The Impact of Special Dividend Announcements, Insider Ownership, and Tax Increases on US Equity Prices

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Abstract:

In the fourth quarter of 2012, large cash balances and looming tax increases led to unprecedented levels of special dividend payments by US corporations. This study examines the market's reaction to 320 special dividend announcements made in October, November, and December of 2012 and finds significant Cumulative Abnormal Returns (CARs) in the days surrounding the dividend announcement. We conclude that CARs were positively correlated with dividend size, which implies that investors reacted favorably to anticipated tax savings of receiving dividends prior to an expected tax increase. We also conclude that CARs were positively correlated with the percent of shares held by insiders, signaling the possible existence of agency problems associated with free cash flow and dividend payments.

I. Introduction

At the end of 2012, a variety of factors led to an unprecedented number of one-time discretionary payments by US corporations to shareholders, better known as special dividends. Non-financial US companies were holding a record \$1.74 trillion in cash and liquid assets on their balance sheets at the end of September, 2012.² Low interest rates and high investor demand encouraged companies to borrow money. Investment-grade nonfinancial companies sold in excess of \$100 billion of bonds in November of 2012, a record monthly total.³ Tax rates for individual investors on dividend income had slowly and steadily declined for 40 years, culminating in 2003 when the Bush-era tax cuts reduced them to 15%. Those tax cuts were set to expire on December 31, 2012 and, barring legislative action, the federal tax rate on dividend income for individuals would rise to the level of ordinary income, which can be as high as 39.6%. Also set to begin on January 1, 2013 was an additional 3.8% tax on dividends for individuals earning above \$200,000 per year or families earning above \$250,000 per year. Thus, the dividend tax rate for some US taxpayers had the potential to rise from 15% to 43.4%.⁴ The tightly-contested 2012 presidential elections added to the uncertainty. Political pundits believed a victory by Mitt Romney was likely to keep taxes on dividend income at existing levels while a Barack Obama victory virtually guaranteed some kind of tax increase. This paper focuses on the market's reaction to special dividend announcements that occurred in the fourth quarter of 2012 in anticipation of increases in tax rates on dividend income for individual investors.

² Ben Casselman, "Cautious Companies Stockpile Cash," *The Wall Street Journal*, December 6, 2012, accessed February 28, 2012. Available at:

http://online.wsj.com/article/SB10001424127887323316804578163394088244224.html

³ Matt Wirz and Patrick McGee, "Firms Flood Bond Market to Finance Payouts," *The Wall Street Journal*, November 29, 2012, accessed February 28, 2012. Available at:

 $http://online.wsj.com/article/SB10001424127887324020804578149641473505474.html?mod=ITP_moneyandinvesting_0$

⁴ Review & Outlook, "Costco's Dividend Tax Epiphany," *The Wall Street Journal*, November 30, 2012, accessed February 28, 2012. Available at:

http://online.wsj.com/article/SB10001424127887324705104578149012514177372.html

As the likelihood of an Obama victory increased in the weeks leading up to the election in early November, companies began to announce one-time, special dividends at a frenzied pace. In the fourth quarter of 2012, common (non-fund) companies listed on the ASE, NYSE, NASDAQ, NGM, and NSC announced a total of 54, 228, and 483 special dividends in October, November, and December, respectively. These totals represented an increase of 46%, 209% and 167% above their respective 2004-2011 monthly averages. The accelerated rate of special dividend announcements and its relationship to recent historical averages can be seen in Figure 1. The end result of these factors (cheap debt, large cash balances, impending tax increases, etc.) was a record number of special dividend payments in October, November, and December of 2012.



Figure 1: Number of special dividend announcements per month in 2012 and recent historical average.⁵

⁵ Howard Silverblatt, "Standard & Poor's Monthly Dividend Action Report," e-mail message to author, November 29, 2012.

The unprecedented number of special dividend announcements at the end of 2012 presents a unique opportunity to examine the market's reaction to special dividends and tax changes. In the first part of the analysis, we will determine if there were abnormal returns associated with the special dividend announcements. The latter part of the analysis will be spent identifying what factors, if any, were correlated the abnormal returns.

II. Previous Work

The academic discussion of how dividend policy affects security prices goes back over half a century, with Miller and Modigliani (1958) being among the pioneers in development of modern theory.⁶ Frameworks like The Free Cash Flow Hypothesis first introduced by Berle and Means (1932)⁷ and later updated by Jensen (1983)⁸ are useful tools for developing hypotheses about the market's reaction to special dividend issuance by firms. The validity and merits of the various theoretical frameworks are beyond the scope of this paper, but during efforts to empirically prove these frameworks, several relevant studies that measured market reaction to special dividend announcements emerged.

