Whose Taxes Matter? The Effects of Institutional Ownership on Dividend Payout Policy around Tax Rate Changes

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Abstract

We examine whether institutional investors' tax-sensitivity affects dividend payout policy, and examine how this relation varies with insider ownership. Taxable investors have tax preferences for receiving dividends before tax increases (i.e., dividend acceleration), but tax-insensitive investors do not. Consistent with this, we find that the likelihood and magnitude of dividend payments before tax rate hikes is lower for firms with high tax-insensitive institutional ownership than for firms with high taxable investor ownership. We then re-examine the positive relation between insider ownership, generally representing taxable owners, and dividend acceleration (Hanlon and Hoopes 2014). We find that dividend acceleration generally increases with insider ownership even when tax-insensitive institutional ownership is high, indicating that managers' preferences outweigh institutions' preferences. However, we find that tax-insensitive *dedicated* institutions constrain insiders' ability to accelerate dividends, indicating that these institutions play a part in monitoring potentially excessive tax-motivated dividend payments. Finally, we find some evidence that firms substitute dividend payments for share repurchases except where tax-sensitive institutional ownership is high, consistent with an overall tax-preference for repurchases. These results contrast with several recent papers and provide important new insight in the relation between shareholder-level taxes and payout policy.

I.   Introduction

Dividend policy represents a fundamental corporate financial policy. Understanding how institutional investors affect corporate financial policies, and dividend policy specifically, is increasingly important (Grinstein and Michaely, 2005). On one hand, institutional owners enhance monitoring, which could increase dividends (Jensen, 1986). However, this relation likely varies with the type of institution because the monitoring role of institutions also varies by type (Bushee 1998, 2001). On the other hand, institutional owners could prefer lower dividends because dividends are proportionate across all shareholders which prevents institutions, who are generally informed investors, from benefiting from their information advantage (e.g., Brennan and Thakor, 1990). The fact that institutions have heterogeneous tax preferences for dividends further complicates the relation between institutional ownership and dividend policy (Desai and Jin, 2011). Inside owners also have preferences around dividend policy (e.g., John and Williams, 1985; Brown, Liang, and Weisbenner, 2007) that can interact with institutions' preferences. In this study, we use a powerful setting to provide new evidence on the relation between institutional ownership and dividend payout policy, with a unique focus on how the relation varies by institution type, institutional tax preferences, and the level of insider ownership.[1]

Several studies use the periods following dividend tax rate decreases to evaluate the effect of owners' tax-sensitivity on firms' dividend payout policy. A key example, Chetty and Saez (2005), examines the effect of taxes, inside ownership, and institutional ownership, as we do in this paper. However, the periods around dividend tax rate *cuts* are often subject to various confounding factors. For example, dividend tax rate cuts often coincide with significant economic expansions, naturally resulting in increased dividends (Edgerton, 2013; see also Floyd,

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[1] Consistent with prior literature in this area (e.g., Chetty and Saez 2005; Hanlon and Hoopes 2014) we focus on dividend payout policy and later examine share repurchases, firms' alternative method for shareholder payouts.

Li, and Skinner, 2015). Additionally, firms must weigh the tax preferences of shareholders against the long-term consequences of initiating a dividend because dividend policies are "sticky," with firms being reluctant to reduce dividends (Brav, Graham, Harvey, and Michaely, 2008). Overall, despite decades of research of the effect of shareholders on dividend policy, the relation between firms' dividend policy and both institutional ownership and investor tax-sensitivities remains unclear (see Grinstein and Michaely, 2005 versus Desai and Jin, 2011).

Our study avoids confounding factors, such as contemporaneous economic effects, by evaluating a firm's decision to pay special dividends in, or shift regular dividends into, the periods immediately prior to an *increase* in dividend tax rates (i.e., "dividend acceleration"). These periods arose as a result of the anticipated (2011) and actual (2013) expiration of the Jobs and Growth Tax Relief and Reconciliation Act of 2003 (JGTRRA) tax cuts. This setting provides advantages over prior research by using a narrow time frame, which eliminates other non-tax factors that affect dividends, and examines dividend changes that are intended to be temporary to obtain tax benefits rather than changes that lock a firm into a new dividend policy (Hanlon and Hoopes 2014). In our setting, at the end of 2010 and 2012, firms faced significant uncertainty regarding the likelihood and level of dividend tax increases at the start of the following year (i.e., 2011 and 2013), with the potential for dividend taxes to revert from the 15.0% preferential tax rate back to the 39.6% ordinary income tax rate that existed prior to JGTRRA. In December of 2010, Congress enacted a two-year extension of the original JGTRRA tax cuts, leading to the eventual increase of the dividend tax rate from 15.0% to a maximum rate of 20.0% at the beginning of 2013 with the enactment of the American Taxpayer Relief Act (ATRA).

