

# Misaligned Owners: A Dark Side of Insider Ownership

Insider ownership can exacerbate agency problems when insiders' interests as owners diverge from other shareholders. Using the 2012 fiscal cliff as a natural experiment (when dividend taxes were expected to rise and many firms paid special dividends), we find that higher insider ownership makes firms less responsive to other shareholders' tax incentives. Firms with the most "misaligned" incentives—high insider ownership combined with high tax-insensitive ownership—experienced significantly more negative abnormal returns around special-dividend announcements. A parsimonious theoretical framework illustrates how higher ownership raises managers' weight on their own after-tax payoff, strengthening incentives to accelerate payouts even when detrimental to firm value.

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# 1 Introduction

In December 2012, Oracle paid a large special dividend that included \$199 million paid to its CEO and founder, Larry Ellison, reportedly saving him over \$25 million in taxes ahead of a looming tax increase.<sup>1</sup> Across the United States, a total of 164 firms similarly paid special dividends between November and December 2012, totaling \$16 billion, which was thirteen times more than over the same period the previous year. The rush was driven by the looming “fiscal cliff,” when dividend tax rates were expected to nearly triple from 15% to 43.4%. For taxable shareholders like Larry Ellison, the incentive to accelerate dividends was substantial. Yet, the majority of shares in many U.S. public firms are held by institutions that are not subject to personal dividend taxes and thus would not benefit from—and might be harmed by—additional dividends around a tax hike.

We exploit this setting to study an important tension in corporate governance regarding the optimal level of managerial (“insider”) ownership in the firm. Classic theory and conventional wisdom hold that equity ownership by managers aligns their interests with shareholders and reduces agency costs (Jensen and Meckling 1976; Jensen and Murphy 1990). However, we show that when managers’ personal financial interests *as owners* deviate from those of other shareholders, higher insider ownership can exacerbate rather than mitigate agency conflicts. The 2012 fiscal cliff provides a unique natural experiment to study such a “dark side” of insider ownership: Insiders faced higher personal dividend taxes and thus would benefit from accelerated payouts, while tax-insensitive institutional investors—who own substantial stakes in most firms—would not. We use this setting to study whether insider ownership drives decisions that maximize value for all shareholders or that benefit insiders at the expense of others.

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<sup>1</sup>See, e.g., CNBC, Dec 4 2012, “Beating the ‘Dividend Cliff’: CEOs, Founders Cash In” at <https://www.cnbc.com/2012/12/04/beating-the-dividend-cliff-ceos-founders-cash-in.html>

We begin by presenting a parsimonious theoretical framework to illustrate the mechanism. The model shows that when insiders face choices that affect the (after-tax) value of their shares differently from other shareholders' shares, higher insider ownership can lead to worse decisions for firm value. This model differs from traditional agency theories that are based on private benefits (e.g., perks, empire-building, or a “quiet life”) and where higher ownership merely *enables* bad behavior (Jensen 1986; Morck et al. 1990; Bertrand and Mullainathan 2003; Yermack 2006). Instead, in our model, higher insider ownership *causes* the problem as it makes insiders even care more about maximizing the value of the ownership stake to them—even when doing so destroys value for others. That is, the more shares insiders own, the stronger their incentive to prioritize their own interests as owners.

Motivated by this model, we make three predictions: (i) that firms with higher insider ownership are more likely to pay special dividends during the fiscal cliff period; (ii) that among high-insider-ownership firms, these payout decisions are less responsive to whether the shareholder base at large would benefit; and (iii) that in firms where the tax incentives between insiders and other shareholders are the most “misaligned”—those with a combination of both high insider ownership and high tax-insensitive ownership—special dividend payments around tax changes have more negative valuation consequences.

We test these predictions using data on special dividend announcements, ownership structure, and stock returns, using the 2012 fiscal cliff as a natural experiment. The fiscal cliff situation arose abruptly following Barack Obama's re-election in November 2012, when many temporary tax cuts from the Bush era were set to expire in the new year. In particular, the personal income tax rate on dividends was expected to almost triple from a maximum federal rate of 15% to 43.4%. Thus, it was widely expected that dividend income would face higher taxes in the new year, and firms had only around two months to act if they wanted to pay their shareholders extra dividends at the existing rates.

This setting thus offers several advantages for isolating the mechanisms we seek to study: It represents a sudden and economically meaningful shock to insiders’ and other shareholders’ tax incentives; it calls for a discrete and identifiable response in the form of a special dividend payout within a narrow time window; and the announcements of these payments allows for measuring the resulting valuation effects using event study methods. It is worth noting that even though the scheduled expiration of these tax cuts was known in advance, the likelihood that tax rates would go up increased significantly during the final months of 2012, as Mitt Romney (Obama’s opponent) had vowed not to allow tax rates to rise. We also observe empirically that very few firms acted before the election results, while firms immediately rushed to pay special dividends in the weeks following the election.

One empirical challenge involves measuring the tax incentives of insiders vs. the firm’s other shareholders. Insiders’ incentives are fairly straightforward, as they almost always pay personal taxes on dividend income and therefore would benefit from accelerating dividends before a rate hike. By contrast, investors who are not subject to personal dividend taxes would not benefit from such an acceleration, but a challenge remains that the investor-level dividend-tax exposure is not always perfectly observable, especially for pass-through institutions.

In our baseline results, we proxy for a firm’s share of “dividend-tax-insensitive” shareholders as the fraction of shares held by institutional owners excluding mutual funds. This measure correctly captures both institutions that are exempt from dividend taxes (such as pension funds, endowments, and foundations) as well as entities that are taxed at the corporate level and eligible for the dividends-received deduction (DRD), such as banks, insurers, and corporations. In contrast, mutual-fund investors are predominantly taxable at personal rates (just as individuals who hold shares directly). This measure of tax-insensitive institutions is not perfect; in particular, we include hedge funds in the tax-insensitive category even though some hedge fund investors are subject to personal dividend taxes, and, conversely,

some mutual funds have tax-exempt investors. To the extent this fraction of tax-insensitive investors is measured with error, our findings are likely to be downward-biased relative to the true effects, but beyond this, we cannot think of a reason why our measure would be systematically biased in a way that would confound our results. We nevertheless test the robustness of this measure in two different ways. First, we validate this proxy using ex-dividend-day price drops; following the clientele intuition of (Elton and Gruber 1970), we find that firms with higher tax-insensitive ownership based on our measure exhibit price drops much closer to the full dividend amount, implying their marginal investors face lower dividend tax rates. Second, we replicate our main results using two alternative measures of tax-insensitive ownership based on (i) including only pension funds as part of the tax-insensitive measure, and (ii) using an alternative measure of tax-insensitive institutions based on Blouin et al. (2017).

Our empirical results strongly support the model’s predictions. First, we establish that firms with higher insider ownership were significantly more likely to pay a special dividend during the fiscal cliff period. A one-standard-deviation increase in insider ownership (7.5 percentage points) raised the probability of paying a special dividend by 2.2 percentage points, i.e., around a 45% increase relative to the unconditional mean of 4.9%. This result is consistent with previous research that has shown that firms with higher insider ownership tend to be more responsive to tax changes, whether actual changes around the 2003 tax cuts or the heightened uncertainty and expected changes around the fiscal cliff periods of 2010 and 2012 (e.g., Chetty and Saez 2005; Brown et al. 2007; Hanlon and Hoopes 2014).

Second, we find that the degree of insider ownership critically affects how these payout decisions respond to the tax preferences of the overall shareholder base. In particular, firms with high insider ownership are *less responsive* to whether their shareholder base would benefit from these payouts. Among firms with low insider ownership, having a higher fraction of tax-insensitive ownership significantly reduces the likelihood of paying a special dividend, consistent with firms responding to their investor base’s preferences. However, this “catering”

relationship weakens and eventually disappears as insider ownership increases. This result implies that when insiders' stakes are small, firms act in the interests of their broader shareholder base. But if insider ownership is higher, it makes firms less responsive to whether their shareholders would benefit from the payout. That is, higher insider ownership makes firms increasingly responsive only to insiders' personal tax incentives, resulting in a "crowding out" of firms' responsiveness to other shareholders' tax preferences.

Third, we examine valuation consequences. Consistent with our prediction, we find that the abnormal returns around special dividend announcements were lowest among firms with both high insider ownership and high tax-insensitive ownership; these are firms where insiders' and other shareholders' tax preferences were most misaligned. Conversely, abnormal returns were highest among firms with high insider ownership and high taxable ownership—these are firms where interests were most aligned. Among the 164 special dividend announcements, 28% had negative cumulative abnormal returns, with negative reactions concentrated among the misaligned firms. This suggests that insider ownership is a double-edged sword—it serves the firm as long as the insiders' interests are aligned with those of other shareholders, but can result in more value-destroying decisions when interests are misaligned.

Finally, we examine how these special dividend payments affected firms' future payouts and cash holdings. Firms that paid special dividends subsequently reduced future share repurchases, while the effect on future regular dividends was also negative but economically small. We also find that even though the special dividend payments consumed large amounts of cash (almost 3% of assets on average), firms nevertheless largely replenished cash holdings within the following few quarters.

This paper contributes to several strands of the literature. First, our findings directly contribute to the literature on the fairly puzzling negative relation between insider ownership and firm values (e.g., Morck et al. 1988). To explain what might cause such a negative relation, a large body of research has documented how insider ownership can cause entrenchment

and thus provide managers with more control to pursue private benefits such as excessive perks, empire-building, or a quiet life (e.g., Demsetz 1983; Fama and Jensen 1983; Stulz 1988; Morck et al. 1990; Bertrand and Mullainathan 2003; Bebchuk and Cohen 2005; Yermack 2006). Recent work has also focused on the extent to which the effects of insider ownership on firm value can depend on context; for example, Benson et al. (2020) finds that managerial ownership is beneficial in rural firms, and Basu et al. (2022) document that this relation depends on whether a firm is included in a stock index. Fabisik et al. (2021) also confirm the negative relationship between managerial ownership and firm value, but argue that this relation may not be causal but instead driven by liquidity as an omitted factor.

We contribute to this literature by providing evidence for a specific setting and mechanism whereby higher insider ownership can lead managers to make value-destroying decisions. Compared with previous research, our mechanism does not rely on private benefits and entrenchment. While the wedge between how insiders and other shareholders value shares in our setting is driven specifically by heterogeneous tax treatment, we can easily imagine that similar mechanisms can operate in other settings, such as when insiders have different risk tolerance or time preferences (Amihud and Lev 1981; Edmans et al. 2017a, 2022). Another key advantage of the tax setting around the fiscal cliff for testing our proposed mechanism is that it provides a clear natural experiment where discrete decisions had to be made quickly, which also allows for measuring valuation effects using an event study framework.<sup>2</sup> A methodological advantage of examining such announcement returns is that ownership structure is predetermined and observable to investors before the announcement, alleviating the typical endogeneity concerns that are common in studies of ownership and firm value (e.g., see discussion in Morck et al. 1988).

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<sup>2</sup>In doing so, our paper also relates to the literature examining valuation consequences of payout announcements (e.g., Brickley 1983; DeAngelo et al. 1996; Gombola and Liu 1999; Guay and Harford 2000; Fama and French 2001; Amihud and Li 2006).

Second, our findings also contribute to the literature that relates taxes, payout policy, and insider ownership. Chetty and Saez (2005) and Brown et al. (2007) find that firms with higher insider ownership increased dividends more following the 2003 dividend tax cut, suggesting that managers' personal tax considerations influence corporate decisions. Hanlon and Hoopes (2014) examine alternative payout responses around periods of tax uncertainty, focusing on both the 2010 and 2012 fiscal cliffs, and document that firms paid special dividends and shifted the timing of regular dividends when uncertainty was high, with responses concentrated among firms with high insider ownership. Buchanan et al. (2017) focus on the role of tax policy uncertainty, showing that firms responded differently in 2010 (high uncertainty) versus 2012 (post-election certainty), with special dividends becoming more prevalent when the tax increase became certain.