One study that examined 2023 special dividend announcements from 1962-1982 found that the dividends were immediately followed by significant positive excess returns as measured by the mean adjusted returns model.⁹ The study also found a significant negative relationship between the frequency with which a firm announced special dividends and the excess returns delivered on the day of the dividend announcement (Day 0). The study did not control for

⁶ Merton H. Miller and Franco Modigliani, "Dividend Policy, Growth, and the Valuation of Shares," *Journal of Business*, October 1961, 34, 411 – 433.

⁷ Adolph A. Berle and Gardiner C. Means, "The Modern and Private Property," New York: Macmillan, 1932.

⁸ Michael C. Jensen, "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers," *American Economic Review*, May 1986, 76, 323–329.

⁹ Narayana Jayaraman and Kuldeep Shastri, "The Valuation Impacts of Specially Designated Dividends," *Journal of Financial and Quantitative Analysis*, September 1988, 23, 310-312.

changes in tax rates or other factors (e.g., cash balances, corporate governance, company performance, etc.). Another study that examined 165 special dividend announcements from 1969 through 1979 also found significant abnormal returns on Day 0 and Day+1.¹⁰ This study also did not control for changes in tax rates or other factors.

More recently, studies have examined the specific topic of corporate governance and special dividend issuances surrounding changes in personal income tax rates. One study showed that dividend payouts increased and decreased based on tax advantages or disadvantages relative to capital gains when large individual shareholders of a firm were affected by these changes.¹¹ Another study examined special dividends issued in 2010 in anticipation of a tax increase that never occurred and found that the likelihood of dividend issuance was positively correlated with the percentage of insider ownership.¹² These studies provide the foundation for the analysis conducted below where we examine the market's reaction to the flood of special dividend announcements made at the end of 2012 and try to determine what factors, if any, are correlated with whether a firm elected to pay a divided, the size of the firm's dividend, and the abnormal returns associated with the dividend announcement.

III.A Data Description – Data Sources, Inclusion Criteria, and General Observations

The dividend data was retrieved from Compustat's North American Daily Security service (Computstat) via the Wharton Research Database Services (WRDS). Inclusion criteria were as follows:

¹⁰ James A. Brickley, "Shareholder Wealth, Information Signaling and the Specially Designated Dividend," *Journal of Financial Economics*, August 1983, 12, 187–209.

¹¹ Perez-Gonzalez, Francisco, Large Shareholders and Dividends: Evidence from U.S. Tax Reforms (September 2002). Available at SSRN: http://ssrn.com/abstract=337640 or http://dx.doi.org/10.2139/ssrn.337640

¹² Hanlon, Michelle and Hoopes, Jeffrey L., What Do Firms Do When Dividend Tax Rates Change? An Examination of Alternative Payout Responses to Dividend Tax Rate Changes (May 23, 2012). Available at SSRN: http://ssrn.com/abstract=2065628 or http://dx.doi.org/10.2139/ssrn.2065628

- Publicly traded North American non-fund equity security
- Traded on an either NYSE or NASDAQ
- Announced a special dividend in October, November, or December of 2012
- Special dividend was payable on or before December 31, 2012
- Dividend to be paid in USD

The dataset was limited to non-fund equities publicly traded on the NYSE and NASDAQ for several reasons. First, a large number of different types of funds are now publicly traded (e.g., Exchange Traded Funds, Mutual Funds, etc.), but the investment strategies and regulation of these funds varies greatly. The market's reaction to a fund's special dividend announcement may not be similar to that of a fund with a different investment strategy. Further, some types of funds (e.g., closed-end mutual funds) have a history of anomalous market behavior, and thus it is safest to exclude them from the sample. Second, the shares of firms traded on the NYSE and NASDAQ are highly liquid, improving the likelihood that any impact of the special dividend on the value of the security will be quickly incorporated into the stock price. Finally, stock price data and additional metrics (e.g., % institutional ownership) are more likely to be available for securities traded on these exchanges.