Using this setting, Hanlon and Hoopes (2014) find that firms accelerate dividends into the period prior to the potential (2011) and actual (2013) dividend tax rate increase, consistent with

firms altering payouts in response to tax rate changes. They also find that dividend acceleration is positively associated with a firm's insider ownership, which they interpret as an indication that high insider ownership aligns manager and shareholder interests in maximizing shareholder wealth. However, Hanlon and Hoopes (2014) leave an open question as to whether there is a heterogeneous response to tax rate changes depending on the tax-sensitivity of the firms' shareholders. Hanlon and Hoopes (2014) acknowledge the importance of this issue, but do not investigate it due to data limitations which, as we discuss next, we overcome. Overall, it is unclear if insider owners or institutional investors drive the dividend acceleration decision.

While insiders and individuals are considered tax-sensitive investors, institutions are often considered tax-insensitive. However, recent literature shows that institutions have heterogeneous tax-sensitivities and develops a method to classify institutions as tax-sensitive or tax-insensitive (Blouin, Bushee, and Sikes 2017). Using this measure allows us to overcome the limitation faced by Hanlon and Hoopes (2014) and to examine how responses to tax rate changes vary with the tax status of institutions. Considering the tax-sensitivities of institutions is important in our setting because dividend paying firms exhibit significant ownership by institutional investors in addition to ownership by tax-sensitive individuals and insiders.[2]

Identifying the tax-sensitivities of investors allows us to consider the possible relations between dividend acceleration, institutional ownership, and tax-sensitivity. If the acceleration of dividend payments into tax-favored periods is unlikely to provide significant non-tax benefits to tax-insensitive investors, firms should be less likely to accelerate dividends as the percentage of tax-insensitive ownership increases because these investors receive no direct tax benefits. However, tax-insensitive institutional investors potentially play a dual role in dividend policy. In

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[2] Our sample of dividend paying firms has mean (median) institutional ownership of 50.4% (53.5%). In fact, Grinstein and Michaely (2005) suggest institutions prefer dividend paying firms.

contrast to tax preferences that may not favor dividend acceleration, as external monitors of management (Bushee, 1998; Hartzell and Starks, 2003; Ramalingegowda and Yu, 2012; An and Zhang, 2013), tax-insensitive institutional investors may show no difference in preference compared to tax-sensitive investors. Finally, tax-insensitive institutions may have a stronger preference for the payment of dividends if it attracts new taxable investors to the firm, potentially resulting in positive capital market consequences (e.g., Merton 1987). In fact, Hribar, Savoy, and Wilson (2013) utilize this setting of the JGTRRA tax cut expiration and find that firms that accelerate dividends realize price appreciation in excess of the implied tax savings to investors.

Ignoring tax preferences, institutional investors' influence over dividend policy likely varies based on the extent of monitoring the institution performs (i.e., the type of institution). Further, the ability of any type of institution to influence dividend policy likely also varies with the level of insider ownership. Thus, the relation between institutional investors and dividend policy is unclear, ex ante, regardless of their tax preferences.

Using a research design similar to Hanlon and Hoopes (2014), we first evaluate the effect of institutional investor tax-sensitivity on dividend acceleration. We find that the dividend acceleration previously documented by Hanlon and Hoopes (2014) decreases with tax-insensitive institutional ownership.[3] In other words, firms with higher levels of tax-insensitive ownership are less responsive to dividend tax rates than firms with more tax-sensitive investors. These results suggest that, on average, firms consider the tax-sensitivity of current shareholders in setting dividend policy. This finding extends Hanlon and Hoopes's (2014) finding, that firms consider insiders' taxes when setting dividend policy, to a broader set of investors (i.e., institutions).

