Operational Actions and Reliability of The Signaling Theory of Dividends: An Investigation of Earnings Anomaly Following Dividend Cuts and Omissions

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The signaling theory of dividends provides no information on dividend cuts and omissions by firms that undertake operational actions to improve performance. Do managers of these firms reduce dividends to signal a decrease in future earnings? This issue may explain the anomalous findings in prior studies that earnings rise following dividend cuts and omissions. Using a sample of 203 firms, we find that a cut in dividends in conjunction with other operational measures is associated with an increase in earnings. In this case, the dividend cut can be viewed as a way to conserve cash and improve the firm's earnings. Our findings also indicate that firms without an operational measure show no earnings increase following a dividend cut. Furthermore, a dividend cut is a reliable signal of poor future earnings for profitable firms in the nonaction group.

Introduction

The signaling theory of dividends states that managers use dividend policy to send signals about the firm's future earnings (Bhattacharya, 1979; Miller and Rock, 1985; and John and Williams, 1985). Although evidence of stock price reactions to dividend changes is interpreted as being consistent with the signaling argument (Deilman and Oppenheimer, 1984; Healy and Palepu, 1988), the reliability of the dividend signal measured by subsequent earnings performance is still an unresolved issue, especially when dividends are reduced. For example, Healy and Palepu (1988), Benartzi et al. (1997), and Jensen and Johnson (1995) observe increases in

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subsequent earnings, which is not consonant with the assertion that a dividend cut or omission indicates less-than-anticipated earnings in the future.

John et al. (1992) and Ofek (1993) document that firms reduce dividend payments and initiate other proactive measures such as employee layoffs, plant closings, and asset sales in response to poor performance. John et al. (1992) also document that their sample firms were able to reestablish profitability following the earnings losses. Furthermore, there is also anecdotal evidence that firm performance improves as a result of turnaround actions. For example, Amdahl Corp. reported that it benefited from a restructuring in 1993 and that its earnings rose for the second quarter in a row (Wall Street Journal, 7/27/94). Ametek Inc. said that a major restructuring and recapitalization program helped boost its second quarter earnings in 1994 more than 60 percent (*Wall Street Journal* 7/14/94). Both firms also reduced their dividend payments around the time the restructuring programs were implemented.

Although firm earnings are expected to improve as a result of the operational measures, such improvement does not bear well with the contention that declining earnings are likely to follow a cut in dividends. Is it possible that a dividend cut indicates poor earnings only when managers do not take any actions to improve firm earnings? Prior empirical studies on the reliability of the signaling content of dividends do not address this issue.

The purpose of this paper is to examine the reliability of the signaling content of a dividend cut in light of the fact that firms often reduce dividend payments as part of a cost-reduction program. We empirically examine unanticipated earnings changes following dividend cuts and omissions for firms that implement one or more operational measures and firms that do not take any measure. We take the perspective that when a firm reduces dividends and concurrently undertakes other value-enhancing measures, it is less likely sending a signal that poor earnings will follow. In this case, the dividend cuts can be viewed as ways to conserve cash and improve earnings. On the other hand, firms that reduce dividend payments but do not implement the cost-reducing measures are the ones likely to experience a drop in future earnings consistent with the signaling theory.

Our empirical evidence indicates that both groups of firms, those implementing operational actions and those not implementing any actions, experience a significant drop in earnings one year prior to and in the year of the dividend cut. Earnings tend to increase substantially within one year after the dividend cut, however, for firms who undertook operational actions. The nonaction firms, on the other hand, do not experience any earnings change. These findings provide a plausible answer to why prior studies observe an increase in future earnings after a dividend reduction. We interpret the findings of no earnings change for the nonaction firms as being consistent with Lintner's (1956) argument that a dividend decrease signifies a permanent drop in earnings.