The time window of October, November, and December 2012 was selected due to the divergence of the number of special dividend announcements in those months from recent historical average. In the fourth quarter of 2012, common (non-fund) companies listed on the ASE, NYSE, NASDAQ, NGM, and NSC announced a total of 54, 228, and 483 special dividends in October, November, and December, respectively. Monthly averages of special dividend announcements for 2004-2011 were 36.9, 73.8, and 180.9 for October, November and

December, respectively. The 2004-2011 highs for those months were 53 (October 2010), 97 (November 2010), and 233 (December 2007).¹³ Also of note is the seasonal pattern in special dividend announcements that is observed in the data, which can be observed in Figure 2 below. **Figure 2:** Number of Special Dividend Announcements per Quarter.¹⁴



The number of special dividend announcements in the first three quarters (Q1-Q3) of 2012 is consistent with prior years. There were a total of 765 special dividend announcements in the fourth quarter (Q4) of 2012, which is dramatically higher than the number of special dividend announcements in the first, second, and third quarters of 2012 (110, 106, and 75, respectively). The 2012 increase of special dividend announcements in the fourth quarter relative to the first three quarters is consistent with historical patterns, but the level of increase is substantially greater than previous years.

 ¹³ Howard Silverblatt, "Standard & Poor's Monthly Dividend Action Report," e-mail message to author, November 29, 2012.
¹⁴ Ibid.

Given the discretionary nature of special dividends and the anticipated increase in taxes between 2012 and 2013, it was rational for firms to increase dividend payments in the fourth quarter of 2012. This seasonality in dividend payments is also observed in other years (i.e., 2004-2011) where changes in tax rates or other external factors were not anticipated or did not materialize (e.g., tax increase in 2010). In the absence of changing external factors that impact dividend decisions, there exists a seasonal pattern in special dividend announcements. One explanation for the increase in special dividend announcements during Q4 is that firms wait until the end of the year to examine their performance and financial needs before making dividend decisions. However, there appears to be no reason these decisions cannot be made in other quarters. We did not find any literature discussing the seasonality of special dividend payments and believe it may warrant further investigation.

III.B Data Description – Data Management and Refinement

All announcement dates provided in the Compustat dataset were verified via press releases, company investor relations, and other sources. Using these sources, we adjusted the dividend announcement dates when press releases indicated that the announcement date differed from the announcement date listed in Compustat. Dividend announcements are commonly made either in the morning before trading begins or after trading closes for the day. The announcement date reported by Compustat does not differentiate between announcements released pre- or posttrading, but our definition of Day 0 relies on this information because we define "Day 0" as the returns generated by the first daily closing price after the dividend announcement. Accurately identifying the time of the dividend announcement was critical to our calculations and warranted the investment in time and risk associated with manual data verification and adjustment. We compensate for errors or imperfections (e.g., two sources that list conflicting announcement dates and times) in the process by examining Cumulative Abnormal Returns (CARs) over a five day window surrounding the dividend announcement date.

A total of 10 events that fit the inclusion criteria described in Section III.A were excluded for one of the following reasons: the company was acquired shortly after the announcement; the dividend was misclassified as a special dividend instead of regularly occurring (e.g., quarterly) dividend; a record of the dividend could not be verified (i.e., no mention of the dividend could be found outside of the Compustat dataset); or the dividend was announced in conjunction with a merger or buyout. A total of N=320 special dividend announcements were included in the final dataset.

Additional data for regression analyses were acquired from other sources. FactSet and Bloomberg were used to retrieve balance sheet information and performance data, Thomson Reuters and Bloomberg were used to retrieve holdings data, and RiskMetrics by ISS and the Corporate Library were used to retrieve corporate governance data.

IV. Daily Abnormal Returns Analysis

Daily abnormal returns on the days surrounding the dividend announcement were calculated. In the following discussion, "Day 0" is defined as the returns generated by the first daily closing price after the dividend announcement. For example, if the announcement came at 3:50 PM (before the markets closed) on December 3, 2012, then Day 0 is defined as December 3rd. If the announcement came at 5:00 PM (after the markets closed) on December 3, 2012, then Day 0 is defined as December 3, 2012, then Day 0 is defined as December 4th. Abnormal returns were calculated as follows:

<u>Abnormal Return on Day N</u>¹⁵ = (Day N Stock Daily Return) - (Day N S&P 500 Daily Return)

Where:

$\underline{\text{Stock Daily Return}} = \frac{(\text{Day N closing price})-(\text{Day N-1 Closing Price})}{(\text{Day N-1 Closing Price})}$