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[3] In our study, dividend acceleration in the period prior to the potential or actual tax increase generally refers to both the likelihood and magnitude of special dividend payments during November/December of 2010 and 2012 and the shifting of normal dividends from January 2013 into December of 2012. If an empirical finding diverges between these periods or payment methods, we specifically discuss the difference.

We next examine whether this baseline relation varies by type of institution. As discussed earlier, institutions play a dual role in dividend policy in that they have a monitoring role in addition to their tax preferences. We identify institutions more likely to exercise their monitoring role by using *dedicated* institutional owners (Bushee, 1998, 2001). Dedicated institutions are often considered to be sophisticated investors that play a significant monitoring role in corporate governance (Bushee, 2001; Ramalingegowda and Yu, 2012; An and Zhang, 2013). If dedicated institutions focus more heavily on their monitoring role than on their tax preferences, they should not reduce the likelihood of dividend acceleration relative to tax-sensitive investors. Specifically, the baseline negative relation between tax-insensitive investors and dividend acceleration should not exist for dedicated tax-insensitive institutions if a) the monitoring role of these investors encourages dividends overall (Jensen, 1986), or b) these investors anticipate price appreciation associated with dividend acceleration (Hribar et al., 2013). Consistent with this, we find that the negative association between tax-insensitive institutions and special dividends is concentrated in non-dedicated institutions, while tax-insensitive dedicated institutions are generally not associated with special dividends. Turning to dividend shifting, we find tax-insensitive dedicated (non-dedicated) institutions are positively (negatively) associated with the decision to shift regular dividends into a tax-favored period. In sum, firms are less likely to accelerate dividends as tax-insensitive ownership increases; however, this effect primarily occurs when institutions are less likely to act as monitors (i.e., for non-dedicated institutions).

We then turn to examining how the previously documented relations vary with insider ownership. These analyses answer the call by Blouin, Raedy, and Shackelford (2011) to further explore the relation between institutional ownership and payout policy for firms with high insider ownership. Hanlon and Hoopes (2014) find that dividend acceleration is increasing in

insider ownership, while we find that dividend acceleration is decreasing in tax-insensitive institutional ownership. However, it is unclear if this muting effect of tax-insensitive institutions on dividend acceleration will constrain insiders. If the general muting effect of tax-insensitive ownership holds for insiders, the relation between insider ownership and dividend acceleration identified in Hanlon and Hoopes (2014) should diminish when firms have high levels of tax-insensitive institutional ownership. In contrast, if managers accelerate dividends for self-serving or myopic reasons, or if they believe there are non-tax benefits associated with acceleration, they are likely to accelerate dividends even when tax-insensitive institutional ownership is high.

Our results indicate that increased tax-insensitive institutional ownership has limited impact on insiders' desire to pay special dividends during this period. Thus, while tax-insensitive institutions generally discourage the acceleration of dividend payments into the period prior to a possible tax rate increase, tax-insensitive institutions, on average, do not affect insiders' desire for tax-favored dividends. Interestingly, this result is inconsistent with Jacob and Michaely (2017), who find that taxes have less effect on dividend policy as tax preferences become more heterogeneous. We find that managers' preferences continue to play a dominant role in dividend policy, even with high ownership by investors with different tax preferences than the insiders.

We next examine the effect of tax-insensitive *dedicated* institutions on insiders' ability to accelerate dividends. As stronger monitors, dedicated institutional investors are most likely to curtail managerial myopia (Bushee, 1998). Therefore, if inside owners are overly focused on accelerating dividends for self-serving reasons (i.e., personal tax-benefits), we expect dedicated institutions to mitigate the relation between insider ownership and dividend acceleration. Our results are consistent with this expectation. Although tax-insensitive dedicated institutions do not discourage special dividend payouts on average, they appear to prevent payouts from increasing

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in managerial ownership. Interestingly, this result is inconsistent with Chetty and Saez (2005) who find that dividend payout likelihood is generally increasing in managerial ownership for firms with high institutional ownership. This highlights the importance of our study investigating the effects of different types of institutions on dividend policy.[4]