Only a small group of the nonaction firms in our study experience an earnings decline after dividends are reduced, consistent with the signaling theory. Firms in this group have strong earnings performance in the year of the dividend cut. This evidence, based on a small sample, suggests that the firm reduces dividends to signal poor earnings only when it is profitable and only when it does not take any steps to correct the upcoming earnings decline.

While our study focuses on the signaling role of dividend changes, it is important to note that dividend changes may occur for a number of other reasons. In his pioneering work, Lintner (1956) suggests that the growth prospects of the industry, cyclical variations of investment opportunities, and working capital requirements are some of the important factors considered in formulating a firm's dividend policy. Rozeff (1982) shows that investment opportunities and earnings variability influence dividend payments. McCabe (1979) finds that investment opportunities, availability of funds, and operating and financial leverage affect dividend payout. Easterbrook (1984) offers an agency conflict explanation of dividend payment. Managers may cut dividends and raise less external funds to reduce monitoring by the outside suppliers of capital.

Signaling Theory of Dividends

Lintner's (1956) study of dividend policy suggests that dividends are changed when there is a permanent change in firm earnings. In addressing the issue of whether dividend policy is relevant, Miller and Modigliani (1961) assert that dividend payments reflect management's assessment of future earnings. Under the asymmetric information environment, a firm's dividend policy is important because it conveys information about future earnings. An increase (a decrease) in current dividends indicates that firm's future earnings are likely to rise (fall). Later studies by Bhattacharya (1979), Miller and Rock (1985), and John and Williams (1985) present the mechanisms by which dividend payments serve as an explicit signal of future earnings. These studies claim that managers intentionally use dividend payment to send a signal about the firm and that there are some costs associated with the dividend signal.

Empirical evidence of negative stock price reactions to dividend cuts is consistent with the signaling argument. For example, Healy and Palepu (1988) find a two-day return of -9.5 percent around the announcement of dividend omissions. Similarly, Deilman and Oppenheimer (1984) observe a two-day return of -8.1 percent associated with the announcements of dividend cuts. Other studies also provide similar evidence of negative stock price reactions to unexpected reductions in dividends. Stockholders react unfavorably because dividend cuts provide information about management's belief that earnings are likely to decrease in the future.

Several studies provide a direct test of the reliability of the dividend signal by examining unexpected earnings subsequent to the dividend change. The results,

however, are not in line with what signaling theory predicts. Early studies by Watts (1973), Gonedes (1978), and Penman (1983) find no relationship between dividend change and subsequent earnings. Healy and Pelepu (1988) find that firms experience two years of increase in earnings following dividend omissions. Benartzi et al. (1997) observe that earnings increase within one year after dividends are cut. Similarly, Jensen and Johnson (1995) report that a significant number of firms experienced rebounds in earnings within two years following a dividend decrease. They contend that a dividend decrease indicates that the firm has hit bottom in terms of its earnings performance. Overall, although stockholders seem to agree that dividend cuts indicate poor firm performance in the future, there is not much evidence to indicate that firm performance actually declines following the dividend cut.

Dividend cuts often are accompanied by other operational and financial actions. Ofek (1993) reports that firms take actions such as asset restructuring and employee layoffs along with dividend cuts in periods of poor performance. John et al. (1992) document that firms respond to earnings losses by initiating several operational measures along with dividend cuts. Also, the firms in their sample were able to reestablish positive earnings in the three years following the loss year.

The evidence that firms undertake other operational actions along with the dividend cut motivated this study. We hypothesize that earnings increase following a dividend cut can be attributed, at least in part, to operational actions. In situations when managers initiate steps to improve firm performance, a dividend cut can best be viewed as a mechanism to enhance performance and not as a signaling device.

Sample and Data Collection

From the *Standard & Poor's Research Insight* databases (Active and Research), we collect a sample of 471 annual dividend cuts and omissions during the period 1991-1997. We use the following criteria to arrive at a final sample of 203 firms:

(a) The dividend cut or omission must be reported in the *Wall Street Journal*.[1] Of the 471 firms, 219 did not meet this criterion.