While this literature generally has found that insider ownership increases firms' overall responsiveness to tax changes and tax uncertainty, it has not examined the question of whether such responsiveness benefits or harms other shareholders, and whether these welfare effects for shareholders depend on the degree of alignment between managers and investors. We build on this literature by studying the value consequences when insiders' and other shareholders' tax preferences are aligned vs. misaligned, showing that insider ownership can make firms less responsive to the incentives of other shareholders and thus result in payout practices that are more likely to destroy value for tax-insensitive investors. By contrast, we find firms with low insider ownership tend to be more responsive in terms of catering to investors' preferences.

Finally, our paper speaks to the literature on tax clientele effects in payout policy; that is, whether firms cater to investors' tax preferences and/or whether investors choose investments based on a firm's tax policies (e.g., Becker et al. 2011; Desai and Jin 2011; Blouin et al. 2017). Jacob and Michaely (2017) show that owners' tax preferences in Swedish private firms significantly influence their payout decisions, with this effect becoming weaker as the

ownership structure becomes more heterogeneous and ownership and management become more separated.

The remainder of the paper is organized as follows. Section 2 describes the data and summary statistics. Section 4 studies determinants of special dividend payments. Section 5 reports the valuation implications of special dividends. Section 6 reports the effects of special dividends on future outcomes. Section 7 concludes.

## **2 Data Description**

We obtain data on special dividends from Capital IQ and firm-level accounting information from Compustat. Stock returns and prices are from the Center for Research in Security Prices (CRSP). Data on institutional stock holdings and insider ownership are from Thomson Reuters.

The sample was constructed as follows. First, we collected data on all special dividend payments announced between January 1, 2011, and December 31, 2012. Our main tests will focus on the period from November 2012 through December 2012, but we also use data from the previous two years as a control (“placebo”) period.

The data from Capital IQ includes the special dividend announcement date and the dividend amount. We exclude any dividends that were scheduled to be paid in 2013. Second, we merged the sample with daily stock return data from CRSP and firm characteristics from Compustat, as well as with the institutional ownership and insider ownership data from Thomson Reuters. The final sample consists of 3,363 firms.

### **2.1 Summary Statistics**

Table A1 in the Appendix describes all variables used in the paper. All variables are winsorized at the 1% and 99% levels.

Table 1 presents summary statistics. Panel A reports summary statistics for the full sample, and Panel B reports summary statistics for the subsample of firms that announced a special dividend in November and December of 2012 (the “event period”). These summary statistics highlight the prevalence of special dividends paid towards the end of 2012. While 4.88% of firms made a special dividend announcement during the event period, only 0.36% made a special dividend announcement during the same months in 2011.

[Insert Table 1 around here]

Figure 1 shows the stark pattern of special dividend announcements during the latter half of 2012, compared with the same period in 2011. The dark area shows the cumulative number of special dividend announcements during these months in 2011, and the grey area shows the same for 2012. We see that special dividend announcements in both years accelerate in November and early December. However, in 2012, the acceleration in special dividend announcements towards the end of the year was many times more pronounced.

[Insert Figure 1 around here]

One concern with this time series evidence is that it might have been driven by reasons other than higher taxes. Was the reason behind these dividends an anticipation of higher taxes? Previous evidence (e.g., Hanlon and Hoopes 2014) as well as anecdotal evidence suggests anticipated taxes were a principal factor. In Table 2, we list media excerpts from a sample of these announcements. As the table shows, many of these announcements explicitly include mentions of anticipated higher taxes as a reason for the special dividend payments.

[Insert Table 2 around here]

Finally, marginal investors in the firms that announced special dividends are also likely to face higher dividend tax rates. The median stock price drop (as a fraction of the size

of prior dividends within the last five years) on the ex-dividend date is 0.82 across the full sample. When we consider the sample of firms that announced a special dividend, we find that the median stock price drop on ex-dividend dates is 0.69. This evidence indicates that in the sample of firms that announced a special dividend, the marginal investor faces a higher dividend tax rate, which is consistent with firms, at least on average, engaging in dividend catering (e.g., Li and Lie 2006).

Table 1 also shows that the average (median) special dividend announcement-date CAR is 2.39% (1.49%), suggesting that the decision to pay a special dividend on average had a positive impact on firm value. This is consistent with previous research showing that dividend initiations, increases, and special dividends, on average, are associated with positive announcement returns (e.g., Brickley 1983). However, even though these special dividends had an overall positive stock market reaction on average, this average masks stark differences across firms; for 28% of these announcements, the market reacted negatively.

The average (median) direct insider ownership is 4.48% (1.70%) across the full sample. Within the sample of firms that announced a special dividend, the average (median) direct insider ownership is 7.79% (4.30%). Thus, consistent with the evidence in Hanlon and Hoopes (2014), the companies that announced a special dividend during the event period tend to have higher insider ownership.

Overall, these results are consistent with the anticipated increase in the dividend tax rate being a principal reason for the abnormal number of special dividend announcements in this period, with associated CARs that are slightly positive on average but that exhibit significant heterogeneity across firms.

## 2.2 Tax-insensitive Ownership Measurement

Our main proxy for tax-insensitive ownership, *Tax-ins. inst. ownership*, is calculated as the proportion of shares owned by institutional investors excluding mutual funds. We exclude

mutual funds, because more mutual fund investors tend to be subject to personal dividend taxes than not. As Table 1 describes, the average firm in our sample has just under 40% of tax-insensitive ownership, but with significant heterogeneity across firms. Around a quarter of firms have a majority (more than 50%) of their owners made up of tax-insensitive shareholders.

This measure has a couple of partly offsetting biases that are important to consider. It is pushed upward by including hedge funds (whose investors also include individuals who do pay dividend taxes) and downward by excluding mutual funds (which include tax-exempt investors such as 401(k) participants). However, these misclassifications should not systematically confound our results. What we need from this measure is not to precisely capture each firm’s tax-insensitive ownership level, but rather, that it can capture meaningful cross-sectional variation in tax incentives across firms. A concern would be if the extent of measurement error in this variable correlates with our outcomes of interest (e.g., special dividend decisions or announcement returns), although such a spurious correlation seems unlikely. As we describe below in more detail, we additionally offer several robustness tests to validate and assess the robustness of this measure.

To help validate this proxy for tax-insensitive investors, we calculate the ex-dividend day price drop as a fraction of the dividend paid, following Elton and Gruber (1970). The idea behind this measure is to capture the marginal investor’s tax rate: In the absence of taxes, the stock price should drop by the full dividend amount on the ex-dividend date, whereas if the marginal investor faces dividend taxes, the price drop on the ex-date will be less than the dividend amount. We calculate this ratio by measuring the market-return-adjusted price change on ex-dividend dates, averaged over all ex-dividend dates between October 2010 and September 2012 for each firm; we then compare this ratio between the firms we classify as having high (above-median) and low (below-median) tax-insensitive ownership.

Table 3 shows that our measure of tax-insensitive ownership broadly corresponds with this alternative measure of capturing the tax rate of each firm’s marginal investors. These results show that the average stock price drop on ex-dividend dates as a fraction of the dividend is lower among firms with low tax-insensitive institutional ownership (0.717) than among firms with high tax-insensitive ownership (0.9965) (the difference is also statistically significant). In other words, a high fraction of tax-insensitive ownership can serve as a proxy for a lower tax rate for the firm’s marginal investors.<sup>3</sup>

Finally, in Section 5.4, we replicate our main results using two alternative measures of tax-insensitive ownership based on including only pension funds as part of the tax-insensitive measure, and using an alternative measure from Blouin et al. (2017) of tax-insensitive institutions. This triangulation across methods supports our conjecture that remaining differences in possible differences in measurement error across firms do not meaningfully confound our overall findings.

### 3 Theoretical framework

In Appendix B, we present a model that describes the mechanism we have in mind. In this section, before we turn to the empirical analysis, we briefly describe the main elements and predictions of this theoretical framework.

There are two periods. Consider a firm with cash  $C$  that in the first period must choose investment  $I$  versus immediate dividend payout  $D_1 = C - I$ , with second-period dividends  $D_2 = R(I)$  generated from investment. Tax-insensitive owners maximize  $(C - I) + \beta R(I)$ , yielding optimal investment  $I^*$  where  $R'(I^*) = 1/\beta$ . Taxable owners facing rising tax rates

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<sup>3</sup>While ex-dividend day price behavior is also affected by microstructure effects such as bid-ask bounce, order imbalances, and trading frictions (?), these microstructure factors should not systematically vary with tax-insensitive ownership composition in our sample. To the extent that any such microstructure effects exist, they would add noise to our validation test, biasing against finding a relationship between institutional ownership and price drops. The fact that we observe a clear cross-sectional pattern strengthens confidence in institutional ownership as a proxy for the fraction of tax-insensitive investors.

$(\tau_2 > \tau_1)$  maximize  $(1-\tau_1)(C-I)+\beta(1-\tau_2)R(I)$ , yielding  $I^\circ$  (*the optimal investment for taxable owners*)  $< I^*$  (Proposition 1)—they underinvest to accelerate dividends.

We next model the agency problem where a (taxable) executive owns a fraction  $\alpha$  of the firm. The executive also cares about their reputation for doing what's in shareholders' best interests, and suffers reputational cost  $\pi$  if they deviate from this. The model shows that the executive will deviate from  $I^*$  to  $I^\circ$  when her after-tax gain  $\alpha[V^{\text{tax}}(I^\circ) - V^{\text{tax}}(I^*)]$  exceeds reputational cost  $\pi$ . Critically, this will depend on value destruction relative to a threshold  $\pi/\alpha$  which decreases with  $\alpha$  (Proposition 3): that is, higher ownership makes deviation more attractive. Further, when the executive implements  $I^\circ$ , tax-insensitive owners suffer value loss  $(C - I^*) + \beta R(I^*) - (C - I^\circ) - \beta R(I^\circ) > 0$  (Proposition 4).

In sum, the model results in the following predictions: (i) higher insider ownership increases the likelihood of paying special dividends around the fiscal cliff; (ii) higher insider ownership decreases the responsiveness to other shareholders' preferences; (iii) announcement returns are most negative when both insider ownership and tax-insensitive ownership are high.

## 4 Who made special dividend payments in anticipation of the tax increase?

We begin by studying how the degree of alignment between managers and investors matters for whether firms made a special dividend payment during the event period (November–December 2012). Our model in Section B in the Appendix implies that when dividend tax rates are expected to increase, taxable insiders prefer lower investment and higher current dividends compared to tax-insensitive shareholders. Thus, firms with higher insider ownership ( $\alpha$ ) should be more likely to pay special dividends, as executives have stronger personal incentives to accelerate payouts before the tax increase. Moreover, among high-insider-ownership

firms, payout decisions should be less responsive to whether the shareholder base is predominantly tax-insensitive, because the relative importance of the reputational cost ( $\pi$ ) of being seen to act in self-interest decreases as ownership rises.

To test whether the responsiveness of insiders depends on the tax incentives for themselves and the other shareholders, we estimate the following cross-sectional model:

$$\begin{aligned} Special_i = & \alpha + \beta_1 Insider\ ownership_i + \beta_2 Tax-ins.\ inst.\ ownership_i \\ & + \beta_3 Insider\ ownership_i \times Tax-ins.\ inst.\ ownership_i + \beta_4 X_i + \eta_j + \varepsilon_i, \end{aligned} \quad (1)$$

where  $Special_i$  is a dummy variable equal to one if a firm announces a special dividend during the event period.<sup>4</sup>

*Insider ownership* is the proportion of shares directly owned by the firm's executives and directors, and *Tax-ins. inst. ownership* is calculated as described in Section 2.2.  $X_i$  is a vector of control variables, including the firm's stock returns over the past five years, size, an indicator for whether the firm has repurchased shares during the prior year, the ratio of total dividend payments to assets, the Hadlock and Pierce (2010) index of financial constraints, and the ratio of cash to assets. All control variables are measured as of the end of 2011.  $\eta_j$  are industry fixed effects based on the Fama-French 48-industry classification.

