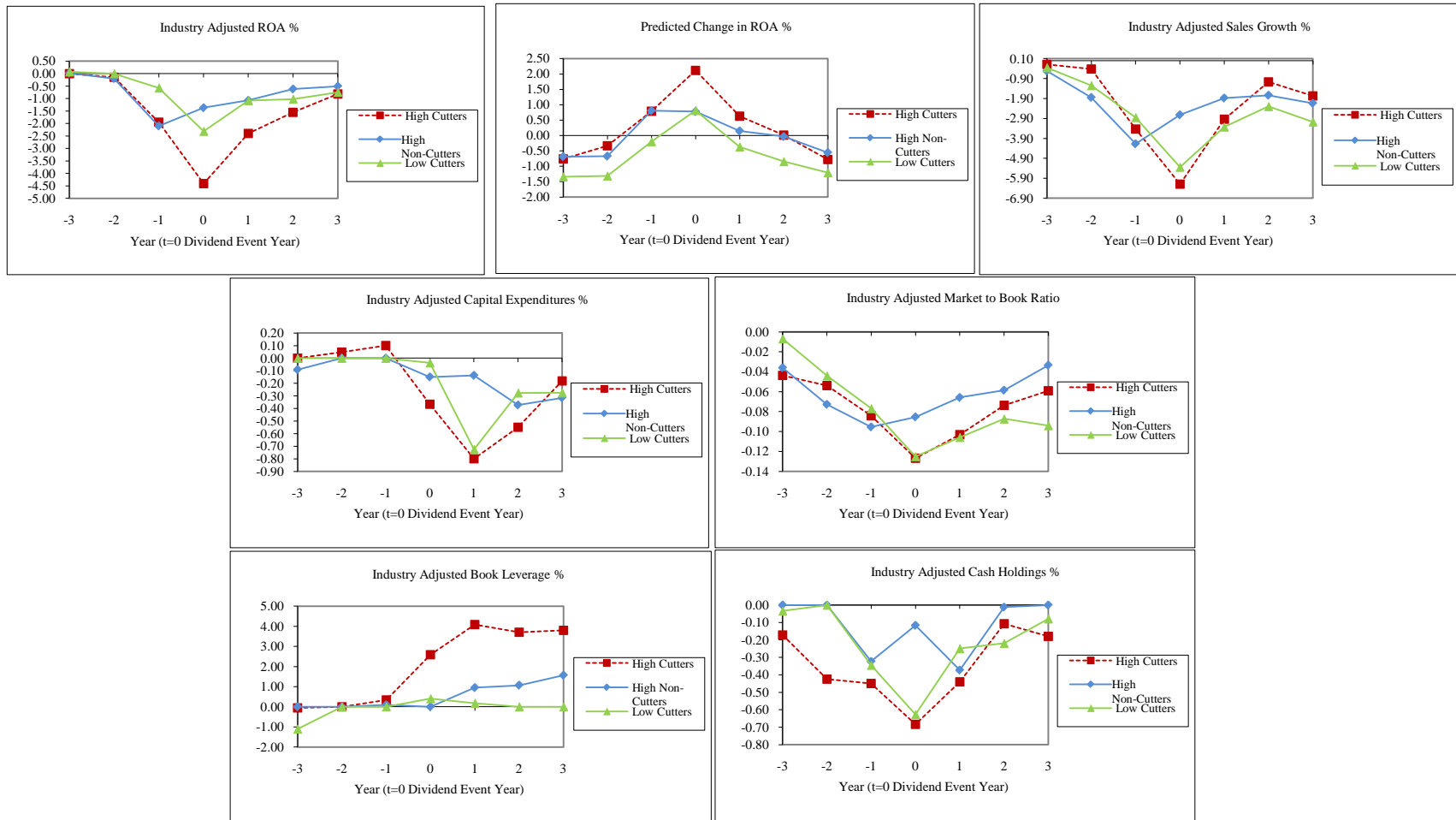


Table I. Dividend Cuts by Year

A dividend cut is a reduction of 10 % or more in a firm's regular (ordinary) cash dividend after a minimum of three years of no reductions. A firm is included in the sample if it pays dividends quarterly, semi-annually or annually, its share code is 10 or 11, and SIC code is not in the 4900-4999 or 6000-6999 range. Dividend omissions (100% cut) are included in the sample if an actual dividend omission announcement date was identified from the *Wall Street Journal Index* or *Lexis-Nexis*.