Finally, we examine the effect of institutional investor tax-sensitivity on share repurchases. On one hand, share repurchases may decrease prior to the tax rate increase as firms substitute dividends for repurchases.[5] On the other hand, institutions may prefer repurchases over dividends due to institutions' informational advantages. The negative relation we document between tax-insensitive institutions and dividend acceleration could reflect these institutions' preferences for repurchases. On average, we find no relation between repurchases and tax rate changes, consistent with Hanlon and Hoopes (2014) and suggesting that our main results are not an artifact of tax-insensitive institutions' preferences for repurchases instead of dividends. However, in contrast to Hanlon and Hoopes (2014), once we account for institutional owners' tax preferences, we find that share repurchases decreased in 2012, suggesting a substitution effect between repurchases and dividends for firms owned by higher levels of individual (non-institutional) shareholders. This type of substitution suggests that firms provided tax benefits to taxable individuals through dividend acceleration while allowing these investors to avoid information disadvantages associated with repurchases. However, we find that this effect reverses for firms with high tax-sensitive institutional ownership. Thus, the tax benefits of repurchases for tax-sensitive institutions constrain firms from reducing repurchases when heavily

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[4] In contrast to many research papers in accounting and finance, we include financial firms in our analysis. Financial firms represent a significant portion of the U.S. economy (e.g., 45.82% of cash dividends in our sample). Also, there is little theoretical reason to believe that financial firms' incentives differ from other firms in this setting. Overall, this design choice does not affect our inferences. We discuss additional analyses related to these firm in Section 5.4.
[5] The capital gains tax rate relevant to repurchases was scheduled to increase (did increase) from 15% to 20% in 2010 (2012). This could encourage firms to accelerate repurchases in conjunction with dividend acceleration.

owned by these investors. Again, this highlights the importance of accounting for heterogeneous shareholder-level taxes when examining the effects of tax rate changes and payout policy.

This study makes several contributions to the literature. We extend our understanding of the effect of heterogeneous tax-sensitivities on firm dividend payout policy and how these tax-sensitivities interact with both the type of institution and insider ownership. First, we find a negative relation between tax-insensitive institutional ownership and dividend acceleration suggesting that shareholder-level taxes affect dividend policy. However, we find that this relation only holds for tax-insensitive *non-dedicated* institutions. This suggests that sophisticated institutions with greater influence, or "voice" (Black, 1992), and longer-term investment horizons (Bushee, 1998, 2001) may anticipate the potential for price appreciation associated with accelerated payouts rather than focusing on their own taxes. To our knowledge, ours is the first dividend policy study accounting for both institution type (e.g., dedicated) and taxation, and our findings highlight the importance of accounting for both institutional type and taxation.

We also find that insiders push for dividend acceleration even with high levels of tax-insensitive ownership, but this effect is mitigated by high levels of tax-insensitive *dedicated* institutional owners. This suggest that, while insiders may anticipate the potential for price appreciation associated with dividend acceleration, they likely also have self-serving interests that are mitigated by dedicated institutional investors. This provides an important extension of Hanlon and Hoopes (2014) who focus on the relation between insiders and dividend acceleration. It also provides an important extension of Chetty and Saez (2005), who focus on the relation between insiders and overall institutional ownership. We find that the type of institutional owner plays an important role, in addition to institutional tax preferences, in the relation between ownership and dividend policy. Further, in contrast to Hanlon and Hoopes (2014), we find that

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the tax rate change affects share repurchases, but the effect varies based on the tax-sensitivity of the institutional owners.

II.   Setting

In 2003, the Jobs and Growth Tax Relief and Reconciliation Act (JGTRRA), also known as the "Bush Tax Cuts," reduced the individual tax rates on ordinary, capital gain, and dividend income. Perhaps the most significant impact of this tax change was the decrease of dividend tax rates from the ordinary rate of 38.6% to the new preferential tax rate of 15%.[6] This change to dividend taxes significantly altered the marginal tax costs associated with the payout of cash to investors. However, JGTRRA contained sunset provisions, meaning these rates were set to expire by December 31, 2010. Immediately prior to this initial (2010) expiration date, there was considerable uncertainty as to whether the tax cuts would receive an extension. While the Obama administration expressed a desire to raise taxes, the U.S. was entering a nascent recovery from the global financial crisis. Gridlock in Congress, combined with general uncertainty about the economy made it difficult for firms and investors to predict whether and to what extent tax rates would increase in 2011 (Hanlon and Hoopes, 2014). Ultimately, the 2010 Tax Relief Act, a two-year extension of the JGTRRA rates, was signed into law on December 17, 2010.