[Insert Table 3 around here]

The results from regression (1) are presented in Panel A of Table 4. In columns (1) and (3) – (5), the coefficient on *Insider ownership* is positive and statistically significant at the 1 % level. This evidence shows that firms with higher insider ownership were more likely to pay out special dividends in anticipation of a dividend tax increase, consistent with

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<sup>4</sup>To facilitate easier interpretation of the estimated coefficients, we use the linear probability model with the dummy variable indicating whether the firm paid a special dividend as the dependent variable, rather than a logit estimator. However, as a robustness check, we also estimate a logit model. The results, presented in Table A3 in the Appendix, confirm that our findings are robust across these alternative models.

the model’s first prediction that higher  $\alpha$  increases the likelihood of tax-motivated payouts (Section B in the Appendix). Specifically, the result in column (1) indicates that a one-standard-deviation increase in insider ownership (7.5 percentage points) is associated with a 2.17 percentage point increase in the likelihood of paying a special dividend. This effect is large compared with the unconditional probability of announcing a special dividend during this period, which was 4.88%. This result is consistent with evidence from past tax reforms on the relationship between insiders and firms’ payout response to changes in dividend tax rates (e.g., Chetty and Saez 2005; Brown et al. 2007; Hanlon and Hoopes 2014).

[Insert Table 4 around here]

Columns (3) – (5) nevertheless show that a decision to pay a special dividend during this period is, on average, not related to the tax incentives of a firm’s investor base. That is, the coefficient on the fraction of tax-insensitive ownership is not significant. While differences in insiders’ tax incentives do matter for a payout decision, the tax incentives of the firm’s investor base do not. In sum, in making these special dividend payout decisions, firms were (on average) not responsive to the tax preferences of their investors.

In column (6), we further interact insider ownership with tax-insensitive ownership. This helps us examine if high insider ownership makes managers more or less responsive to the tax preferences of the investor base. This column shows that the result of the previous finding from columns (2) and (3), which showed no relationship on average between special dividends in this period and the tax incentives of the investor base, is driven mainly by firms with high insider ownership. Specifically, when we include the interaction term, we see that the coefficient on tax-insensitive ownership becomes negative. This means that—consistent with the model’s second prediction that responsiveness to shareholder preferences decreases with  $\alpha$ —when insider ownership is low, having an investor base of more tax-insensitive shareholders is negatively associated with paying a special dividend during the event period, as we would expect if investors’ taxes matter for payout policy. Among these firms, higher

institutional ownership makes it less likely that a firm will make a special dividend payment. For example, firms with insider ownership at the 25th percentile (0.56%) are less likely to pay special dividends the more their investor base is made up of institutional investors (in column (6),  $0.56\% \times 1.1970 - 0.0701 < 0$ ).

So when the insider has little or no personal stake in the decision on whether to pay a special dividend before the anticipated tax increase, the firm is more responsive to shareholders' tax incentives. However, as the insider ownership share increases, the firm becomes less responsive to the tax incentives of the investor base and increasingly responsive to insiders' tax incentives. Columns (4) – (6) show that these results are robust to controlling for industry fixed effects as well as other firm characteristics.

As a placebo test, Panel B shows the results of the same regression for special dividend payments made between January and September 2012. These results show that there is no significant economic or statistical relationship between special dividend payout decisions and the ownership variables we study during the placebo period. Corollary 1 of the model (Appendix B) implies that when expected tax rates are constant across periods ( $\tau_1 = \tau_2$ ), insiders and tax-insensitive owners agree on investment and payout timing, the wedge disappears, and ownership structure should not predict accelerated payouts. In Panel B (stable-tax years), the coefficients on insider ownership ( $\alpha$ ), outside owner composition, and their interaction are statistically and economically small—exactly as the model predicts in the absence of a wedge. This supports our interpretation that the Panel A relationships are activated by an intertemporal tax conflict rather than unobserved firm characteristics.

Importantly, because firms had a limited period during which to decide whether to make special dividend payments or not, this setting alleviates potential concerns about endogenous changes in ownership structure before the special dividend announcement date. To examine whether insiders changed their ownership in anticipation of these tax changes or special dividend payments, Table A2 examines the ratio of insider selling to buying in a difference-

in-difference test between firms that paid special dividends and other firms, before and after the presidential election. This evidence shows that there were no meaningful differences in the relative selling and buying behavior of insiders between firms that paid special dividends and those that did not in the months following the presidential election in November.

Overall, we show that a firm’s ownership structure is associated with whether the firm responds to an anticipated dividend tax increase. Firms with high insider ownership respond more strongly to anticipated changes in tax rates. However, such a response is not related to the tax incentives of the investor base, which is inconsistent with a tax clientele hypothesis that would predict that higher tax-insensitive ownership should be negatively related to paying tax-motivated special dividends. Still, the lack of an average relationship with the investor base is entirely driven by firms with high insider ownership. By contrast, among firms where insider ownership is low (and thus insiders have smaller personal stakes in payout decisions), firms appear more responsive to shareholders’ incentives, as they are more likely to make special dividend payouts, especially when the fraction of taxable shareholders is high. This is consistent with the model where managers with low ownership are motivated by reputational concerns to cater to shareholder preferences.

In sum, these results are consistent with insiders’ personal tax incentives being the principal driver of firms’ special payout decisions around tax changes, and that increasing insider ownership makes firms less responsive to the tax incentives of their investor bases.

## **5 Special Dividends: Valuation Implications**

### **5.1 Empirical Strategy**

In this section, we study the valuation implications of the special dividend payments made during the event period (November-December 2012). We focus here on the firms that announced a payout and examine if the valuation consequences of their decisions are related

to the ownership characteristics and degree of misalignment. Our model in Section B in the Appendix shows that when taxable executives choose investment level  $I^\circ$  (optimal for taxable shareholders) instead of  $I^*$  (optimal for tax-insensitive shareholders), the value destruction to tax-insensitive shareholders equals  $(C - I^*) + \beta R(I^*) - [(C - I^\circ) + \beta R(I^\circ)]$ . This value loss increases with insider ownership  $\alpha$ , as higher ownership strengthens insiders' incentives to deviate from  $I^*$ . We therefore predict that announcement returns should be lowest when both insider ownership and tax-insensitive ownership are high—where preferences are most misaligned and insiders have the strongest incentive to act in self-interest.

To study this question, we employ an event study methodology and estimate the following regression to measure the valuation implications:

$$\begin{aligned} CAR_{special,i} = & \alpha + \beta_1 Insider\ ownership_i + \beta_2 Tax-ins.\ inst.\ ownership_i \\ & + \beta_3 Insider\ ownership_i \times Tax-ins.\ inst.\ ownership_i + \eta_j + \varepsilon_i, \end{aligned} \quad (2)$$

where  $CAR_{special,i}$  is the cumulative abnormal return over three trading days  $[-1, +1]$  around firm  $i$ 's special dividend announcement and  $\eta_j$  are industry fixed effects. The definitions of the ownership variables are the same as in the previous sections.

This regression seeks to answer the following questions. Did the reaction to these special dividends depend on the alignment of tax preferences between a firm's insiders and its other investors? We hypothesize that when tax preferences are not aligned, that is, when insiders have high ownership but most other investors are tax-insensitive, the abnormal returns around the special dividend announcements will be lower. Conversely, the tax (mis-)alignment hypothesis predicts that when most shareholders are tax-preferred, the abnormal returns around the special dividend announcements will be negatively related to the ownership of the insider. That is, the higher insider ownership is, the more likely managers are to take actions that hurt other shareholders because the manager then cares relatively more

about how taxes affect their shares. Conversely, we predict that when most shareholders are taxable, then abnormal returns will be higher when insiders also have high ownership, since incentives are aligned.

A methodological advantage of looking at announcement returns around these special dividend announcements is that the information about the ownership structure that we use in the regressions is pre-determined and observable to investors and thus already reflected in the share price *before* the special dividend announcement. In other words, what the regression picks up is about the change in the value purely from the payout decision.

To the best of our knowledge, this is the first study to examine the valuation implications of manager-investor alignment using an event study methodology. Whereas previous research has shown that payout policy decisions depend on the tax preferences of insiders and investors (Chetty and Saez 2005; Brown et al. 2007), these studies do not study whether decisions to change dividend payout policy in response to tax changes have any valuation consequences.<sup>5</sup> That is, this methodology allows us to study not only whether the decision to pay out special dividends has positive or negative consequences on average, but also whether the valuation implications depend on the degree of alignment between insiders and other investors.

In contrast to previous changes in dividend tax rates, firms had a limited period during which to respond to the impending tax change and needed to make discrete and large dividend payments if they wanted to take advantage of the existing low tax rate. The reason behind this urgency was that the presidential candidates had opposite views on whether dividend taxes should increase. As a result, there was considerable uncertainty about the future dividend tax rate until the very end of the presidential campaign. After the election outcome,

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<sup>5</sup>Brown et al. (2007) exploited a sequence of eight legislative events surrounding the 2003 dividend tax cut. They find that the stock price reaction was higher for firms with high individual ownership and a high dividends-to-assets ratio. They do not study the reaction around actual changes to payout policy, and doing so would also have been difficult since firms implemented these changes by only gradually raising dividends over time. The advantage of the setting in the current study is that firms had to react very quickly, and thus the tax-motivated payouts are more easily identifiable.

a dividend tax increase at the end of the year became widely expected, and firms therefore had less than two months to take advantage of the existing low tax rates. That is, after the dividend tax decrease of 2003 firms had the option of gradually changing their payout policy, while in the current setting, firms instead had to make a large payment within a short window of time. The discrete and observable nature of these decisions allows us to employ the event study methodology.<sup>6</sup>

## 5.2 Event study results

In this section, we report the event study results from estimating Equation (2). Table 5 reports the results.

[Insert Table 5 around here]

Column (1) shows that the level of insider ownership did not (on average) affect the valuation implications of the payout decision. However, this result is unconditional on the firm’s investors’ tax preferences. As we show below, this unconditional result masks two opposite effects of insider ownership.

In Columns (2) and (3), we show that insider ownership does matter for the valuation implications of these special dividends if we also consider the investor base. We do so by interacting insider ownership with tax-insensitive ownership. The purpose of this interaction is to test whether a stronger alignment between insiders’ and shareholders’ tax incentives is associated with more efficient dividend payout decisions. We find that when there is a smaller fraction of tax-insensitive investors (as measured by institutional ownership less mutual fund ownership), higher insider ownership is associated with higher abnormal returns around

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<sup>6</sup>One may also consider examining the 2012 U.S. presidential election day for an event study, with a hypothesis that investors may have expected that firms with high insider and high tax-insensitive ownership would pay value-destroying special dividends. However, as shown in Table 2, special dividends were very rare, even during this peak period, due to the uncertain situation. Thus, it might not have been *ex-ante* clear to investors which of these firms would indeed pay special dividends, even after the election outcomes were known.

the special dividend announcements. The coefficient of *Insider Ownership* in column (2) indicates that a one-standard-deviation increase in insider ownership (7.5 percentage points) is associated with a 0.46 percentage point higher cumulative abnormal return. In these firms, the insiders' tax preferences are aligned with a larger fraction of investors. Therefore, because higher insider ownership is going to make the insider care more about maximizing the value of the payout decision, it results in higher value among firms with mainly taxable investors. These payout decisions are thus better received by the market. This is the *bright* side of insider ownership.