Year	No. of Cuts	Percentage of all Cuts
1965	6	0.67
1966	7	0.78
1967	7	0.78
1968	7	0.78
1969	16	1.78
1970	54	5.99
1971	52	5.77
1972	20	2.22
1973	13	1.44
1974	24	2.66
1975	51	5.66
1976	11	1.22
1977	18	2.00
1978	15	1.66
1979	27	3.00
1980	47	5.22
1981	35	3.88
1982	90	9.99
1983	29	3.22
1984	13	1.44
1985	24	2.66
1986	33	3.66
1987	16	1.78
1988	9	1.00
1989	16	1.78
1990	13	1.44
1991	39	4.33
1992	28	3.11
1993	23	2.55
1994	9	1.00
1995	17	1.89
1996	13	1.44
1997	9	1.00
1998	11	1.22
1999	23	2.55
2000	11	1.22
2001	34	3.77
2002	11	1.22
2003	13	1.44
2004	7	0.78
Total	901	100

Table II: Full Sample Descriptive Statistics

Characteristics of sample firms from 1965-2004. Dividend cutters are firms that reduced their regular cash dividend by 10 % or more in a fiscal year. Control firms are firms that did not reduce their dividend in a fiscal year, i.e. either there is an increase in the dividend or no change in the dividend. A firm is included in the sample if it did not reduce its regular cash dividend in the three years prior to the dividend event (reduction or non-reduction), it pays dividends quarterly, semi-annually or annually, its share code is 10 or 11, and SIC code is not in the 4900-4999 or 6000-6999 range. Industry adjusted variables are calculated by subtracting the variable's annual 4-digit SIC median value from the actual firm value. Predicted Change in ROA is calculated according to Fama and French (2000). Market, SMB and HML betas are the Fama-French three factor model loadings estimated using daily returns over a one year period prior to the dividend event (excluding the 60-day period prior to the event) and idiosyncratic risk is the annualized standard deviation of residuals. Recent Stock Return is $(P_{t-1}-P)/P$ and Previous Dividend Yield is D_{j-1}/P , where P_{t-1} is the share price on the date of the firm's previous fiscal year end (t is the current fiscal year), P is the share price 10 trading days before the current dividend announcement date and D_{j-1} is the regular cash dividend in the previous payment period (j is the current payment period). Previous Dividend Change is $(D_{j-1}-D_{j-2})/D_{j-2}$, Current Dividend Change is $(D_j-D_{j-1})/D_{j-1}$ and Standardized Dividend Change is $(D_j-D_{j-1})/P$. L is the lag operator and represents the year prior to the dividend event year. + Significant at the 10 % level or better using the t-test for means and Wilcoxon (signed-rank) test for medians. * Significant at the 10 % level or better for the equality of means (t-test) or medians (Ranksum Test).

Variable	Dividend Cutters			Control Firms			Cutters vs. Controls	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	t Test t-stat	Ranksum Test z-stat
Log Assets (\$ `000)	5.293 +	5.107 +	1.746	5.814 +	5.692 +	1.782	-8.611 *	-8.653 *
L.ROA (Return on Assets) - Ind. Adj. %	-1.465 +	-1.296 +	6.137	2.388 +	1.134 +	6.503	-17.478 *	-18.515 *
L.Predicted Change in ROA %	0.256 +	0.352 +	3.054	-1.632 +	-1.448 +	2.932	18.936 *	18.767 *
L.Sales Growth - Ind. Adj. %	-3.798 +	-3.261 +	13.845	0.389 +	0 +	13.508	-9.116 *	-10.268 *
L.Capital Expenditures/Total Assets - Ind. Adj. %	0.787 +	0.031 +	3.956	0.930 +	0.127 +	3.822	-1.102	-1.621
L.Market-to-Book Ratio - Ind. Adj.	-0.096 +	-0.080 +	0.327	0.078 +	0 +	0.535	-9.678 *	-12.750 *
L.Cash/Total Assets - Ind. Adj. %	0.439 +	-0.397 +	7.127	1.753 +	0 +	8.512	-4.570 *	-5.385 *
L.Book Leverage - Ind. Adj. %	0.202	0	15.163	-2.976 +	-1.166 +	14.760	6.333 *	6.737 *
Market Beta	0.856 +	0.838 +	0.527	0.898 +	0.877 +	0.493	-2.551 *	-2.447 *
SMB Beta	0.649 +	0.598 +	0.654	0.544 +	0.516 +	0.630	4.937 *	4.619 *
HML Beta	0.391 +	0.406 +	0.686	0.272 +	0.263 +	0.666	5.230 *	5.733 *
Idiosyncratic Risk %	36.495 +	33.775 +	14.148	30.649 +	28.282 +	11.988	14.249 *	13.143 *
Recent Stock Return %	-12.169 +	-12.162 +	23.541	4.302 +	1.575 +	16.436	-28.930 *	-23.587 *
Previous Dividend Yield %	1.581 +	1.591 +	0.623	0.891 +	0.816 +	0.505	39.775 *	30.576 *
Previous Dividend Change %	0.297 +	0 +	2.843	1.966 +	0 +	6.326	-7.886 *	-9.980 *
Current Dividend Change %	-62.599 +	-53.125 +	26.887	2.558 +	0 +	8.772	-190.378 *	-74.524 *
Standardized Dividend Change %	-0.955 +	-0.8333 +	0.558	0.019 +	0 +	0.068	-225.148 *	-74.526 *
Number of observations	901			22768				