(b) To ensure that the dividends are reduced following a period of stable dividend payments, we include firms with no decrease in dividends in four consecutive quarters prior to the dividend cut or omission. We dropped 45 firms that failed to meet this criterion. We obtain qualitatively similar results (not reported) using eight consecutive quarters of stable dividends.

(c) Data on earnings before extraordinary items and market value of equity are available on the *Standard & Poor's Research Insight* databases. We require data for least one year during a four-year period surrounding the dividend cut or omission.

[1] In some cases, dividend cuts or omissions are not explicitly reported in the *Wall Street Journal*. For these firms, we verify the dividend cut or omission by examining change in quarterly dividend payments reported in *Wall Street Journal*.

Four firms are deleted using this selection criterion. We obtain similar results (not reported) by using a sample of 173 firms that have data in each of the four years.

Of the 203 firms, we classify 135 as *action* firms that implemented an operational action surrounding the dividend cut. Evidence of an operational action is obtained from two sources. First, we search the *Wall Street Journal* for reports of employee layoffs, plant shutdowns, asset sales, and general restructuring programs during a two-year period surrounding the dividend cut or omission announcement. This search provided us with 103 firms. It is possible that operational actions of some of the no-action firms were not reported in the *Wall Street Journal*. To decrease the likelihood of wrongly classifying these firms as no-action firms, we check their financial data in the *Standard & Poor's Research Insight* database. Specifically, we search for any significant change in the number of employees and dollar value of property, plant, and equipment in the year of the dividend cut and one year after. We identify 32 firms with significant changes that are classified as action firms. The remaining 68 firms, which we denote as *nonaction* firms, have no evidence of an operational measure during the two-year period. Our results are similar when we re-classify the sample into 103 action firms identified from the *Wall Street Journal* and the remaining 100 firms as nonaction firms.

Table 1 presents some descriptive information about the sample. Yearly breakdown shows that most of the dividend cuts occur in the early 1990s. Breakdown by industry shows that the highest number of the sample firms belongs to the crude petroleum and natural gas industry, followed by electric services, real estate investment trusts, machine tools, and organic chemicals. The mean market value of equity a year prior to the dividend cut is $1,071 million while the median value is $184 million. Of the 203 firms, 119 decreased dividends and 84 omitted dividends. The mean and median dividend yields a year prior to dividend decrease are 4.93 percent and 4.60 percent, respectively. These results are similar to the median dividend yield of 4.49 percent for the dividend decrease sample reported in Benartzi et al. (1997). The mean and median dividend yields for the omission firms are slightly lower, 3.05 percent and 2.29 percent, respectively.

Table 1 also provides information on the percentage of sample firms with earnings losses. In the year before the dividends are reduced, 38.4 percent of the firms have negative earnings. The percentage climbs to 53.7 percent in the year of the dividend cuts or omissions and then drops to 39.2 percent within one year and 23.0 percent within two years. The percentage of firms with losses in the year of dividend cut is consistent with that reported in DeAngelo et al. (1992). Breakdown of the earnings losses by operational action shows that a higher percentage of the action firms suffered losses in the year of the dividend decrease when compared to the nonaction firms. The chi-square statistics for the differences in percentages between these two groups are significant in both year -1 and year 0. Although the proportions

following the cut are not significantly different between the two groups, the action firms seem to recover faster than the nonaction firms.

Table 1—Description of the Final Sample of 203 Firms that Decreased or Omitted Dividend Payments During the Period 1991-1997

Year	1991	1992	1993	1994	1995	1996	1997	Total
N	41	34	42	16	28	17	25	203

Industry	N
Crude Petroleum and Natural Gas (SIC 1311)	10
Electric Services (SIC 4911)	9
Real Estate Investment Trusts (SIC 6798)	6
Machine Tools (SIC 3540)	5
Industrial Organic Chemicals (SIC 2860)	5
Other	168
Total	203