The interaction term also shows evidence of the dark side of misalignment due to high insider ownership: The worst valuation consequences of special dividend payments in this period were for firms that had a combination of high insider ownership and high tax-insensitive ownership, i.e., where the tax misalignment was the highest, and insiders also had a strong reason to personally care about the decision. If a firm has many tax-insensitive (institutional) investors, higher insider ownership is associated with lower abnormal returns around these special dividend announcements. For example, column (2) shows that the valuation consequences of these special dividends as we increase insider ownership are predicted to turn negative when institutional ownership rises above 27% ( $0.0615/0.2271$ ), which is below the median (36.6%) of tax-insensitive ownership among the special dividend payers in our sample.

These results show that having misaligned tax incentives between insiders and the investor base results in lower valuation consequences of these special dividends, consistent with the model's prediction that value destruction  $(C - I^*) + \beta R(I^*) - [(C - I^\circ) + \beta R(I^\circ)]$  is largest when  $\alpha$  is high and the shareholder base is predominantly tax-insensitive (Section B in the Appendix). In Panel B of Table 5, we show the results of testing whether these payouts were more likely to have negative consequences, or whether they were merely less

positive. We employ the same independent variables as in Equation (2), but we replace the dependent variable (CAR) with an indicator of a negative CAR.

We find strong support for the special dividend payments being more likely to result in negative stock market reactions when tax incentives are misaligned. This result is evident in the coefficient of the interaction between insider ownership and tax-insensitive ownership. Among firms with low tax-insensitive ownership and high insider ownership (when tax incentives are aligned), the stock market reactions are *less* likely to be negative (the bright side of insider ownership). But as tax-insensitive ownership increases, the relation between higher insider ownership and the probability of a negative return around these special dividend announcements also increases (the dark side of insider ownership). As in Panel A, the predicted valuation consequence of higher insider ownership turns negative around the median level of institutional ownership.

Overall, we find that differences in insider ownership (which makes up a small fraction of total ownership) have a large impact on both the probability that a firm reacts to tax changes and the valuation implications for firms that do react. That is, while insider ownership in most firms is a small fraction of total shares (median 1.7%), it has a big impact on a firm's response to changes in dividend tax rates. Further, these stronger responses are not always in the interest of shareholders. Tax-insensitive institutions own a large fraction of shares outstanding in many firms and should be important in determining firms' payout policies. However, we show that the investor base plays only a weak role on average in determining firms' responsiveness to dividend tax changes. Finally, when firms have high insider ownership and high tax-insensitive ownership, the payout decisions in response to the anticipated tax change are, on average, less efficient and more likely to have negative valuation consequences.

### **5.3 Alternative interpretation: Signaling of governance quality**

A possible alternative interpretation for the lower abnormal returns for firms with misaligned incentives is that the market simultaneously learns about governance quality when insiders reveal they are willing to act in their own self-interest. This might mean that part of the valuation effects reflects an expectation of future decisions that go against the shareholder base rather than merely reflecting value destruction from the payout decision itself.

However, we view these interpretations as complementary rather than competing in terms of supporting the mechanism that these decisions by misaligned firms are more likely to be value-destroying. To the extent the announcement “signals” weak governance, then this by itself implies that the decision was value-destroying, whether through the direct channel (foregone investment returns) or the indirect channel (revelation of agency problems). Thus, both interpretations support our core finding that high insider ownership leads to value-destructive decisions when shareholder interests are misaligned.

### **5.4 Robustness: Alternative proxies for tax-insensitive ownership**

Our previous analysis uses the fraction of (non-mutual-fund) institutional investors as a proxy for the fraction of a firm’s shareholder base that is not subject to personal dividend tax rates. Even though no measure is likely to be perfect, this section reports results using two alternative proxies.

First, we use pension fund ownership as a proxy for tax-insensitive ownership. This is relevant because pension funds often make up the largest individual category of tax-insensitive investors, and this category also has no ambiguity as to whether any pass-through investors may be subject to personal dividend taxes. Using this proxy, we re-run our baseline regressions for the determinants of special dividend payment as well as for their valuation consequences. The results in Table A4 in the Appendix are largely consistent with our

earlier results using non-mutual fund institutional ownership as a proxy for tax-insensitive ownership.<sup>7</sup>

We also construct an alternative measure of tax-insensitive ownership using the classification developed by Blouin et al. (2017), who classify institutional investors as either tax-sensitive or tax-insensitive. Their classification is based on investment advisors’ clientele information reported in the SEC’s Form ADV for a smaller “calibration” sample. They then impute the tax-sensitivity of institutional investors in a larger “classification” sample using tax-motivated trading behavior and portfolio characteristics that significantly predict tax sensitivity in the calibration sample. Using their data, we aggregate 13F institutional investors classified as “tax-insensitive” as of 2011 at the firm level to construct an alternative measure of tax-insensitive ownership (*Alt. tax-ins. inst. ownership*). We then re-estimate our baseline regressions for both the determinants of special dividend payments and their valuation effects.<sup>8</sup>

The results, reported in Table A5 in the Appendix, show that our baseline findings remain largely unchanged when substituting non-mutual fund institutional ownership with this alternative proxy for tax-insensitive ownership. If anything, the results suggest that firms respond to shareholders’ tax incentives, even on average, when including the control variables for firm characteristics, although the economic magnitude of this effect remains modest.

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<sup>7</sup>That said, there is one difference in the estimated coefficient on insider ownership in Panel A for the determinant of special dividend payments: Unlike the previously observed zero impact of insider ownership on the decision to pay special dividends, the positive coefficient on insider ownership here indicates that insiders are more likely to pay special dividends in anticipation of dividend tax rate increases when more of the firm’s shares are held by non-pension-fund institutional investors.

<sup>8</sup>Blouin et al.’s (2017) classification of institutional investors is available at: <http://www.iiclassifications.com>. We thank the authors for making the data publicly accessible.

## 6 The impact of tax-motivated special dividends on future payouts, investments, and cash

We now turn to examining whether the large special dividend payouts firms made before the fiscal cliff were associated with changes in future payouts. In particular, we hypothesize that these special dividend payments were followed by reductions in payouts and reductions in firms’ cash levels. This evidence can importantly help shed light on whether dividends were mostly shifted “forward” in time and the degree to which these payouts affected firms’ cash and investment going forward.

To examine this question, we analyze the following difference-in-difference regression:

$$\begin{aligned}
 y_{i,t} = & \alpha + \beta_1 I_{PaidSpecial,i} + \beta_2 EventPeriod_t + \beta_3 PostPeriod_t \\
 & + \beta_4 I_{PaidSpecial,i} \times EventPeriod_t + \beta_5 I_{PaidSpecial,i} \times PostPeriod_t + \eta_i + \varepsilon_{it},
 \end{aligned} \tag{3}$$

where  $y_{it}$  are our dependent variables (dividends, repurchases, and cash, all normalized by lagged assets, measured quarterly).  $I_{PaidSpecial,i}$  is an indicator equal to one if the firm announces a special dividend during the event period. To analyze changes in payouts over time, we include indicators for the EventPeriod (specifically, the fiscal quarter that includes at least November of 2012) and PostPeriod (the first two quarters after the event period), as well as interactions of these period indicators with  $I_{PaidSpecial,i}$ . The baseline period (omitted category) is the last quarter preceding the event period. We also include firm fixed effects ( $\eta_i$ ) in some regressions, which subsume  $I_{PaidSpecial,i}$  when included. Table 6 presents the results.

[Insert Table 6 around here]

Column (1) shows that firms that paid special dividends before the fiscal cliff also had a higher level of baseline dividend payments; specifically, they paid 0.31% more of assets in

dividends than other firms in the pre-event period. As we would expect, firms that paid special dividends in the event period increased their total dividend payments between the pre-period and event period more than firms that did not pay any special dividends (the diff-in-diff between the pre-period and event period is 2.54% of assets). That is, the special dividends were indeed “extra” dividends and did not merely match what other firms were doing.

However, in the post period, the firms that had paid special dividends in the event period reduced their dividends more (compared to what they paid in the pre-event period) than the firms that did not pay special dividends. These results show that there was some substitution of dividends over time among the special dividend payers, so that the firms that paid special dividends in November and December subsequently reduced dividends in later months. However, while this substitution is statistically significant, it is nevertheless economically quite small—around 0.05-0.07% of assets—compared with the special dividends that these firms paid that were, on average, more than 2% of assets.

Columns (3) and (4) further show that the special dividend payers also cut future repurchases. While there is no relative change in repurchases in the event period between special dividend payers and the firms that did not pay a special dividend, the coefficient on  $I_{PaidSpecial,i} \times PostPeriod$  shows that the firms that paid special dividends subsequently reduced repurchases by more than the firms that did not pay special dividends. This result is thus evidence of substitution between the tax-motivated special dividends and future repurchases.

This substitution result is also different from that observed around previous tax changes: Chetty and Saez (2005) find that firms that increased dividends after the dividend tax decrease in 2003 did not reduce repurchases. Also Floyd et al. (2013) point out that the longer-term evidence following the 2003 tax change is inconsistent with tax-motivated substitution

between repurchases and dividends, as repurchases have continued to increase throughout the last decade.

An alternative explanation for our substitution result could be that the firms that paid out special dividends would have reduced their repurchases anyway, even in the absence of making these special dividend payments. While this story is difficult to rule out, we see no relative changes in repurchases until exactly the quarter after these firms paid out special dividends. Such *short-term* substitution alleviates the concern that a potential time-varying omitted variable could be driving these results.

Finally, in columns (5) and (6), we analyze the changes in cash holdings around the event period. We find that while cash levels are lower in the quarter of the special dividend payments, we surprisingly find no evidence of relatively lower cash holdings one quarter later (the coefficient on  $I_{PaidSpecial,i} \times PostPeriod$  is economically small and insignificant).<sup>9</sup> This result implies that firms that paid out special dividends replenished their cash levels remarkably quickly, as they accumulated additional cash of around 3% of assets within the two quarters compared with the non-payers.

In summary, firms that accelerated dividends tended to slightly curtail regular dividends and significantly cut back on share repurchases in the subsequent quarters, yet they replenished their cash balances within two quarters. This suggests the special dividends mostly represented a timing shift in payouts (particularly substituting for near-term repurchases) without causing long-lasting cash shortages.

## 7 Conclusion

Conventional wisdom holds that higher insider ownership improves governance by aligning managerial and shareholder interests. This paper shows that this prescription has important

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<sup>9</sup>There is nevertheless a downward trend in the uninteracted period indicators, which shows that cash is decreasing during the period for all firms, just not more than among the firms that paid special dividends.

limits. When insiders’ personal interests diverge from those of other shareholders—whether due to differential tax treatment as in the current setting, or alternatively, due to different risk preferences (Amihud and Lev 1981) or time horizons (Edmans et al. 2017a)—higher insider ownership can make agency problems worse, not better. We exploit the 2012 fiscal cliff as a natural experiment to study this dark side of insider ownership. The anticipated sharp increase in dividend tax rates created a clear split in incentives: taxable insiders benefited from accelerating dividends, while tax-insensitive institutional investors did not.

We establish three main findings. First, firms with higher insider ownership were significantly more likely to pay special dividends during the fiscal cliff period. Second, and more importantly, high-insider-ownership firms were less responsive to whether their shareholder base would benefit from these payouts: Among firms with low insider ownership, payout decisions reflected the tax preferences of the broader investor base, but when insiders held substantial stakes, firms paid special dividends regardless of whether other shareholders stood to gain.