Table III: Logit Regressions

Logit analyses of factors affecting the decision to cut a dividend. The dependent variable equals 1 if the firm is a dividend cutter and is 0 otherwise. Dividend cutters are firms that reduced their regular cash dividend by 10 % or more in a fiscal year. Control firms are firms that did not reduce their dividend a fiscal year, i.e. either there is an increase in the dividend or no change in the dividend. A firm is included in the sample if it did not reduce its regular cash dividend in the three years prior to the dividend event (reduction or non-reduction), it pays dividends quarterly, semi-annually or annually, its share code is 10 or 11, and SIC code is not in the 4900-4999 or 6000-6999 range. Industry adjusted variables are calculated by subtracting the variable's annual 4-digit SIC median value from the actual firm value. Predicted Change in ROA is calculated according to Fama and French (2000). Market, SMB and HML betas are the Fama-French three factor model loadings estimated using daily returns over a one year period prior to the dividend event (excluding the 60-day period prior to the event) and idiosyncratic risk is the annualized standard deviation of residuals. Recent Stock Return is $(P_{t-1} - P)/P$ and Previous Dividend Yield is D_{j-1}/P , where P_{t-1} is the share price on the date of the firm's previous fiscal year end (t is the current fiscal year), P is the share price 10 trading days before the current dividend announcement date and D_{j-1} is the regular cash dividend in the previous payment period (j is the current payment period). Previous Dividend Change is $(D_{j-1} - D_{j-2})/D_{j-2}$. Column (1) is a random effects logit model while column (2) is a pooled logit model with robust standard errors. All regressions include year and industry fixed effects. P values are reported in parentheses. + significant at 10%; * significant at 5%; ** significant at 1%.

Explanatory Variables	(1)	(2)
	RE Logit	Pooled Logit
Log Assets (millions)	-0.1863** (0.000)	-0.1638** (0.000)
L.Return on Assets (ROA) - Ind. Adjusted %	-0.0297** (0.008)	-0.0272* (0.016)
L.Predicted Change in ROA %	0.2440** (0.000)	0.2188** (0.000)
L.Sales Growth - Ind. Adjusted %	-0.0122** (0.000)	-0.0113** (0.000)
L.Capital Expenditures/Total Assets - Ind. Adjusted %	0.0267* (0.022)	0.0280** (0.008)
L.Market-to-Book Ratio - Ind. Adjusted	0.2017 (0.191)	0.155 (0.299)
L.Cash/Total Assets - Ind. Adjusted %	-0.0292** (0.000)	-0.0295** (0.000)
L.Book Leverage - Ind. Adjusted %	0.0156** (0.000)	0.0124** (0.000)
Market Beta	-0.2197+ (0.100)	-0.192 (0.132)
SMB Beta	0.1198 (0.168)	0.0958 (0.259)
HML Beta	0.1814* (0.020)	0.1667* (0.022)
Idiosyncratic Risk %	0.0266** (0.000)	0.0240** (0.000)
Recent Stock Return %	-0.0541** (0.000)	-0.0522** (0.000)
Previous Dividend Yield %	2.4519** (0.000)	2.1066** (0.000)
Previous Dividend Change %	-0.0943** (0.000)	-0.0886** (0.000)
Constant	-2.9914** (0.000)	-4.8471** (0.000)
Observations	23669	23615
Number of Firms	2785	2780
Log-Likelihood/Pseudo Log-Likelihood	-2336	-2354
Rho	0.214	
Pseudo R-Squared		0.385

Table IV: Propensity Scores

In-sample propensity score estimates from the logit analyses in Table III. The propensity score is the estimated probability of a dividend cut, given that the firm did not reduce its regular cash dividend in the previous three years.