Firm Size	Mean	Median
Market Value of Equity (millions)	$1,071.26	$184.03

		Dividend Yield	
Type of Decrease	N	Mean	Median
Dividend Decrease	119	4.928	4.597
Dividend Omission	84	3.053	2.291

Operational Actions	N
No Actions	68
Actions	135

		Percentage of Firms with Losses Around Dividend Cut (Year 0)			
Type of Firms	N	Year -1	Year 0	Year 1	Year 2
All Firms	203	38.4	53.7	39.2	23.0
No Operational Actions	68	27.9	45.6	37.5	27.9
Operational Actions	135	43.7	57.8	40.0	20.6
χ^2		4.8[b]	2.7[a]	0.1	1.2

[a, b] Significant at the 10 percent and 5 percent levels using a χ^2 test for difference in proportions between the nonaction and action firms

Empirical Analysis

Change in Annual Earnings Surrounding Dividend Cuts

Table 2 reports raw and industry-adjusted change in annual earnings before extraordinary items around the year of a dividend cut. The earnings changes are computed relative to previous year's earnings and deflated by the beginning of the year market value of equity.[2] Deflation of earnings changes by the market value of equity makes the cross-sectional comparison more meaningful (Benartzi et al. 1997).

[2] We obtain similar results using change in annual operating cash flow deflated by beginning of the year market value of equity

Table 2—Yearly Change in Earnings Before Extraordinary Items (Deflated by Beginning of the Year Market Value of Equity)

Year -1		Year 0		Year 1		Year 2			
Sample	N	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Raw Change in Earnings									
All Firms	203	-7.77[c]	-4.73[c]	-7.01[c]	-2.71[c]	6.09[c]	3.13[c]	1.00	2.16[c]
No Operational Actions	68	-3.22[c]	-1.89[c]	-2.30	-2.97[c]	0.04	2.55	-0.49	1.76
Operational Actions	135	-10.05[c,f]	-6.29[c,f]	-9.38[d,c]	-2.68[c]	9.07[c,e]	3.59[c,e]	1.73	2.56[c]
Before Dividend Cut	34	-9.03[c,f]	-4.69[c,e]	-5.08[a]	-2.34[a]	6.68[a,d]	0.56[a]	-2.26	-0.13
After Dividend Cut	36	-9.32[c,f]	-6.23[c,f]	-12.31[e,b]	-7.77[b]	9.06[b,e]	5.86[b]	8.86[c,d]	4.32[b]
Before and After	33	-12.18[c,f]	-8.47[c,f]	-10.87[e,a]	-3.51[a]	15.82[b,f]	8.46[c,f]	-3.99	1.15
Industry-Adjusted Change in Earnings									
All Firms	199	-5.64[c]	-2.63[c]	-5.08[c]	-2.12[c]	5.41[c]	3.16[c]	-0.29	1.67[b]
No Operational Actions	68	-2.26[b]	-1.31	-1.44[c]	-2.21	0.01	2.75	-0.29	2.33
Operational Actions	131	-7.37[c,e]	-3.01[c,f]	-6.97[c]	-2.11[c]	8.13[c,e]	3.82[c,e]	-0.28	0.65[a]
Before Dividend Cut	33	-6.61[c,e]	-1.84[c,d]	-5.22[a]	-2.13[a]	8.09[b,e]	2.97[c]	-2.28	0.64
After Dividend Cut	34	-7.80[c,f]	-4.11[c,e]	-6.43	-4.75[a]	4.56[b]	4.84[b]	6.80	3.42[b]
Before and After	32	-9.04[c,f]	-3.69[c,f]	-7.16	-0.37	14.26[b,f]	4.81[c,f]	-7.49	0.21

Year 0 is the year when the quarterly dividend payment is decreased or omitted following at least four consecutive quarters of stable dividends. Industry-adjusted earnings are computed as raw earnings minus median earnings in the industry (based on four-digit SIC code). N is the number of observations for year 0. There are few missing values for year -1, year 1, and year 2. Only the sample of 103 firms with dividend news in the *Wall Street Journal* is partitioned into the subsamples (before dividend cut, after dividend cut, and before and after