Abnormal returns were calculated for Day 0 as well as the two days that preceded Day 0 (Day-2, Day-1) and the two days followed Day 0 (Day+1, Day+2). Cumulative abnormal returns (CAR) were then calculated by adding daily abnormal returns. For example, the CAR for Day+1 would be calculated as follows:

<u>Day+1 CAR</u> = (Day N-2 Abnormal Return on Day N-2) + (Day N-1 Abnormal Return) + (Day 0 Abnormal Return) + (Day+1 Abnormal Return)

In theory, cash on the balance sheet belongs to equity shareholders. A dollar inside of a healthy firm should have equal value to its shareholders as a dollar outside of the firm. In other words, if an individual owns shares in a firm, then cash on the firm's balance sheet is equal in value to cash in the individual's personal bank account. Thus, investors should be indifferent to special dividend announcements and our null hypothesis is that both average and median Cumulative Abnormal Returns are equal to zero.

Figure 3 below is a scatterplot of the Cumulative Abnormal Returns of each of the 320 equities in the sample shown versus dividend announcement date. CARs were calculated over a five day period from Day-2 to Day+2. Figure 3 clearly depicts two trends: first, we see that special dividend announcements became more frequent over time and peaked in late November

¹⁵ Note: For all securities in the sample, abnormal return calculation assumes beta = 1

and early December and second, although there is a wide distribution to the CARs, they are generally above zero. In Figure 4, we show the average and median of these five day CARs.



Figure 4: Cumulative Abnormal Returns in the Days Surrounding a Special Dividend Announcement.



Figures 3 and 4 suggest that our null hypothesis be rejected. Both median and average CARs rose to well above zero on Day 0, the first day of trading after the special dividend announcement, indicating a favorable market reaction to the announcements. Further, in Figure 4 we see no substantial median or mean CARs on Day-2. By Day-1, the median CAR remains close to zero while the mean CAR creeps up to 0.23%, but this result is not statistically significant (p = 0.1743).¹⁶ By Day 0 and beyond, the average and median CAR jump above 1% and the results are all highly significant. We also examined CARs across two other windows: a one day window (Day 0 only) and a three day window (Day-1 to Day+1). The average and median CARs during these three windows as well as the statistical significance of these results are shown in Table 1.

Table 1: Cumulative Abnormal Returns across three windows: Day 0 only, Day-1 to Day+1, and Day-2 to Day+2

	Day 0	Day-1 to Day+1	Day-2 to Day+2
Average CAR	1.49%	1.91%	2.20%
p-Value ¹⁷	$p \leq 0.0000$	$p \le 0.0000$	$p \leq 0.0000$
z-Value	6.80	6.90	6.57
Median CAR	0.75%	1.23%	1.38%
p-Value ¹⁸	$p \leq 0.0000$	$p \le 0.0000$	$p \le 0.0000$

These results imply two things. First, markets reacted favorably to the special dividend announcements, driving up equity prices and delivering returns that surpassed the broader market. The statistical significance of these results supports our rejection of the null hypothesis that median and average abnormal returns are equal to zero. Second, because the CARs in the

¹⁶ Two-Tailed, Two Sample Unequal Variance T-Test

¹⁷ Ibid.

¹⁸ Mann-Whitney Two-Tailed Rank-Sum Test

two days leading up to the special dividend announcements did not differ from the null hypothesis at a statistically significant level, we can infer that the market was surprised by the special dividend announcements.

By extending the window beyond Day 0 and looking at three and five day windows, we see that the market continued to react favorably to the special dividend announcements as CARs continued to grow. However, the bulk of the returns were delivered on Day 0, thus we should not be surprised to see statistically significant results in the three and five day windows since those windows both include Day 0. Lastly, we note that the disparity between average and median returns can be attributed to a positively skewed distribution, with 19 equities delivering CARs in excess of 10%, as can be seen in the scatterplot shown in Figure 3.

The Cumulative Abnormal Returns found in this study are consistent with the findings of previous studies that examined special dividend announcements.^{19 20} Although these studies also found statistically significant abnormal returns on Day+1, this could be the result of the authors' definition of Day 0. Before we adjusted the announcement date provided in the Compustat dataset, we found similar results in our sample. For example, many of the announcement dates listed in Compustat were accurate, but the announcement occurred after markets had closed for the day. Thus, if we were to use the unadjusted Compustat announcement day, then the market's reaction to the dividend announcement would appear on Day+1 in our analysis. The prior studies that examined market reaction to special dividend announcements were written at a time when verifying the time of day of the dividend announcement would have been far more cumbersome than it is today.