Random Effects Logit Model			
Percentile		Obs	23669
1%	0.000		
5%	0.000	Mean	0.035
10%	0.000	Std. Dev.	0.107
25%	0.001		
50%	0.004		
75%	0.018	Observations with Propensity Score > 50 %	
90%	0.070	Dividend Cutters	258
95%	0.172	Control Firms	131
99%	0.650	Total	389

Pooled Logit Model			
Percentile		Obs	23615
1%	0.000		
5%	0.000	Mean	0.038
10%	0.001	Std. Dev.	0.103
25%	0.002		
50%	0.007		
75%	0.024	Observations with Propensity Score > 50 %	
90%	0.083	Dividend Cutters	247
95%	0.183	Control Firms	108
99%	0.610	Total	355

Correlation of Propensity scores	0.9965
---	--------

Table V: Explaining the Dividend Cut

Reasons cited by firms in news items when announcing a dividend cut. The primary reason cited (Panel A) is either the first reason mentioned in the news item or the reason mentioned in the headline. All reasons cited (Panel B) include multiple explanations for the dividend cut. The sample includes 516 firms that reduced their regular cash dividend between 1965-2004. Percentages are calculated based on the total number of cutters (Panel A, Line 5) in the same column. High Score Cutters are firms that cut their dividend with propensity scores greater than 50 %. Low Score Cutters are the matching dividend cutters with the lowest propensity scores. The propensity score is the estimated probability of a dividend cut in the current year, given that the firm did not reduce its regular cash dividend in the previous three years. The Kolmogorov-Smirnov test does not reject the equality of distributions for the primary reason cited (Panel A) between the High Score Cutters and Low Score Cutters.

Panel A Primary Reason Cited	All Cutters		High Score Cutters		Low Score Cutters	
	No. of Cuts	Percent	No. of Cuts	Percent	No. of Cuts	Percent
0 No Reason Found	63	12.2%	21	8.1%	42	16.3%
1 Poor Performance/Difficult Environment	339	65.7%	181	70.2%	158	61.2%
2 To Conserve Cash for Operations or Current Projects	70	13.6%	39	15.1%	31	12.0%
3 For Future Growth, To Repurchase Shares or Reduce Debt	32	6.2%	12	4.7%	20	7.8%
4 Other	12	2.3%	5	1.9%	7	2.7%
5 Total	516	100.0%	258	100.0%	258	100.0%
Panel B All Reasons Cited						
1 Poor Performance/Difficult Environment	386		207		179	
2 To Conserve Cash for Operations or Current Projects	178		99		79	
3 For Future Growth, To Repurchase Shares or Reduce Debt	65		22		43	
4 Other	27		12		15	

Table VI: Announcement Effects

Cumulative excess returns (CERs) are calculated by subtracting the CRSP value-weighted index return from the firm's stock return, measured over the 3-day period centered on the dividend event announcement date. Cumulative abnormal returns (CARs) are calculated according to the Fama-French three-factor model, measured over the 3-day period centered on the dividend event announcement date. High Score Cutters are firms that cut their dividend with propensity scores greater than 50 %. High Score Non-Cutters are firms that did not cut their dividend with propensity scores greater than 50 %. Low Score Cutters are the matching dividend cutters with the lowest propensity scores. The propensity score is the estimated probability of a dividend cut in the current year, given that the firm did not reduce its regular cash dividend in the previous three years. The sample period is from 1965-2004. + Significant at the 10 % level or better using the t-test for means and the Wilcoxon (signed-rank) test for medians. * At least 10 % significance of the t-test of equality of means and the two sample Wilcoxon ranksum test for medians.

PANEL A:

Variable	Mean	Median	Std. Dev.	No. of Obs.
High Score Cutters				
3-Day Cumulative Excess Return	-0.0471 +	-0.0521 +	0.0644	258
3-Day Cumulative Abnormal Return (Fama-French)	-0.0423 +	-0.0463 +	0.0625	258
High Score Non-Cutters				
3-Day Cumulative Excess Return	0.0089 +	0.0065 +	0.0487	131
3-Day Cumulative Abnormal Return (Fama-French)	0.0101 +	0.0068 +	0.0471	131
Low Score Cutters				
3-Day Cumulative Excess Return	-0.0500 +	-0.0520 +	0.0601	258
3-Day Cumulative Abnormal Return (Fama-French)	-0.0465 +	-0.0457 +	0.0569	258
	t Test		Ranksum Test	
	t-stat		z-stat	
High Cutters vs High Non Cutters				
3-Day Cumulative Excess Return	-8.7608 *		-8.4890 *	
3-Day Cumulative Abnormal Return (Fama-French)	-8.4521 *		-8.1610 *	
High Cutters vs Low Cutters				
3-Day Cumulative Excess Return	0.5275 *		0.2910 *	
3-Day Cumulative Abnormal Return (Fama-French)	0.7949 *		0.4720 *	

PANEL B:

Variable	Mean	Median	Std. Dev.	Percentage of Observations
High Score Cutters				
3-Day Cumulative Excess Return >0	0.0459	0.0373	0.0391	21.32
3-Day Cumulative Abnormal Return (Fama-French) >0	0.0418	0.0317	0.0364	24.42
3-Day Cumulative Excess Return <0	-0.0723	-0.0719	0.0433	78.68
3-Day Cumulative Abnormal Return (Fama-French) <0	-0.0694	-0.0723	0.0414	75.58
High Score Non-Cutters				
3-Day Cumulative Excess Return >0	0.0394	0.0282	0.0363	57.25
3-Day Cumulative Abnormal Return (Fama-French) >0	0.0375	0.0233	0.0355	59.54
3-Day Cumulative Excess Return <0	-0.0319	-0.0237	0.0295	42.75
3-Day Cumulative Abnormal Return (Fama-French) <0	-0.0302	-0.0221	0.0300	40.46
Low Score Cutters				
3-Day Cumulative Excess Return >0	0.0394	0.0268	0.0393	17.44
3-Day Cumulative Abnormal Return (Fama-French) >0	0.0302	0.0166	0.0350	19.38
3-Day Cumulative Excess Return <0	-0.0689	-0.0671	0.0448	82.56
3-Day Cumulative Abnormal Return (Fama-French) <0	-0.0649	-0.0625	0.0444	80.62

Table VII: Announcement Effects Regressions

Cumulative excess returns (CERs) are calculated by subtracting the CRSP value-weighted index return from the firm's stock return, measured over the 3-day period centered on the dividend event announcement date. Cumulative abnormal returns (CARs) are calculated according to the Fama-French three-factor model, measured over the 3-day period centered on the dividend event announcement date. The magnitude of the dividend cut per share is scaled by the stock price 10 trading days prior to the announcement date. $I_{Low\ Score}$ is an indicator function to denote the low score cutters. High Score Cutters are firms that cut their dividend with propensity scores greater than 50 %. Low Score Cutters are the matching dividend cutters with the lowest propensity scores. The propensity score is the estimated probability of a dividend cut, given that the firm did not reduce its regular cash dividend in the previous three years. Previous Dividend Yield is the regular cash dividend in the previous payment period scaled by the share price 10 trading days before the current dividend announcement date. The Down Market dummy variable equals 1 if the return on the S&P 500 for the month is negative. The Dividend Premium is derived from Baker and Wurgler (2004) and is the log difference in the market to book ratios of dividend payers and non-payers. The sample period is from 1965-2004. Estimation is by OLS with bootstrapped standard errors (500 repetitions) adjusted to allow for correlation within the two-digit SIC industry group.+ significant at 10%; * significant at 5%; ** significant at 1%. P-values are reported in parenthesis.

Dependent Variable	CER			CAR		
	(1)	(2)	(3)	(4)	(5)	(6)
Explanatory Variables						
Magnitude of the Dividend Cut/P %	-0.0172** (0.000)	-0.0182** (0.003)	-0.0176** (0.007)	-0.0119** (0.005)	-0.0121* (0.032)	-0.0106+ (0.072)
Magnitude of the Dividend Cut/P % [$I_{Low\ Score}$]	-0.0231** (0.000)	-0.0223** (0.000)	-0.0224** (0.000)	-0.0179** (0.003)	-0.0179* (0.013)	-0.0179** (0.008)
Previous Dividend Yield %		0.00216 (0.714)	0.00481 (0.399)		0.000363 (0.945)	0.0019 (0.738)
Down Market Dummy		-0.00819 (0.105)	-0.00999+ (0.055)		-0.00255 (0.609)	-0.00398 (0.427)
Dividend Premium		-0.000522** (0.002)	-0.000453** (0.006)		-0.000485** (0.004)	-0.000425* (0.011)
Dummy Variables: Cited Reasons for the Dividend Cut						
Poor Performance/Difficult Environment			-0.0174** (0.003)			-0.0143* (0.012)
To Conserve Cash for Operations or Current Projects			-0.00441 (0.375)			-0.00231 (0.680)
For Future Growth, To Repurchase Shares or Reduce Debt			0.0219* (0.016)			0.0186* (0.022)
Other reasons cited			-0.000709 (0.957)			-0.01 (0.381)
Constant	-0.0246** (0.000)	-0.0276** (0.002)	-0.0194+ (0.070)	-0.0272** (0.000)	-0.0297** (0.000)	-0.0230* (0.017)
Observations	516	516	516	516	516	516
Adjusted R-squared	0.04	0.0562	0.0841	0.0215	0.0328	0.0524