[a, b, c] Significantly different from 0 at the 10 percent, 5 percent, and 1 percent levels using a two-tailed t-test for the means and a two-tailed Wilcoxon test for the medians

[d, e, f] Significantly different from no operational actions sample at the 10 percent, 5 percent, and 1 percent levels using a two-tailed t-test for the means and a two-tailed test for the medians

Industry-adjusted change, which we compute to control for industry factor, is raw change minus the median change in the industry defined by the four-digit standard industrial classification (SIC) code. The findings for year -1 show that both the raw and industry-adjusted changes in earnings are significantly different from zero for the total sample and for the subsamples of action and nonaction firms. Comparison between the action and the nonaction firms shows that the former experience greater decline in earnings prior to the dividend cut. It appears that a proactive operational measure is implemented when there is a large decline in earnings prior to the dividend cut.[3] Similar to the year -1 findings, the raw and industry-adjusted earnings changes in year 0 are significantly different from zero for all firms and the subsamples.

According to the findings in Table 2, there is a significant rebound in earnings for the total sample in year 1 and to a lesser extent in year 2. The mean and median values of both the raw and industry-adjusted changes in earnings are positive and significantly different from zero. These findings are consistent with the anomalous results reported in Healy and Palepu (1988), Benartzi et al. (1997), and Jensen and Johnson (1995) that earnings improve after firms reduce dividend payments. It is also consistent with Jensen and Johnson's (1995) contention that firms reduce dividends when earnings are at the lowest point.

The results on subsequent earnings changes for the action and nonaction firms reported in Table 2 address the main empirical question of this study: To what extent operational actions explain earnings rebound following a dividend cut? The results show that only the operational action firms show increase in earnings following the year of the dividend cut. Like the total sample, earnings improvement for these firms is more pronounced in year 1. Similar findings for the industry-adjusted data also confirm that such earnings increase cannot be attributed to industry performance. The nonaction firms, on the other hand, do not experience any earnings increases. For these firms, none of the mean or median value in either year 1 or 2 is significantly different from zero. Furthermore, the action firms have significantly higher mean and median increases in earnings in year 1 than those of the nonaction firms. For example, the year 1 mean value of 9.07 for the action firms is significantly higher than the 0.04 mean value for the nonaction firms.

Although our results do not show earnings decrease for the nonaction firms, they do depart from the anomalous findings reported in Healy and Palepu (1988), Benartzi et al. (1997), and Jensen and Johnson (1995). Also, Linter's (1956) version

[3] We perform logistic regression using operational action as the dependent variable (coded 1 if action firm, 0 if non-action firm) and change in earnings (raw or industry-adjusted) in year -1 as the explanatory variable. The results confirm our contention that poor earnings performance in prior year increases the likelihood of a managerial action to improve performance. For example, for the raw data, the coefficient value is -6.77 and significant at the 1 percent level. The model's classification accuracy is 68.09 percent.

of dividend policy that firms reduce dividends in response to a permanent decrease in earnings seems to hold for the nonaction firms. These firms show no evidence of a change in earnings (in years 1 and 2) following poor earnings (in years -1 and 0).

The interpretations of our earnings results could be problematic due to a lack of control for the timing of the operational measures. Operational actions before the dividend cuts may increase earnings in year -1 and year 0, whereas operational actions following the dividend cuts may produce better earnings in year 1 and year 2. To address this issue, we report earnings for the following subsamples: (a) firms reporting operational actions in the *WSJ* prior to dividend cuts, (b) firms reporting operational actions in the *WSJ* following dividend cuts, and (c) firms reporting operational actions in the *WSJ* both before and after dividend cuts. The results for these subsamples, reported in Table 2, provide some support for our contention. Although all three subsamples show earnings improvement in year 1, only firms taking actions after the dividend cut show improvement in year 2, two years after the cut. Although the timing of the operational actions may have some affect on the earnings results, we do not report subsequent results (in Tables 3 and 4) separately for these three smaller subsamples.