Third, valuation consequences were more likely to be negative when incentives were misaligned. The firms with the lowest returns had a combination of both high insider ownership and high tax-insensitive ownership. By contrast, returns were most positive when high insider ownership coincided with a predominantly taxable shareholder base and interests were aligned. These patterns demonstrate that higher insider ownership can lead managers to make value-destroying decisions when doing so advances their personal interests. On the other hand, high insider ownership is good for value when incentives align.

These findings have important implications for corporate governance, as the mechanism we identify critically differs from traditional agency costs arising from entrenchment. In entrenchment theories, high ownership “enables” managers to pursue private benefits like empire-building or excessive perks. Our mechanism operates differently: higher ownership intensifies conflicts by making insiders care more about maximizing their personal stake

value, even when this harms other shareholders. This mechanism thus represents a distinct cost of insider ownership that should be weighed against its well-documented benefits (e.g., Fahlenbrach and Stulz 2009; Edmans et al. 2017b).

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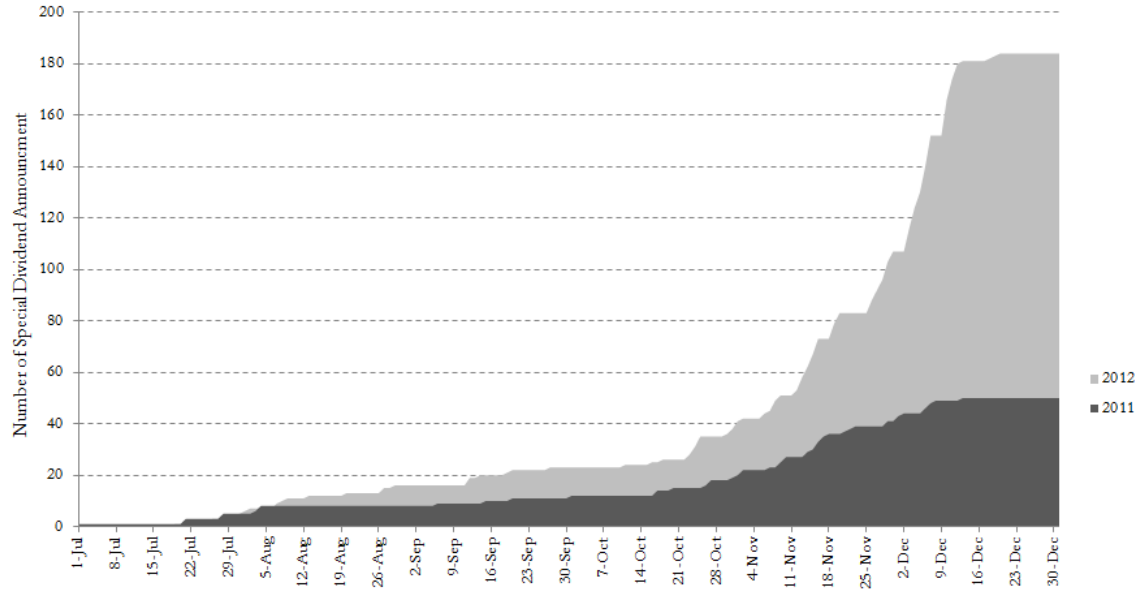
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Figure 1: **Special Dividend Announcements.** The dark area plots the cumulative number of special dividend announcements between July 1, 2011 and December, 31 2011. The grey area cumulatively plots the number of special dividend announcements between July 1, 2012 and December, 31 2012. We exclude dividends that are scheduled to be paid after year-end.



**ALT TEXT:** Graphs showing the surge in special dividend announcements in late 2012 compared with the same period in 2011.

**Table 1**

**Summary Statistics.** This table reports summary statistics of firm characteristics defined in Table A1. Panel A reports summary statistics for the sample that consists of all firms with ordinary common shares in the CRSP-Compustat universe that operated both in 2011 and 2012. Panel B repeats the analysis from Panel A for the subsample of firms that paid a special dividend during the event period (Nov–Dec 2012).

| <b>Panel A: All Firms</b>    |        |       |        |        |        |        |        |      |
|------------------------------|--------|-------|--------|--------|--------|--------|--------|------|
|                              | Mean   | SD    | p1     | p25    | p50    | p75    | p99    | N    |
| I[Special dividend, event]   | 0.049  | 0.215 | 0.000  | 0.000  | 0.000  | 0.000  | 1.000  | 3363 |
| I[Special dividend] (2011)   | 0.004  | 0.060 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 3363 |
| I[Any dividend, event]       | 0.330  | 0.470 | 0.000  | 0.000  | 0.000  | 1.000  | 1.000  | 3363 |
| I[Dividend] (2011)           | 0.403  | 0.491 | 0.000  | 0.000  | 0.000  | 1.000  | 1.000  | 3359 |
| Dividend-to-assets           | 0.009  | 0.022 | 0.000  | 0.000  | 0.000  | 0.008  | 0.146  | 3268 |
| Insider ownership            | 0.045  | 0.075 | 0.000  | 0.006  | 0.017  | 0.048  | 0.439  | 3363 |
| Institutional ownership      | 0.582  | 0.308 | 0.008  | 0.313  | 0.642  | 0.854  | 1.000  | 3363 |
| Mutual fund ownership        | 0.195  | 0.142 | 0.000  | 0.058  | 0.197  | 0.306  | 0.506  | 3363 |
| Tax-ins. inst. ownership     | 0.388  | 0.204 | 0.008  | 0.229  | 0.414  | 0.542  | 0.828  | 3363 |
| I[Share repurchase] (2011)   | 0.312  | 0.464 | 0.000  | 0.000  | 0.000  | 1.000  | 1.000  | 3362 |
| Past return                  | -0.115 | 0.634 | -0.968 | -0.577 | -0.225 | 0.190  | 2.367  | 3353 |
| Size                         | 6.644  | 2.033 | 2.313  | 5.241  | 6.606  | 7.979  | 11.88  | 3341 |
| Cash-to-assets               | 0.198  | 0.219 | 0.001  | 0.042  | 0.110  | 0.276  | 0.931  | 3341 |
| Financial constraints (H-P)  | -3.506 | 0.715 | -4.637 | -3.997 | -3.506 | -3.056 | -1.705 | 3361 |
| Price-drop-to-dividend ratio | 0.860  | 2.294 | -5.496 | 0.061  | 0.824  | 1.476  | 11.92  | 1607 |
| Insider net selling, pre     | 0.367  | 0.737 | -1.000 | 0.000  | 0.850  | 1.000  | 1.000  | 3363 |
| Insider net selling, event   | 0.273  | 0.643 | -1.000 | 0.000  | 0.000  | 1.000  | 1.000  | 3363 |

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**Panel B: Firms that Paid Special Dividend during November-December 2012**

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|                                    | Mean   | SD    | p1     | p25    | p50    | p75    | p99    | N   |
|------------------------------------|--------|-------|--------|--------|--------|--------|--------|-----|
| I[Special dividend, event]         | 0.073  | 0.261 | 0.000  | 0.000  | 0.000  | 0.000  | 1.000  | 164 |
| I[Special dividend] (2011)         | 0.675  | 0.470 | 0.000  | 0.000  | 1.000  | 1.000  | 1.000  | 163 |
| Dividend-to-assets                 | 0.022  | 0.037 | 0.000  | 0.000  | 0.006  | 0.027  | 0.146  | 162 |
| Insider ownership                  | 0.078  | 0.098 | 0.000  | 0.010  | 0.043  | 0.103  | 0.439  | 164 |
| Institutional ownership            | 0.549  | 0.269 | 0.043  | 0.324  | 0.597  | 0.787  | 1.000  | 164 |
| Mutual fund ownership              | 0.181  | 0.121 | 0.000  | 0.073  | 0.181  | 0.295  | 0.431  | 164 |
| Tax-ins. inst. ownership           | 0.368  | 0.178 | 0.014  | 0.209  | 0.388  | 0.498  | 0.807  | 164 |
| I[Share repurchase] (2011)         | 0.348  | 0.478 | 0.000  | 0.000  | 0.000  | 1.000  | 1.000  | 164 |
| Past return                        | 0.065  | 0.577 | -0.841 | -0.344 | -0.066 | 0.356  | 1.930  | 164 |
| Size                               | 6.511  | 1.743 | 2.725  | 5.433  | 6.416  | 7.505  | 10.492 | 164 |
| Cash-to-assets                     | 0.209  | 0.196 | 0.001  | 0.051  | 0.152  | 0.319  | 0.844  | 164 |
| Financial constraints (H-P)        | -3.606 | 0.597 | -4.637 | -3.987 | -3.608 | -3.239 | -2.173 | 164 |
| Price-drop-to-dividend ratio       | 0.462  | 1.717 | -5.131 | -0.302 | 0.692  | 1.430  | 4.291  | 127 |
| Special dividend announcement CAR  | 0.024  | 0.049 | -0.052 | -0.002 | 0.015  | 0.037  | 0.226  | 164 |
| % of announcements w/ negative CAR | 0.281  | 0.451 | 0.000  | 0.000  | 0.000  | 1.000  | 1.000  | 164 |
| Insider net selling, pre           | 0.519  | 0.630 | -1.000 | 0.000  | 0.999  | 1.000  | 1.000  | 164 |
| Insider net selling, event         | 0.375  | 0.623 | -1.000 | 0.000  | 0.000  | 1.000  | 1.000  | 164 |

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**Table 2**  
**Examples of Special Dividend Announcements.** This table presents examples of media quotes regarding the reasons for announcing special dividend payments during the event period.

| Company Name                          | Announcement | Media Quotes                                                                            | Sources           |
|---------------------------------------|--------------|-----------------------------------------------------------------------------------------|-------------------|
| Costco Wholesale Corp.                | Nov 28, 2012 | "... saving shareholders from a big bite should taxes rise due to the fiscal cliff."    | CNNMoney          |
| Las Vegas Sands Corp.                 | Nov 26, 2012 | "... Moves Up Payout To Avoid Fiscal Cliff Taxes"                                       | Huffington Post   |
| EnviroStar, Inc.                      | Nov 09, 2012 | "..., taking into consideration present tax policies, ..."                              | Business Wire     |
| NIC Inc.                              | Nov 08, 2012 | "... given the uncertainty of future dividend tax rates."                               | Press release     |
| Erie Indemnity Company                | Nov 19, 2012 | "..., given the potential significant increases in tax rates on dividend ..."           | Reuters           |
| Southside Bancshares Inc.             | Nov 08, 2012 | "... due to the potential changes in the tax code ..."                                  | Reuters           |
| Sun Hydraulics Corp.                  | Dec 02, 2012 | "In anticipation of expected tax law changes in 2013, ..."                              | Reuters           |
| HEICO Corp.                           | Dec 05, 2012 | "... to ensure shareholders may take advantage of 2012 tax rates."                      | Globe Newswire    |
| U.S. Global Investors                 | Dec 12, 2012 | "... as it braces for the possible impact of the fiscal cliff."                         | Business Journals |
| Ikonic Corp.                          | Dec 10, 2012 | "... this one-time event prior to potential tax rate increases in 2013."                | Business Journals |
| Sterling Financial Corp.              | Dec 12, 2012 | "... in light of expected changes in tax rates applicable to cash dividends, ..."       | Business Wire     |
| National Healthcare Corp.             | Dec 06, 2012 | "... to avoid potentially higher taxes next year amid heated "fiscal cliff" ..."        | WSJ               |
| Teche Holding Company                 | Nov 29, 2012 | "Because of the uncertainty in the tax rate ... on dividends in 2013 ..."               | Marketwire        |
| Evolving Systems Inc.                 | Dec 07, 2012 | "... will be paid before the end of 2012 to avoid tax ..."                              | Reuters           |
| FedFirst Financial Corp.              | Nov 14, 2012 | "Given the potential increase in tax rates on dividends beginning next year ..."        | WSJ               |
| Access National Corp.                 | Nov 20, 2012 | "... a significant increase in the federal tax rate of qualified dividends in 2013 ..." | Business Wire     |
| Canterbury Park Holding Corp.         | Dec 07, 2012 | "... special dividend is a tax-efficient way to return value to our shareholders."      | Business Wire     |
| Heritage Financial Group              | Dec 07, 2012 | "Considering the ongoing uncertainties regarding federal taxation next year ..."        | Business Wire     |
| OmegaFlex, Inc.                       | Nov 15, 2012 | "... to secure for the shareholders the benefits of the current dividend tax ..."       | Globe Newswire    |
| Southern National Bancorp of Virginia | Nov 29, 2012 | "... this unusual and non-recurring action in light of ... pending tax hikes."          | Globe Newswire    |
| United-Guardian Inc.                  | Dec 06, 2012 | "Given the uncertainty of the tax treatment of dividends ..."                           | Globe Newswire    |
| Bolt Technology Corp.                 | Nov 20, 2012 | "... take advantage of current dividend tax rates which may increase in 2013."          | Globe Newswire    |

**Table 3**

**Price-drop-to-dividend ratio.** This table presents a comparison of the Price-drop-to-dividend ratios over the past two years (i.e., October 2010—September 2012) between firms with high and low *Tax-ins. inst. ownership*. All variables are as defined in Table A1. Columns (1) and (2) report the Price-drop-to-dividend ratio as a fraction of the dividend paid. The difference between the means is reported in Column (3). *p*-value of the difference is reported in Column (4).