Table VIII: Descriptive Statistics for the Propensity Score Cohorts

Characteristics of selected firms from 1965-2004. High Score Cutters are firms that cut their dividend with propensity scores greater than 50 %. High Score Non-Cutters are firms that did not cut their dividend with propensity scores greater than 50 %. Low Score Cutters are the matching dividend cutters with the lowest propensity scores. The propensity score is the estimated probability of a dividend cut in the current year, given that the firm did not reduce its regular cash dividend in the previous three years. Industry adjusted variables are calculated by subtracting the variable's annual 4-digit SIC median value from the actual firm value. Predicted Change in ROA is calculated according to Fama and French (2000). Market, SMB and HML betas are the Fama-French three factor model loadings estimated using daily returns over a one year period prior to the dividend event (excluding the 60-day period prior to the event) and idiosyncratic risk is the annualized standard deviation of residuals. Recent Stock Return is $(P_{t-1}-P)/P$ and Previous Dividend Yield is D_{j-1}/P , where P_{t-1} is the share price on the date of the firm's previous fiscal year end (t is the current fiscal year), P is the share price 10 trading days before the current dividend announcement date and D_{j-1} is the regular cash dividend in the previous payment period (j is the current payment period). Previous Dividend Change is $(D_{j-1}-D_{j-2})/D_{j-2}$, Current Dividend Change is $(D_j-D_{j-1})/D_{j-1}$ and Standardized Dividend Change is $(D_j-D_{j-1})/P$. L is the lag operator and represents the year prior to the dividend event year. + Significant at the 10 % level or better using the t-test for means and the Wilcoxon (signed-rank) test for medians. * At least 10 % significance of the t-test of equality of means and the two sample Wilcoxon ranksum test for medians.

Variable	High Score Cutters		High Score Non-Cutters		Low Score Cutters		High Cutters vs. High Non Cutters		High Cutters vs. Low Cutters	
	Mean	Median	Mean	Median	Mean	Median	t Test t-stat	Ranksum Test z-stat	t Test t-stat	Ranksum Test z-stat
Log Assets (\$ `000)	5.2966 +	5.1159 +	4.6255 +	4.3362 +	5.2747 +	5.0687 +	3.3777 *	3.7410 *	0.1387	-0.0040
L.ROA (Return on Assets) % - Ind. Adj.	-2.8347 +	-1.9310 +	-4.0020 +	-3.7055 +	-0.2217	-0.3142 +	1.9103 *	2.2600 *	-4.7932 *	-3.9120 *
L.Predicted Change in ROA %	1.0643 +	0.9598 +	1.3053 +	1.3833 +	-0.5725 +	-0.2286 +	-0.7174	-1.3480	5.9609 *	5.1280 *
L.Sales Growth % - Ind. Adj.	-4.1135 +	-3.7228 +	-9.1114 +	-7.4152 +	-2.8437 +	-3.2653 +	3.0776 *	2.7610 *	-1.0301	-0.9230
L.Capital Expenditures/Total Assets % - Ind. Adj.	0.9538 +	0.2235 +	0.2891	0.0000	0.7953 +	0.0040 +	1.3837	1.4450	0.4499	0.2210
L.Market-to-Book Ratio - Ind. Adj.	-0.1031 +	-0.0816 +	-0.1388 +	-0.1032 +	-0.0570 +	-0.0760 +	1.1946	0.4910	-1.4648	-0.7650
L.Cash/Total Assets % - Ind. Adj.	0.3356	-0.2435 +	1.6527 +	-0.0886	1.2502 +	-0.3545	-1.6537 *	-1.3030	-1.3394	-0.3370
L.Book Leverage % - Ind. Adj.	2.0135 +	0.2748 +	0.5987	0.9541	-0.7460	0.0000	0.8130	0.3540	2.0179 *	1.9200 *
Market Beta	0.8966 +	0.9080 +	0.8038	0.8128	0.8456 +	0.8115 +	1.7435 *	1.6750 *	1.1182	1.5170
SMB Beta	0.7228 +	0.6685 +	0.7718	0.7611	0.6020 +	0.5446 +	-0.7087	-1.0170	2.0914 *	1.9540 *
HML Beta	0.4355 +	0.4468 +	0.3659	0.4042	0.3423 +	0.3119 +	0.9118	0.9990	1.5546	1.8730 *
Idiosyncratic Risk %	39.0030 +	35.1442 +	43.8115	41.0128	34.8295 +	32.6253 +	-2.8623 *	-2.5740 *	3.3533 *	2.8770 *
Recent Stock Return %	-27.5254 +	-28.0065 +	-17.6294	-16.4179	3.3175 +	0.2119	-5.1293 *	-5.2600 *	-16.6085 *	-14.0010 *
Previous Dividend Yield %	2.0510 +	2.1522 +	2.0334	2.1622	1.0865 +	1.0244 +	0.3732	0.0690	22.3863 *	15.8730 *
Previous Dividend Change %	0	0	0.4282	0	0.7526 +	0 +	-1.9142 *	-2.8180 *	-2.6869 *	-2.8480 *
Current Dividend Change %	-66.6470 +	-60.8187 +	0.3367	0	-62.3192 +	-54.0169 +	-29.7867 *	-16.5000 *	-1.7983 *	-1.8970 *
Standardized Dividend Change %	-1.3503 +	-1.2385 +	0.0082	0	-0.6106 +	-0.5448 +	-26.5056 *	-16.4140 *	-17.0021 *	-14.7560 *
Number of observations	258		131		258					