Findings on Large Firms

As note earlier, it is possible that the nonaction firms in our sample have undertaken operational measures that did not receive coverage in the *Wall Street Journal*. One possible reason is that these are small firms that receive little press coverage. To address this concern, we examine earnings changes for the 50 largest firms in our sample with assets greater than $413.00 million. Of the 50 firms, 44 are action firms while only six are nonaction firms. The results (not reported) indicate that the six nonaction firms do not experience any significant increase in earnings following a dividend cut, while the 44 action firms have significant increase in earnings. This evidence, although based on a small sample, supports our previous findings that earnings following a dividend cut increase when firms implement operational measures.

Regression Analyses

As the next step of our investigation, we perform regression analyses. We examine the extent to which earnings changes in years 1 and 2 can be forecast by the magnitude of the dividend cut and the implementation of operational action. We regress subsequent change in earnings on the amount of the dividend cut, action variable (coded 1 if operational action and coded 0 if no operational action), and change in prior year's earnings. As in Healy and Palepu (1988), earnings change in prior year is included in the regressions to control for the earnings pattern. We use both single regression framework (separate regression of each independent variable) and multiple regression framework (regression of all independent variables). If divi-

dends have information content, one would expect a positive relationship between the magnitude of the dividend cut and future earnings change, even after controlling for the action variable and prior year's earnings change.

Table 3 reports the regression results. The results indicate that there is no relationship between dividend cuts and earnings changes that follow. The only significant coefficient for the dividend cut variable is -1.096, which is of the opposite sign. These results do not support the signaling argument of dividends. The findings on the action variable show significant and positive coefficients for year 1. This suggests that earnings changes in year 1 are greater when firms take operational steps and that such earnings changes occur even after controlling for prior year's earnings. For example, the coefficient of 0.090 indicates that the action firms have a 9.0 percent greater increase in earnings in year 1 than the nonaction firms. In the multiple-regression model, the action firms have a 5.8 percent greater increase in industry-adjusted earnings in year 1 when compared to the nonaction firms. As expected, we find that the coefficients of prior year's earnings change are negatively related to current year's earnings change.[4]

An important problem with the multiple regression findings is that the change in dividend and change in prior year's earnings could be correlated. Using Pearson's correlation measure, we detect significant correlation of roughly 15 percent between change in dividend and change in earnings in year 0 for both raw and industry-adjusted data. Our results, therefore, should be interpreted with caution.

Change in Annual Earnings in Year 1 for Smaller Subsamples

We take our investigation a step further to examine which group of firms in our sample is likely to experience a decrease in earnings a year after dividends are cut. The groups are formed based on whether the firm initiated an operational measure and on the earnings change quartile in prior year (i.e., year 0). These two attributes appear to have influenced the future earnings performance in our analyses thus far. Firms in quartile 1 have the highest earnings changes, while firms in quartile 4 have the lowest earnings changes. Quartile 1 has 50 firms, quartile 2 has 53, quartile 3 has 52, and quartile 4 has 48 firms.

The results, reported in Table 4, indicate that in year 1, a change in earnings has the expected negative sign for the sample of 14 nonaction firms in quartile 1. The mean and median for the other groups are either not significantly different from zero or have positive values. The positive values are more pronounced when firms with substantial earnings decrease (quartile 4) take operational steps to improve performance. To get a sense of the predictive ability of the dividend change for each of the

[4] Following Healy and Palepu (1988), we replicate the regressions using annual data constructed around the dividend decrease quarter, defined as quarter 0. For example, year -1 is four quarters prior to quarter 0, and year 0 is quarter 0 plus three subsequent quarters. We obtain similar results using these annualized quarterly data.