¹⁹Narayana Jayaraman and Kuldeep Shastri, "The Valuation Impacts of Specially Designated Dividends," *Journal of Financial and Quantitative Analysis*, September 1988, 23, 310-312.

²⁰ James A. Brickley, "Shareholder Wealth, Information Signaling and the Specially Designated Dividend," *Journal of Financial Economics*, August 1983, 12, 187–209.

V. Regression Results

There are a number of theories that seek to explain dividend policy and firm behavior, many of which lack strong empirical evidence to support their arguments.²¹ It may be that no single model or theory can fully explain dividend policy given the complexity of endogenous and exogenous factors that managers must consider when determining divided policy.²² It is well beyond the scope of this paper to argue the merits of the various models, but by combining the sample described above with other metrics, we can investigate if common characteristics exist among the firms that paid special dividends. At the beginning of the paper, we introduced several hypotheses presented in news stories about the proliferation of special dividend payments (e.g., cheap debt, large cash balances, changing tax rates, etc.). In the following section we will use linear regression to test if there is evidence for these theories hypotheses.

We noted previously that individuals, institutional investors, and corporations are taxed at different rates on dividend income. Roughly speaking, institutional investors and corporations pay little to no taxes on dividend income while individuals have a more significant tax liability. Further, at the end of 2012 individual shareholders anticipated they would pay lower taxes on dividend income received before December 31, 2012 than they would on dividend income received after January 1, 2013. We expect individual shareholders to react favorably to a special dividend announcement to be paid prior to December 31, 2012 due to this tax increase. By extension, we expect that dividend size will be correlated with Cumulative Abnormal Return because the larger the size of the dividend, the greater the tax savings. The differential tax

²¹Frankfuter G. M., Wood B. G. Junior, 2002, Dividend policies and their empirical test, International Review of Financial Analysis, 11, pp. 111 – 138.

²² Dhrymes, P. J., & Kurz, M. (1967). Investment, dividend, and external finance behavior of firms. In Ferber R. (Ed.), Determinants of investment behavior: a conference of the Universities–National Bureau Committee for Economic Research (pp. 427–485). New York: National Bureau of Economic Research.

treatment between individuals and institutional investors implies that institutions are indifferent to dividends while individuals' preference to dividends depends on tax rates. Thus it is expected that the CARs would be lower for companies with a higher proportion of institutional shareholders. In Table 3 below, we present the results of a series of univariate linear regressions as well as a multivariate linear regression. In each regression, the dependent variable is Cumulative Abnormal Returns across the five day window (Day-2 to Day+2).

	Univariate Regressions			Multivariate Regression
	Estimate (<i>t-Statistic</i>)	Estimate (<i>t-Statistic</i>)	Estimate (<i>t-Statistic</i>)	Estimate (<i>t-Statistic</i>)
Intercept	0.0087 (2.46)	0.1375 <i>(3.53)</i>	0.0356 (4.56)	0.0044 (0.43)
Dividend Size as % of Day-1 Closing Price	0.2575 (6.12)			0.2456 (5.87)
% Insider Ownership ²³		0.1357 (3.40)		0.0506 (2.43)
% Institutional Ownership ²⁴			-0.0191 (-1.89)	-0.0024 (-0.22)

Table 3: CAR versus Dividend Size as % of Day-1 Price, % Insider Ownership, and %Institutional Ownership.

In the univariate regression analysis, we compared Dividend Size as a % of Day-1 Closing Price (Dividend Size), % Insider Ownership, and % Institutional Ownership against Cumulative Abnormal Returns. Each of the three results yielded statistically significant results for both the intercept and the independent variable. When the three independent variables were used to perform a multivariate linear regression, the estimates for intercept and % Institutional Ownership moved towards zero and were no longer statistically significant.

²³ % Insider Ownership data obtained from Bloomberg on 3/3/2013.

²⁴ % Institutional Ownership data obtained from Bloomberg on 3/3/2013.