Table IX : Delisted Firms

Firms delisted from their exchange within three years from the dividend event. A dividend event is either a reduction or a non-reduction in the firm's regular cash dividend between 1965 and 2004. Delisting codes are obtained from CRSP. High Score Cutters are firms with propensity scores greater than 50 % that cut their dividend. High Score Non-Cutters are firms with propensity scores greater than 50 % that did not cut their dividend. Low Score Cutters are the matching dividend cutters with the lowest propensity scores. The propensity score is the estimated probability of a dividend cut in the current year, given that the firm did not reduce its regular cash dividend in the previous three years.

CRSP Delisting Code	High Score Cutters		High Score Non-Cutters		Low Score Cutters	
	No. of Firms	Percent	No. of Firms	Percent	No. of Firms	Percent
2 Merger	22	62.9%	14	58.3%	28	68.3%
3 Exchange of Stock	1	2.9%	1	4.2%	4	9.8%
4 Liquidation	0	0.0%	0	0.0%	1	2.4%
5 Dropped by Exchange	12	34.3%	9	37.5%	8	19.5%
Total	35	100.0%	24	100.0%	41	100.0%

Table X: Announcement Effects Regressions for All Dividend Cutters

Cumulative excess returns (CERs) are calculated by subtracting the CRSP value-weighted index return from the firm's stock return, measured over the 3-day period centered on the dividend event announcement date. Cumulative abnormal returns (CARs) are calculated according to the Fama-French three-factor model, measured over the 3-day period centered on the dividend event announcement date. The magnitude of the dividend cut per share is scaled by the stock price 10 trading days prior to the announcement date. $I_{Low\ Score}$ is an indicator function to denote the low score cutters. High (Low) Score Cutters are firms that cut their dividend with propensity scores greater (less) than the median dividend cutters' propensity score. The propensity score is the estimated probability of a dividend cut, given that the firm did not reduce its regular cash dividend in the previous three years. Previous Dividend Yield is the regular cash dividend in the previous payment period scaled by the share price 10 trading days before the current dividend announcement date. The Down Market dummy variable equals 1 if the return on the S&P 500 for the month is negative. The Dividend Premium is derived from Baker and Wurgler (2004) and is the log difference in the market to book ratios of dividend payers and non-payers. The sample period is from 1965-2004. Estimation is by OLS with bootstrapped standard errors (500 repetitions) adjusted to allow for correlation within the two-digit SIC industry group.+ significant at 10%; * significant at 5%; ** significant at 1%. P-values are reported in parenthesis.

Dependent Variable	CER		CAR	
	(1)	(2)	(4)	(5)
Explanatory Variables				
Magnitude of the Dividend Cut/P %	-0.0167** (0.000)	-0.0166** (0.000)	-0.00934** (0.007)	-0.00749+ (0.090)
Magnitude of the Dividend Cut/P % [$I_{Low\ Score}$]	-0.0148** (0.000)	-0.0155** (0.000)	-0.00983** (0.010)	-0.0113** (0.005)
Previous Dividend Yield %		-0.000206 (0.961)		-0.00317 (0.455)
Down Market Dummy		-0.00776* (0.040)		-0.00316 (0.375)
Dividend Premium		-0.000541** (0.000)		-0.000484** (0.000)
Constant	-0.0336** (0.000)	-0.0333** (0.000)	-0.0374** (0.000)	-0.0353** (0.000)
Observations	901	901	901	901
Adjusted R-squared	0.0356	0.0582	0.0127	0.0307

Table XI: Descriptive Statistics for the Propensity Score Cohorts Including All Dividend Cutters

Characteristics of selected firms from 1965-2004. Predicted Change in ROA is calculated according to Fama and French (2000). High Score Cutters are firms that cut their dividend with propensity scores greater than the median dividend cutter's propensity score. High Score Non-Cutters are firms that did not cut their dividend with propensity scores greater than the median dividend cutter's propensity score. Low Score Cutters are the matching dividend cutters with the lowest propensity scores. The propensity score is the estimated probability of a dividend cut in the current year, given that the firm did not reduce its regular cash dividend in the previous three years. Industry adjusted variables are calculated by subtracting the variable's annual 4-digit SIC median value from the actual firm value. Predicted Change in ROA is calculated according to Fama and French (2000). Market, SMB and HML betas are the Fama-French three factor model loadings estimated using daily returns over a one year period prior to the dividend event (excluding the 60-day period prior to the event) and idiosyncratic risk is the annualized standard deviation of residuals. Recent Stock Return is $(P_{t-1}-P)/P$ and Previous Dividend Yield is D_{j-1}/P , where P_{t-1} is the share price on the date of the firm's previous fiscal year end (t is the current fiscal year), P is the share price 10 trading days before the current dividend announcement date and D_{j-1} is the regular cash dividend in the previous payment period (j is the current payment period). Previous Dividend Change is $(D_{j-1}-D_{j-2})/D_{j-2}$, Current Dividend Change is $(D_j-D_{j-1})/D_{j-1}$ and Standardized Dividend Change is $(D_j-D_{j-1})/P$. L is the lag operator and represents the year prior to the dividend event year. + Significant at the 10 % level or better using the t-test for means and the Wilcoxon (signed-rank) test for medians. * At least 10 % significance of the t-test of equality of means and the two sample Wilcoxon ranksum test for medians.