Table 3—Results of the Regression Analyses

Dependent Variables		Independent Variables			
Δ Earnings: Raw Year	Constant	Dividend	Action	Earnings: Prior Year	Adjusted R^2
1	0.039	-0.883	-	-	0.003
1	0.043	-	0.090[b]	-	0.016
1	0.018	-	-	-0.604[c]	0.263
1	-0.021	-0.181	0.053	-0.587[c]	0.262
2	0.014	0.168	-	-	0.005
2	-0.005	-	0.022	-	0.004
2	0.032	-	-	-0.345[c]	0.108
2	0.007	-0.199	0.051	-0.358[c]	0.105
Δ Earnings: Industry-Adjusted					
1	0.027	-1.096[a]	-	-	0.010
1	0.001	-	0.081[b]	-	0.014
1	0.026	-	-	-0.543[c]	0.238
1	-0.020	-0.346	0.058[a]	-0.526[c]	0.240
2	0.003	0.244	-	-	0.005
2	-0.003	-	-0.000	-	-0.005
2	0.014	-	-	-0.307[a]	0.082
2	0.004	-0.127	0.023	-0.314[a]	0.073

Number of observations are 203 for the raw-data regressions and 199 for the industry-adjusted regressions
[a, b, c] t-statistic significant at the 10 percent, 5 percent, and 1 percent levels

eight categories reported in Table 4, we regress earnings change in year 1 on the amount of dividend cut deflated by the beginning of the year equity value. The results (not reported) show that only the nonaction firms in quartile 1 have a significant and positive regression coefficient. This is true for both the raw and industry-adjusted data. The regression coefficients for the action categories are mainly significant with negative signs, suggesting increase in earnings following a dividend cut.

Our interpretation of these findings is that managers cut dividends to signal a drop in future earnings only when the firm is experiencing healthy earnings and only when operational measures are not implemented. It is less likely that a dividend cut is a reliable signal for firms who are already at the lowest point of earnings or who make attempts to improve firm performance.

Summary and Conclusions

According to the signaling theory of dividends, a dividend cut signifies less-than-expected earnings in the future. Prior empirical findings, however, observe increase in earnings following dividend cuts. In this paper we examine whether operational actions that are often implemented in conjunction with the dividend cut explain such anomalous findings.

Table 4—Earnings Change in Year 1 (Deflated by the Market Value of Equity in the Beginning of Year 0) Categorized by Operational Actions and by Quartiles Based on Earnings Change in Year 0

Operational Action	Δ Earnings in Year 0 Quartile	N	Earnings: Raw		Δ Earnings: Industry-Adjusted	
			Mean	Median	Mean	Median
No	1	14	-4.963	-4.487[a]	-6.369[a]	-3.396[a]
No	2	20	1.533	2.813	2.118	2.898[a]
No	3	25	-0.377	1.862	-0.468	3.305
No	4	9	4.866	7.141[a]	5.660	10.035
Yes	1	36	-1.735	0.004	-0.378	0.967
Yes	2	33	0.009	0.435	0.729	0.028
Yes	3	27	6.309[b]	5.857[b]	7.165[b]	4.669[c]
Yes	4	39	29.240[c]	30.336[c]	24.795[b]	21.488[c]

[a, b, c] Significantly different from 0 at the 10 percent, 5 percent, and 1 percent levels using a two-tailed t-test for the means and a two-tailed Wilcoxon test for the medians

Our findings indicate that earnings subsequent to a dividend cut are positively related to the operational actions. Firms that initiate measures to improve performance see their earnings rise after dividends are reduced, while firms without any actions do not experience any change in earnings. Further analyses indicate that only the nonaction firms with strong earnings in the year of the dividend cut experience a decline in earnings.

The findings of our study suggest that a dividend cut may not be an effective signal of poor future performance under all circumstances. When a dividend reduction accompanies other operational actions, managers are less likely sending a signal that poor performance is forthcoming. On the other hand, firms with good earnings record may find a dividend cut to be a reliable signal of declining future earnings only when there are no plans to implement any operational measures.

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