The univariate linear model comparing Dividend Size to CAR predicts that for every 1% increase in Dividend Size, there was a 0.26% increase in CAR. The highly significant result (t=6.12) means we can reject the null hypothesis that dividend tax rates are irrelevant to investor reaction to a dividend announcement. We noted earlier that marginal tax rates on dividends were projected to increase from 15% to up to 43.4% between 2012 and 2013, a difference of 28.4%. In other words, \$100 in dividends paid out in 2012 versus \$100 in dividends paid out in 2013 would save investors up to \$28.4 in taxes. If we ignore differential tax rates between institutions and individuals and assume all investors were exposed to the same tax increase, then the model's estimate for the effect of dividend size on abnormal returns is almost exactly the magnitude predicted by the net tax savings to investors (25.8% versus 28.4%). In the multivariate linear model, the magnitude of the coefficient for Dividend Size barely changed from the univariate model and remained highly significant (t=5.87). This suggests that the effect of Dividend Size on CAR is largely independent of the other inputs we included in the multivariate analysis.

Of course, not all investors are taxed at the same rates on dividends. We also expected to see a significant relationship between % Institutional Ownership and Cumulative Abnormal Return due to the differential tax rates. In the univariate linear model comparing % Institutional Ownership to CAR, the estimate for the relationship between the two was -0.0191 with a t-statistic of -1.89. The negative value for the estimate matches the intuition – a larger percentage of institutional shareholders means that fewer shareholders are exposed to the anticipated tax increases and thus there should be a lower impact on CAR. Put differently, for every 1% increase in % Institutional Ownership, the model predicts a 0.019% decrease in CAR. In the multivariate linear model, the magnitude of the coefficient for % Institutional Ownership substantially decreased and was no longer statistically significant. This suggests that % Institutional

Ownership is likely correlated with one of the other independent variables in the multivariate analysis.

We also tested the effect of % Insider Ownership on Cumulative Abnormal Return. The univariate linear model predicts that for every 1% increase in % Insider Ownership, there was a 0.136% increase in CAR (t=3.40). One possible explanation for this relationship is potential agency problems between a firm's managers and its shareholders. For example, a high percentage of insider ownership increases the agency costs associated with free cash flow discussed in Jensen (1983).²⁵ Another related (but unproven) explanation is that firms with high insider ownership likely have CEOs or other executives with large holdings that are reluctant to pay dividends due to their own personal income tax exposure, which is another form of agency problem. In Figure 5 we created a scatterplot of five day CAR (y-axis) versus % Insider Ownership doesn't appear particularly strong; however, this is not too surprising given that we already know that Dividend Size also has an important effect on CAR. It is noteworthy that thirteen of the twenty largest CARs belonged to firms with % Insider Ownership above the population median of 7.52%.

²⁵ Michael C. Jensen, "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers," *American Economic Review*, May 1986, 76, 323–329.



Figure 5: Scatterplot of Cumulative Abnormal Returns versus % Insider Ownership.

The results of the multivariate regression reflect those of the univariate regression. The relationship between % Insider Ownership and CAR remains statistically significant (t=2.43), although the estimate is reduced to 0.0506. The t-statistic for the intercept declines to 0.43, which suggests that much of the variance in CAR can be explained by % Insider Ownership and Dividend Size. Finally, regardless of the root cause of the issue, the relationship between % Insider Ownership and Cumulative Abnormal Returns strongly implies the existence of agency problems and warrants further investigation into corporate governance, insider ownership, and dividend policy.

VI. Summary & Conclusion

In the discussion above, we established that tax rates on dividends greatly impact investor reaction to special dividend announcements. When investors anticipated an increase in tax rates on dividend income in the final months of 2012, they reacted favorably to special dividend announcements, which had the potential to save up to 28 cents on every dollar in dividend income. We also established that there is a significant relationship between % Insider Ownership and Cumulative Abnormal Returns. Large insider holdings predict a large abnormal return, which implies there may be agency problems related to insider ownership and dividend policy. The authors believe this warrants further investigation.

Despite the "fiscal cliff" warnings touted throughout the fall of 2012, tax rates on dividend income for individual investors increased modestly from 15% to 23.8% after a deal reached by congress on January 1, 2013. This increase only applied to individuals making over \$400,000 per year or couples making over \$450,000 per year,²⁶ leaving the vast majority of US taxpayers unaffected by the new laws. The credible threat of increased taxes, however, temporarily impacted firms' dividend decision making process as well as investor reactions to special dividend announcements.

²⁶ Binayamin Appelbaum and Catherine Rampell, "Bigger Tax Bite for Most Under Fiscal Pact," *The New York Times*, January 1, 2013, accessed March 2, 2013. Available at:

http://www.nytimes.com/2013/01/02/business/economy/a-bigger-tax-bite-for-most-households-under-senate-plan.html?_r=0

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