Variable	High Score Cutters		High Score Non-Cutters		Low Score Cutters		High Cutters vs. High Non Cutters		High Cutters vs. Low Cutters	
	Mean	Median	Mean	Median	Mean	Median	t Test t-stat	Ranksum Test z-stat	t Test t-stat	Ranksum Test z-stat
Log Assets (\$ `000)	5.4102 +	5.2397 +	4.9521 +	4.6096 +	5.1764 +	5.0245 +	3.6725 *	4.3870 *	2.0124 *	1.8640 *
L.ROA (Return on Assets) % - Ind. Adj.	-2.3527 +	-1.9460 +	-2.5138 +	-2.1014 +	-0.5753 +	-0.5731 +	0.4133	0.7420	-4.3907 *	-3.7100 *
L.Predicted Change in ROA %	0.8590 +	0.7899 +	0.7191 +	0.8060 +	-0.3476 +	-0.1969	0.6893	0.2840	6.0454 *	5.4750 *
L.Sales Growth % - Ind. Adj.	-4.2045 +	-3.4371 +	-5.4584 +	-4.1701 +	-3.3902 +	-2.8506 +	1.3046	1.2770	-0.8826	-1.0100
L.Capital Expenditures/Total Assets % - Ind. Adj.	0.7807 +	0.1008 +	0.4592 +	0.0000	0.7938 +	0.0000 +	1.1596	1.5650	-0.0494	-0.0660
L.Market-to-Book Ratio - Ind. Adj.	-0.1106 +	-0.0842 +	-0.1248 +	-0.0955 +	-0.0819 +	-0.0768 +	0.7490	0.0110	-1.3164	-1.0360
L.Cash/Total Assets % - Ind. Adj.	0.0143	-0.4490 +	1.1660 +	-0.3233	0.8651 +	-0.3443	-2.2356 *	-1.4240	-1.7938 *	-1.4630
L.Book Leverage % - Ind. Adj.	1.4069 +	0.3446 +	0.0361	0.0965	-1.0046	0.0000	1.3018	0.7330	2.3933 *	2.0420 *
Market Beta	0.8861 +	0.8807 +	0.7972 +	0.8104 +	0.8251 +	0.7864 +	2.6926 *	2.5600 *	1.7386 *	2.1900 *
SMB Beta	0.6636 +	0.5981 +	0.6980 +	0.6447 +	0.6350 +	0.5950 +	-0.7870	-0.8500	0.6567	0.6110
HML Beta	0.4372 +	0.4501 +	0.4069 +	0.3682 +	0.3442 +	0.3179 +	0.6554	1.2500	2.0377 *	2.3020 *
Idiosyncratic Risk %	37.2488 +	33.3854 +	39.7136 +	36.4307 +	35.7393 +	33.8055 +	-2.4756 *	-2.1570 *	1.6027	1.1900
Recent Stock Return %	-23.7671 +	-24.0000 +	-11.9640 +	-8.1357 +	-0.5458	-1.4389	-10.3553 *	-10.1700 *	-17.0122 *	-15.1460 *
Previous Dividend Yield %	1.9167 +	1.9672 +	1.8466 +	1.8984 +	1.2438 +	1.2076 +	2.1179 *	1.9650 *	19.2590 *	16.3130 *
Previous Dividend Change %	0	0	0.3029 +	0 +	0.5669 +	0 +	-2.0911 *	-2.9480 *	-2.8581 *	-2.9130 *
Current Dividend Change %	-64.0549 +	-56.5217 +	0.4701 +	0 +	-61.1392 +	-50.0000 +	-53.6776 *	-28.2680 *	-1.6290	-1.6280
Standardized Dividend Change %	-1.2034 +	-1.0714 +	0.0103 +	0.0000 +	-0.7064 +	-0.6000 +	-46.6241 *	-28.2170 *	-14.9263 *	-14.3780 *
Number of observations	451		482		450					