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| Low: 787 firms | High: 820 firms | Difference | p-value |
|----------------|-----------------|------------|---------|
| (1)            | (2)             | (3)        | (4)     |
| 0.7170         | 0.9965          | -0.2794    | 0.0143  |

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**Table 4**

**Determinants of Special Dividend Payment.** This table presents results based on OLS regressions for the determinants of the likelihood of paying a special dividend during November-December 2012. The main explanatory variables are *Insider ownership*, *Tax-ins. inst. ownership*, and their interaction. Control variables include *past return*, *size*, *dividend-to-assets*, *cash-to-assets*, *repurchased shares in 2011*, and the *Hadlock-Pierce index*. All variables are defined in Table A1. *t*-statistics, calculated using heteroscedasticity robust standard errors clustered by Fama-French 48 industries are reported in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

| Dependent variable: Firm paid special dividend {0,1}            |                    |                    |                    |                    |                    |                      |
|-----------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------------|
|                                                                 | (1)                | (2)                | (3)                | (4)                | (5)                | (6)                  |
| <b>Panel A: Fiscal Cliff Period (Nov-Dec 2012)</b>              |                    |                    |                    |                    |                    |                      |
| Insider ownership                                               | 0.289***<br>(4.29) |                    | 0.293***<br>(4.16) | 0.274***<br>(3.89) | 0.279***<br>(3.66) | 0.0175<br>(0.20)     |
| Tax-ins. inst. ownership                                        |                    | -0.0232<br>(-1.44) | 0.0057<br>(0.33)   | -0.0082<br>(-0.50) | -0.0237<br>(-0.95) | -0.070***<br>(-2.72) |
| Insider ownership<br>× Tax-ins. inst. ownership                 |                    |                    |                    |                    |                    | 1.197***<br>(3.17)   |
| Constant                                                        | 0.036***<br>(8.97) | 0.058***<br>(7.59) | 0.034***<br>(3.91) | 0.018***<br>(2.36) | -0.0370<br>(-1.03) | -0.0336<br>(-0.97)   |
| Industry Fixed-effects                                          | No                 | No                 | No                 | Yes                | Yes                | Yes                  |
| Controls                                                        | No                 | No                 | No                 | No                 | Yes                | Yes                  |
| <i>N</i>                                                        | 3,363              | 3,363              | 3,363              | 3,363              | 3,257              | 3,257                |
| <i>R</i> <sup>2</sup>                                           | 0.0101             | 0.0005             | 0.0101             | 0.0358             | 0.0587             | 0.0638               |
| <b>Panel B: Placebo, Pre-Fiscal Cliff Period (Jan-Sep 2012)</b> |                    |                    |                    |                    |                    |                      |
| Insider ownership                                               | 0.0215<br>(0.67)   |                    | 0.0302<br>(0.91)   | 0.0211<br>(0.62)   | 0.0173<br>(0.54)   | 0.0268<br>(0.55)     |
| Tax-ins. inst. ownership                                        |                    | 0.009<br>(0.84)    | 0.0118<br>(1.07)   | 0.0092<br>(0.73)   | 0.0134<br>(0.88)   | 0.0151<br>(0.84)     |
| Insider ownership<br>× Tax-ins. inst. ownership                 |                    |                    |                    |                    |                    | -0.0434<br>(-0.26)   |
| Constant                                                        | 0.016***<br>(6.33) | 0.013***<br>(2.98) | 0.0108**<br>(2.17) | -0.0046<br>(-0.91) | -0.0093<br>(-0.77) | -0.0094<br>(-0.79)   |
| Industry Fixed-effects                                          | No                 | No                 | No                 | Yes                | Yes                | Yes                  |
| Controls                                                        | No                 | No                 | No                 | No                 | Yes                | Yes                  |
| <i>N</i>                                                        | 3,524              | 3,524              | 3,524              | 3,524              | 3,412              | 3,412                |
| <i>R</i> <sup>2</sup>                                           | 0.0002             | 0.0002             | 0.0005             | 0.0159             | 0.0208             | 0.0208               |

**Table 5**

**Special Dividend Announcement Day CAR.** This table presents results on the relation between the firm-level cumulative abnormal returns (CAR) when a firm announces a special dividend and the ownership variables. Panel A reports estimates from OLS regressions with *special dividend announcement-date CAR* as the dependent variable. All variables are as defined in Table A1. Panel B reports estimates from a linear probability model with an indicator of CAR being negative as the dependent variable. *t*-statistics, calculated using heteroscedasticity robust standard errors clustered by Fama-French 48 industries are reported in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

|                                                             | (1)                 | (2)                  | (3)                  |
|-------------------------------------------------------------|---------------------|----------------------|----------------------|
| <b><i>Panel A: Announcement Day CAR</i></b>                 |                     |                      |                      |
| Insider ownership                                           | 0.0001<br>(0.01)    | 0.0615***<br>(0.02)  | 0.0811***<br>(0.02)  |
| Tax-ins. inst. ownership                                    | -0.0060<br>(0.01)   | 0.0085<br>(0.01)     | 0.0064<br>(0.01)     |
| Insider ownership<br>× Tax-ins. inst. ownership             |                     | -0.2271***<br>(0.07) | -0.2461***<br>(0.07) |
| Constant                                                    | 0.0196***<br>(0.00) | 0.0152***<br>(0.00)  | 0.0407***<br>(0.00)  |
| Industry Fixed-effects                                      | No                  | No                   | Yes                  |
| <i>N</i>                                                    | 164                 | 164                  | 164                  |
| <i>R</i> <sup>2</sup>                                       | 0.0034              | 0.0398               | 0.3274               |
| <b><i>Panel B: % of Announcements with Negative CAR</i></b> |                     |                      |                      |
| Insider ownership                                           | -0.0044<br>(0.31)   | -1.4344***<br>(0.45) | -1.9869***<br>(0.52) |
| Tax-ins. inst. ownership                                    | 0.1846<br>(0.18)    | -0.1519<br>(0.22)    | -0.3214<br>(0.31)    |
| Insider ownership<br>× Tax-ins. inst. ownership             |                     | 5.2866**<br>(1.98)   | 5.2147**<br>(2.20)   |
| Constant                                                    | 0.2129**<br>(0.08)  | 0.3168***<br>(0.08)  | 0.1287<br>(0.09)     |
| Industry Fixed-effects                                      | No                  | No                   | Yes                  |
| <i>N</i>                                                    | 164                 | 164                  | 164                  |
| <i>R</i> <sup>2</sup>                                       | 0.0054              | 0.0378               | 0.2725               |

**Table 6**

**Tax-motivated Special Dividends and Future Payouts** This table reports estimates from difference-in-difference regressions to examine the extent to which special dividends during the event period are related to changes in the following dependent variables: *dividends*, *share repurchases*, *cash*, *R&D*, *capital expenditure*, and *net debt issuance*. The observations are at the firm-quarter level. The sample covers firm-quarter observations between January 2010 and July 2013. All the dependent variables are normalized by the book value of lagged assets. *Special* is an indicator of announcing a special dividend during the event period. *Event Period* is an indicator for the fiscal quarter that includes November 2012. *Post Period* is an indicator for the two quarters immediately following the Event Period. *t*-statistics, calculated using heteroscedasticity robust standard errors clustered by Fama-French 48 industries are reported in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

|                                                                   | (1)                 | (2)                  | (3)                 | (4)                 | (5)                 | (6)                 |
|-------------------------------------------------------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|
| <b><i>Panel A: Dividends, Repurchases, and Cash</i></b>           |                     |                      |                     |                     |                     |                     |
| Dependent variable                                                | Dividends           |                      | Repurchases         |                     | Cash                |                     |
| Special                                                           | 0.003***<br>(0.00)  |                      | 0.0001<br>(0.00)    |                     | 0.034**<br>(0.01)   |                     |
| Special $\times$ Event Period                                     | 0.025***<br>(0.00)  | 0.025***<br>(0.00)   | -0.0005<br>(0.00)   | -0.0004<br>(0.00)   | -0.029***<br>(0.01) | -0.033***<br>(0.01) |
| Special $\times$ Post Period                                      | -0.0003<br>(0.00)   | -0.0001<br>(0.00)    | -0.0009**<br>(0.00) | -0.0007**<br>(0.00) | -0.0004<br>(0.01)   | 0.0001<br>(0.01)    |
| Constant                                                          | 0.002***<br>(0.00)  | 0.003***<br>(0.00)   | 0.002***<br>(0.00)  | 0.002***<br>(0.00)  | 0.192***<br>(0.00)  | 0.194***<br>(0.00)  |
| Industry $\times$ Quarter FE                                      | Yes                 | Yes                  | Yes                 | Yes                 | Yes                 | Yes                 |
| Firm FE                                                           | No                  | Yes                  | No                  | Yes                 | No                  | Yes                 |
| <i>N</i>                                                          | 39,245              | 39,244               | 37,680              | 37,675              | 39,615              | 39,615              |
| <i>R</i> <sup>2</sup>                                             | 0.1827              | 0.6945               | 0.0493              | 0.4610              | 0.2951              | 0.8950              |
| <b><i>Panel B: R&amp;D, Investment, and Net Debt Issuance</i></b> |                     |                      |                     |                     |                     |                     |
| Dependent variable                                                | R&D                 |                      | CAPEX               |                     | Net debt issuance   |                     |
| Special                                                           | -0.012***<br>(0.00) |                      | 0.0006<br>(0.00)    |                     | -0.0021<br>(0.00)   |                     |
| Special $\times$ Event Period                                     | 0.0008<br>(0.00)    | -0.0003<br>(0.00)    | 0.0007<br>(0.00)    | 0.0006<br>(0.00)    | -0.0049<br>(0.00)   | -0.0047<br>(0.00)   |
| Special $\times$ Post Period                                      | -0.0004<br>(0.00)   | -0.0006<br>(0.00)    | 0.0009<br>(0.00)    | 0.0004<br>(0.00)    | 0.0008<br>(0.00)    | 0.0010<br>(0.00)    |
| Constant                                                          | 0.027***<br>(0.00)  | 0.027***<br>(0.00)   | 0.011***<br>(0.00)  | 0.011***<br>(0.00)  | 0.006***<br>(0.00)  | 0.006***<br>(0.00)  |
| Industry $\times$ Quarter FE                                      | Yes                 | Yes                  | Yes                 | Yes                 | Yes                 | Yes                 |
| Firm FE                                                           | No                  | Yes                  | No                  | Yes                 | No                  | Yes                 |
| <i>N</i>                                                          | 16,930              | 16,915               | 39,223              | 39,222              | 37,477              | 37,467              |
| <i>R</i> <sup>2</sup>                                             | 0.2673              | 0.8807 <sup>41</sup> | 0.3813              | 0.7504              | 0.0488              | 0.2928              |



# A Additional Tables

**Table A1**  
**Variable Definitions.**

|                                      |                                                                                                                                                                                                                                                                                          |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $CAR_{special}$                      | The sum of market-adjusted abnormal returns over three days, from one trading day before to one trading day after the announcement of a special dividend.                                                                                                                                |
| <i>Event period</i>                  | Months of November and December of 2012.                                                                                                                                                                                                                                                 |
| $I[Special\ dividend, event]$        | A dummy equal to one if a firm announced a special dividend during the event period (Nov–Dec 2012) and zero otherwise.                                                                                                                                                                   |
| $I[Special\ dividend]$               | A dummy equal to one if a firm paid special dividends during a year and zero otherwise.                                                                                                                                                                                                  |
| $I[Dividend]$                        | A dummy equal to one if a firm paid any dividend during a year and zero otherwise.                                                                                                                                                                                                       |
| $I[Share\ repurchase]$               | A dummy equal to one if a firm repurchased shares during a year and zero otherwise.                                                                                                                                                                                                      |
| <i>Dividend-to-assets</i>            | The total dividend amount during a year, divided by the book value of assets (DVC/AT).                                                                                                                                                                                                   |
| <i>Insider ownership</i>             | The sum of shares held by insiders who are current or past executives or directors, divided by shares outstanding in the fourth fiscal quarter of 2011 (Thomson Insiders Database).                                                                                                      |
| <i>Institutional ownership</i>       | The sum of shares held by institutional investors, divided by shares outstanding. Measured as of the fourth fiscal quarter of 2011 (Thomson 13F Database).                                                                                                                               |
| <i>Mutual fund ownership</i>         | The sum of shares held by mutual funds, divided by shares outstanding. Measured as of the fourth fiscal quarter of 2011 (Thomson Mutual Fund Holdings Database).                                                                                                                         |
| <i>Tax-ins. inst. ownership</i>      | Our main proxy for tax-insensitive ownership, defined as <i>Institutional ownership</i> – <i>emphMutual fund ownership</i> .                                                                                                                                                             |
| <i>Pension fund ownership</i>        | The sum of shares held by institutional investors with <i>type-code</i> =5, divided by shares outstanding. Measured as of the fourth fiscal quarter of 2011 (Thomson 13F Database).                                                                                                      |
| <i>Alt. tax-ins. inst. ownership</i> | An alternative proxy for tax-insensitive ownership, defined as the sum of shares held by tax-insensitive institutional investors based on Blouin et al.’s (2017) classification, divided by shares outstanding. Measured as of the fourth fiscal quarter of 2011 (Thomson 13F Database). |
| <i>Past return</i>                   | Past five-year stock return, calculated by compounding monthly CRSP returns.                                                                                                                                                                                                             |
| <i>Size</i>                          | Log (total assets), end of year.                                                                                                                                                                                                                                                         |
| <i>Cash-to-assets</i>                | Cash/Total assets (CHE/AT), end of year                                                                                                                                                                                                                                                  |
| <i>Financial constraints (H-P)</i>   | Hadlock and Pierce (2010) measure of financial constraints.                                                                                                                                                                                                                              |
| <i>Price drop to dividend ratio</i>  | Market-return-adjusted ex-dividend price change as a fraction of dividend paid (Elton and Gruber, 1970), averaged over the past five years.                                                                                                                                              |
| <i>Insider net selling</i>           | (Sum of shares sold - Sum of shares purchased)/(Sum of shares purchased + Sum of shares sold) by insiders who are current or past executives or directors.                                                                                                                               |

**Table A2**

**Insider Trading around the Event Period.** This table shows results for a comparison of insider trading patterns between special dividend paying firms and others during January 2012 to December 2012. The difference-in-difference estimation compares the changes in the means of *insider net selling* for the special dividend paying firms and firms that did not pay a special dividend. *Insider net selling* is the difference between the number of shares sold and bought by insiders who are current or past executives or directors, divided by the sum of the shares sold and bought. *Special* is an indicator of announcing a special dividend during the event period. *Post Election* is a dummy variable equal to one for the period November 2012 - December 2012, and zero for the period January 2012 - October 2012. In each column, we report estimated coefficients and their *t*-statistics, calculated using heteroscedasticity robust standard errors clustered by Fama-French 48 industries. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

|                           | (1)                        | (2)                   | (3)                   |
|---------------------------|----------------------------|-----------------------|-----------------------|
| <i>Dependent variable</i> | <i>Insider net selling</i> |                       |                       |
| Special {0, 1}            | 0.1600***<br>(3.15)        |                       |                       |
| Post Election {0, 1}      | -0.0912***<br>(-7.37)      | -0.0912***<br>(-7.37) |                       |
| Special {0, 1}            | -0.0527                    | -0.0527               | -0.0697               |
| × Post Election {0, 1}    | (-1.11)                    | (-1.11)               | (-1.25)               |
| Constant                  | 0.3592***<br>(27.32)       | 0.3670***<br>(61.30)  | 0.3219***<br>(273.94) |
| Firm FE                   | No                         | Yes                   | Yes                   |
| Industry × Year FE        | No                         | No                    | Yes                   |
| <i>N</i>                  | 6,726                      | 6,726                 | 6,726                 |
| <i>R</i> <sup>2</sup>     | 0.0064                     | 0.7503                | 0.7542                |

**Table A3**

**Determinants of Special Dividend Payment (Logit Model).** This table presents the relationship between firm characteristics and the likelihood of paying a special dividend during November-December 2012. The table reports estimates logit regressions. *Tax-ins. inst. ownership* is *Institutional ownership* minus *Mutual fund ownership*. The control variables used for column (6) include *past return*, *size*, *dividend-to-assets*, *cash-to-assets*, *repurchased shares in 2011*, and the *Hadlock-Pierce index*. All other variables including the control variables are defined in Table A1. In each column, we report estimated coefficients and their *t*-statistics, calculated using heteroscedasticity robust standard errors clustered by Fama-French 48 industry classifications. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

| Dependent variable: Firm paid special dividend {0,1} |                      |                      |                      |                      |                     |                     |
|------------------------------------------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|
|                                                      | (1)                  | (2)                  | (3)                  | (4)                  | (5)                 | (6)                 |
| Insider ownership                                    | 4.03***<br>(6.28)    |                      | 4.10***<br>(5.63)    | 3.86***<br>(5.52)    | 4.10***<br>(5.01)   | 0.697<br>(0.51)     |
| Tax-ins. inst. ownership                             |                      | -0.498<br>(-1.45)    | 0.103<br>(0.27)      | -0.255<br>(-0.71)    | -0.644<br>(-1.15)   | -1.45**<br>(-2.47)  |
| Insider ownership<br>× Tax-ins. inst. ownership      |                      |                      |                      |                      |                     | 13.66***<br>(2.97)  |
| Constant                                             | -3.20***<br>(-34.76) | -2.78***<br>(-18.56) | -3.25***<br>(-16.81) | -3.67***<br>(-22.36) | -5.09***<br>(-6.24) | -5.01***<br>(-6.35) |
| Industry Fixed-effects                               | No                   | No                   | No                   | Yes                  | Yes                 | Yes                 |
| Controls                                             | No                   | No                   | No                   | No                   | Yes                 | Yes                 |
| <i>N</i>                                             | 3,363                | 3,363                | 3,363                | 3,181                | 3,077               | 3,077               |

**Table A4**

**Insider Ownership, Pension Ownership, Special Dividend Payment, and Announcement Day CAR.** This table reports the estimates from a linear probability model with an indicator of paying a special dividend during November-December 2012 as the dependent variable (Panel A) and the estimates from OLS regressions with *special dividend announcement-date CAR* as the dependent variable (Panel B). The control variables used for column (6) in Panel A include *past return*, *size*, *dividend-to-assets*, *cash-to-assets*, *re-purchased shares in 2011*, and the *Hadlock-Pierce index*. All other variables including the control variables are defined in Table A1. In each column, we report estimated coefficients and their *t*-statistics, calculated using heteroscedasticity robust standard errors clustered by Fama-French 48 industry classifications. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

| <i>Panel A: Firm paid special dividend? {0,1}</i> |                    |                    |                    |                    |                    |                      |
|---------------------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------------|
|                                                   | (1)                | (2)                | (3)                | (4)                | (5)                | (6)                  |
| Insider ownership                                 | 0.289***<br>(4.29) |                    | 0.289***<br>(4.22) | 0.276***<br>(3.83) | 0.284***<br>(3.60) | 0.177**<br>(2.28)    |
| Pension fund ownership                            |                    | -0.013<br>(-0.96)  | -0.000<br>(-0.03)  | -0.008<br>(-0.56)  | -0.017<br>(-1.25)  | -0.039***<br>(-3.16) |
| Insider ownership<br>× Pension fund ownership     |                    |                    |                    |                    |                    | 0.726**<br>(2.06)    |
| Constant                                          | 0.036***<br>(8.97) | 0.052***<br>(9.82) | 0.036***<br>(6.15) | 0.017**<br>(2.66)  | -0.036<br>(-1.04)  | -0.033<br>(-0.97)    |
| Industry Fixed-effects                            | No                 | No                 | No                 | No                 | Yes                | Yes                  |
| Controls                                          | No                 | No                 | No                 | No                 | No                 | Yes                  |
| <i>N</i>                                          | 3,363              | 3,363              | 3,363              | 3,363              | 3,257              | 3,257                |
| <i>R</i> <sup>2</sup>                             | 0.0101             | 0.0002             | 0.0101             | 0.0358             | 0.0587             | 0.0609               |

| <i>Panel B: Announcement Day CAR</i>          |                    |                    |                      |
|-----------------------------------------------|--------------------|--------------------|----------------------|
|                                               | (1)                | (2)                | (3)                  |
| Insider ownership                             | 0.002<br>(0.18)    | 0.023<br>(1.55)    | 0.055***<br>(3.87)   |
| Pension fund ownership                        |                    | -0.005<br>(-0.70)  | -0.002<br>(-0.30)    |
| Insider ownership<br>× Pension fund ownership |                    | -0.111*<br>(-2.07) | -0.189***<br>(-3.75) |
| Constant                                      | 0.017***<br>(7.16) | 0.019***<br>(6.02) | 0.038***<br>(29.90)  |
| Industry Fixed-effects                        | No                 | No                 | Yes                  |
| <i>N</i>                                      | 164                | 164                | 164                  |
| <i>R</i> <sup>2</sup>                         | 0.0002             | 0.0327             | 0.3375               |

**Table A5**

**Insider Ownership, Alternative Tax-insensitive Ownership measures, Special Dividend Payment, and Announcement Day CAR.** This table presents results based on OLS regressions for the determinants of the likelihood of paying a special dividend during November-December 2012. The main explanatory variables are *Insider ownership*, *Alt. tax-ins. inst. ownership*, and their interaction. Control variables include *past return*, *size*, *dividend-to-assets*, *cash-to-assets*, *repurchased shares in 2011*, and the *Hadlock-Pierce index*. All variables are defined in Table A1. *t*-statistics, calculated using heteroscedasticity robust standard errors clustered by Fama-French 48 industries are reported in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

| <i>Panel A: Firm paid special dividend {0,1}</i>     |                    |                    |                    |                    |                    |                      |
|------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------------|
|                                                      | (1)                | (2)                | (3)                | (4)                | (5)                | (6)                  |
| Insider ownership                                    | 0.289***<br>(4.29) |                    | 0.297***<br>(4.17) | 0.280***<br>(3.72) | 0.280***<br>(3.46) | 0.087<br>(1.13)      |
| Alt. tax-ins. inst. ownership                        |                    | -0.014<br>(-1.34)  | 0.002<br>(0.19)    | -0.006<br>(-0.51)  | -0.024*<br>(-1.84) | -0.049***<br>(-3.47) |
| Insider ownership<br>× Alt. tax-ins. inst. ownership |                    |                    |                    |                    |                    | 0.730***<br>(3.51)   |
| Constant                                             | 0.036***<br>(8.97) | 0.056***<br>(8.58) | 0.035***<br>(4.76) | 0.0175**<br>(2.23) | -0.039<br>(-1.09)  | -0.038<br>(-1.11)    |
| Industry Fixed-effects                               | No                 | No                 | No                 | Yes                | Yes                | Yes                  |
| Controls                                             | No                 | No                 | No                 | No                 | Yes                | Yes                  |
| <i>N</i>                                             | 3,363              | 3,315              | 3,315              | 3,315              | 3,221              | 3,221                |
| <i>R</i> <sup>2</sup>                                | 0.0101             | 0.0004             | 0.0103             | 0.0360             | 0.0590             | 0.0636               |

| <i>Panel B: Announcement Day CAR</i>                 |                    |                      |                      |
|------------------------------------------------------|--------------------|----------------------|----------------------|
|                                                      | (1)                | (2)                  | (3)                  |
| Insider ownership                                    | 0.002<br>(0.12)    | 0.041***<br>(3.15)   | 0.065***<br>(3.99)   |
| Alt. tax-ins. inst. ownership                        | -0.002<br>(-0.32)  | 0.006<br>(1.02)      | 0.010<br>(1.32)      |
| Insider ownership<br>× Alt. tax-ins. inst. ownership |                    | -0.110***<br>(-3.37) | -0.120***<br>(-2.99) |
| Constant                                             | 0.018***<br>(5.54) | 0.015***<br>(4.24)   | 0.037***<br>(10.80)  |
| Industry Fixed-effects                               | No                 | No                   | Yes                  |
| $N$                                                  | 164                | 164                  | 164                  |
| $R^2$                                                | 0.0009             | 0.0321               | 0.3207               |

## B Model

**Environment.** Two periods  $t = 1, 2$ . The firm starts with cash  $C > 0$  at  $t = 1$ . It chooses investment  $I \in [0, C]$  and distributes a dividend  $D_1 = C - I$  at  $t = 1$ . At  $t = 2$ , production yields  $D_2 = R(I)$  with  $R'(I) > 0$  and  $R''(I) < 0$  (increasing in  $I$  and concave, reflecting diminishing returns to investment). Investors maximize total discounted after-tax payouts. Time discount is  $\beta \in (0, 1)$ . The firm's investors can be taxable or tax-insensitive. Dividend taxes apply to taxable owners; the tax rate  $\tau$  can vary across periods, and is  $(\tau_1, \tau_2) \in [0, 1]^2$  at  $t = 1$  and  $t = 2$ , respectively. "Tax-insensitive" owners face no dividend taxes.

**Assumptions.** (i)  $R$  is strictly concave and twice continuously differentiable; (ii) feasibility  $0 \leq I \leq C$  and  $D_1, D_2 \geq 0$ ; (iii) no external financing/issuance and repurchases are ruled out (dividends are the only payout margin); (iv)  $\beta \in (0, 1)$  and  $\tau_1, \tau_2 \in [0, 1]$ ; (v) interior solutions unless stated otherwise.

### B.1 Benchmark: tax-insensitive owners

The (pre-tax) objective for tax-insensitive owners is

$$V^{\text{pre-tax}}(I) = (C - I) + \beta R(I). \quad (4)$$

The first-order condition (FOC) is

$$R'(I^*) = \frac{1}{\beta}. \quad (5)$$

### B.2 Taxable owners

With dividend taxes  $(\tau_1, \tau_2)$ , the objective is

$$V^{\text{tax}}(I) = (1 - \tau_1)(C - I) + \beta(1 - \tau_2)R(I). \quad (6)$$

The FOC is

$$-(1 - \tau_1) + \beta(1 - \tau_2)R'(I^\circ) = 0 \iff R'(I^\circ) = \frac{1 - \tau_1}{\beta(1 - \tau_2)}. \quad (7)$$

**Proposition 1 (Tax increase pulls dividends forward).** If  $\tau_2 > \tau_1$ , then relative to the tax-insensitive benchmark:

$$I^\circ < I^*, \quad D_1^\circ \equiv C - I^\circ > D_1^* \equiv C - I^*, \quad D_2^\circ \equiv R(I^\circ) < D_2^* \equiv R(I^*).$$

*Proof.* From (5) and (7),  $\tau_2 > \tau_1$  implies  $R'(I^\circ) > \frac{1}{\beta} = R'(I^*)$ . With  $R'' < 0$ , the optimizer is smaller:  $I^\circ < I^*$ . Then  $D_1^\circ = C - I^\circ > C - I^* = D_1^*$  and, since  $R'$  is positive,  $R(I^\circ) < R(I^*)$ , i.e.,  $D_2^\circ < D_2^*$ .  $\square$

**Note: No cash retention when  $\beta < 1$ .** Suppose the firm could carry  $S \geq 0$  dollars of cash from  $t = 1$  to  $t = 2$ , i.e. choose  $D_1 = C - I - S$  and  $D_2 = R(I) + S$  (cash earns no return). The change in the objective from increasing  $S$  by one unit is:

(a) *Tax-insensitive owners:*  $\Delta V^{\text{pre-tax}} = -1 + \beta < 0$ ;

(b) *Taxable owners:*  $\Delta V^{\text{tax}} = -(1 - \tau_1) + \beta(1 - \tau_2)$ .

Hence, in both benchmarks we study—*tax-insensitive owners* and *taxable owners with  $\tau_2 \geq \tau_1$*  (including  $\tau_1 = \tau_2$  and the *fiscal-cliff* case  $\tau_2 > \tau_1$ )—we have  $\Delta V \leq 0$ , so the firm never carries cash across periods. Therefore all non-invested cash is paid out at  $t = 1$ :  $D_1 = C - I$  and  $D_2 = R(I)$ .

*Remark:* If  $\tau_2 < \tau_1$  and taxes differ sufficiently, deferral of cash payouts could be optimal despite  $\beta < 1$ ; this case is not our focus.

### B.3 Benchmark with constant tax rates ( $\tau_1 = \tau_2$ )

If  $\tau_1 = \tau_2 \equiv \tau$ , then

$$V^{\text{tax}}(I) = (1 - \tau) [(C - I) + \beta R(I)] = (1 - \tau) V^{\text{pre-tax}}(I). \quad (8)$$

Hence the FOCs coincide and both owner types prefer the same investment level:

$$R'(I^\circ) = R'(I^*) = \frac{1}{\beta} \Rightarrow I^\circ = I^*. \quad (9)$$

*Intuition.* The constant tax rate scales both periods' dividends proportionally. It therefore leaves unchanged the trade-off between investing and paying out immediately; investment policy is identical to the pre-tax benchmark.

**Proposition 2 (Constant tax rates imply identical dividends).** If  $\tau_1 = \tau_2 \equiv \tau$ , then  $I^\circ = I^*$  and

$$D_1^\circ = D_1^*, \quad D_2^\circ = D_2^*.$$

*Proof.* When  $\tau_1 = \tau_2$ ,  $V^{\text{tax}}(I) = (1 - \tau)V^{\text{pre-tax}}(I)$ , so the argmax is unchanged:  $I^\circ = I^*$ . Because  $D_1 = C - I$  and  $D_2 = R(I)$ , dividends coincide in both periods.  $\square$

**Corollary 1 (No dividend conflict under constant rates even with mixed tax status).** If  $\tau_1 = \tau_2$ , the manager's private objective is a positive multiple of  $V^{\text{pre-tax}}$ , so  $I^{\text{exec}} = I^*$  and hence  $D_1^{\text{exec}} = D_1^*$  and  $D_2^{\text{exec}} = D_2^*$  even if shareholders are tax-insensitive while the executive is taxable (or vice versa).

## B.4 Executive problem and deviation condition

Consider a manager who owns a fraction  $\alpha \in (0, 1]$  of the equity and faces a reputational/monitoring cost  $\pi \geq 0$  if she deviates from the tax-insensitive optimum  $I^*$  toward  $I^\circ$ . The executive deviates iff her private after-tax gain exceeds the cost:

$$\alpha \left( V^{\text{tax}}(I^\circ) - V^{\text{tax}}(I^*) \right) > \pi. \quad (10)$$

**Proposition 3 (Threshold form and interaction).** The deviation condition (10) is equivalent to

$$V^{\text{tax}}(I^\circ) - V^{\text{tax}}(I^*) > \frac{\pi}{\alpha}. \quad (11)$$

Let  $g(\alpha, \pi) \equiv \pi/\alpha$ . Then

$$\frac{\partial g}{\partial \pi} = \frac{1}{\alpha} > 0, \quad \frac{\partial g}{\partial \alpha} = -\frac{\pi}{\alpha^2} < 0, \quad \frac{\partial^2 g}{\partial \alpha \partial \pi} = -\frac{1}{\alpha^2} < 0. \quad (12)$$

Thus higher insider ownership  $\alpha$  lowers the effective cost threshold  $\pi/\alpha$ , attenuating the impact of a given governance cost  $\pi$  on the deviation condition.

**Note (Dividend-form identity and decision rule).** Because  $D_1 = C - I$  and  $D_2 = R(I)$ ,

$$V^{\text{tax}}(I^\circ) - V^{\text{tax}}(I^*) = (1 - \tau_1)(D_1^\circ - D_1^*) + \beta(1 - \tau_2)(D_2^\circ - D_2^*).$$

Hence the deviation condition (10) is equivalent to

$$\alpha \left[ (1 - \tau_1)(D_1^\circ - D_1^*) + \beta(1 - \tau_2)(D_2^\circ - D_2^*) \right] > \pi.$$

**Proposition 4 (Value loss equals discounted dividend shortfall for tax-insensitive owners).** When the executive implements  $I^\circ < I^*$  (i.e., pulls dividends forward), the pre-

tax value loss to tax-insensitive owners is

$$\Delta V^{\text{pre-tax}} \equiv V^{\text{pre-tax}}(I^*) - V^{\text{pre-tax}}(I^\circ) = (D_1^* - D_1^\circ) + \beta (D_2^* - D_2^\circ) \geq 0,$$

with strict inequality for interior solutions by concavity of  $R$ . □

## B.5 Theory $\rightarrow$ empirics: testable predictions

- (i) (*Incidence*) If dividend taxes increase,  $\tau_2 > \tau_1$ , the probability and size of a higher (special) dividend at  $t = 1$  rise.
- (ii) (*Heterogeneity*) Let  $\theta$  proxy for tax-insensitive outside ownership with  $\pi'(\theta) > 0$ . In a binary-choice model for special dividends,

$$\Pr(\text{SD} = 1) = \Lambda\left(\gamma_0 + \gamma_1 \theta + \gamma_2 \alpha + \gamma_3 \alpha \times \theta + \text{controls}\right), \quad (13)$$

the theory predicts  $\gamma_1 < 0$  and  $\gamma_3 > 0$ .

- (iii) (*Valuation*) Event-study announcement returns are more negative when tax-insensitive ownership is larger (higher  $\theta$ ), consistent with  $\Delta V^{\text{pre-tax}} > 0$ .