In 2012, the JGTRRA tax rates were again set to expire. Without another act of Congress, the dividend tax rate would increase to the prior high of 39.6% in 2013. Additionally, regardless of the fate of JGTRRA, the Patient Protection and Affordable Care Act of 2010 called for a 3.8% increase in the dividend and long-term capital gain tax rate for high-income taxpayers (the "net

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[6] Capital gains rates decreased from 20% to 15%. The maximum ordinary rate decreased from 38.6% to 35%. Note that the maximum ordinary rate before JGTRRA was 38.6% due to the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) reducing the rate from 39.6% to 38.6%. However, the maximum ordinary rate was set to revert to 39.6% after expiration of JGTRRA and EGTRRA on December 31, 2010.

investment income tax"). Given that the economy was beginning to accelerate by this time, it was widely anticipated that there would be at least some increase to dividend tax rates. A compromise was eventually reached and on January 2, 2013, President Obama signed ATRA into law which resulted in a permanent maximum dividend and long-term capital gain tax rate of 20%, plus the 3.8% additional net investment income tax for high-income individuals.

The enactment of JGTRRA in 2003 represented an opportunity for researchers to evaluate the effects of dividend tax rates on firm payout policies. Initial research finds that firms increase dividends in response to the decrease in dividend tax rates (see, e.g., Chetty and Saez, 2005, 2006; Blouin et al., 2011). However, the period surrounding the initiation of JGTRRA did not present a particularly clean setting to research the effects of the tax decrease on dividend payout policy. For example, Edgerton (2013) argues that dividend payout increases after the 2003 tax-cut coincided with a surge in corporate profits, and finds that share repurchases increased just as quickly as dividends. Yagan (2015) suggests that the increase in dividends around the 2003 tax cut was small in dollar terms and was driven by small private firms. Further, while JGTRRA significantly reduced the tax costs associated with dividend distributions, survey evidence suggests that managerial concerns about making changes to dividend payout policy, which is "sticky," that could constrain cash resources in the future (Brav et al., 2008).

Conversely, the potential and actual *expiration* of JGTRRA and the associated changes to the dividend tax rate provides a powerful setting to evaluate the role of shareholder-level taxes on firms' decisions to alter payout policies. Because the expiration of JGTRRA would result in a tax rate *increase* for dividend income, the expiration of JGTRRA allowed firms to make a *one-time modification* to their payouts through either a shift in the timing of their regular dividend or a special dividend, both of which would not require firms to commit to a long-term modification

to their dividend policy. Additionally, given the short window for legislative action and limited time for firms to make a decision about their payout policy, this setting allows for a cleaner identification of a firm's investors that influence the decision to accelerate dividends.

III.   Literature Review and Hypothesis Development

Hanlon and Hoopes (2014) were the first to utilize the JGTRRA dividend tax increase setting, finding that firms shift the timing of regular dividends and pay special dividends in both the November/December 2010 and 2012 periods. Their finding indicates that firms consider the effect of changing dividend tax rates in determining dividend policy and modify dividend policy in a way that reduces taxes for tax-sensitive insiders. However, it is still unclear whether firms consider the tax preferences of their other shareholders, or instead focus on the tax preferences of insiders, as part of their decision to accelerate dividends during these periods.

While the tax clientele literature argues that investor's desire for dividends and capital gains is often motivated by their tax-sensitivity (e.g., Elton and Gruber, 1970; Auerbach, 1983; Graham and Kumar, 2006; DeAngelo, DeAngelo, and Skinner, 2008; Blouin et al., 2011), it is less clear that firms adjust dividend policy to the tax-sensitivities of their investors. Grinstein and Michaely (2005) find that while tax-insensitive institutions are generally attracted to dividend paying firms, these firms do not increase their dividends when tax-insensitive ownership increases. Alternatively, Desai and Jin (2011) identify "dividend adverse" institutions based on hypothesized tax preferences and find that tax-insensitive ownership affects dividend payout policy. Blouin et al. (2011) also examine the effect of the 2003 JGTRRA dividend tax cuts and find that increases to dividends following the reduction in tax rates are increasing in tax-sensitive ownership. Overall, however, much evidence remains mixed. For example, Edgerton (2013) and

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Floyd et al. (2015) raise questions regarding analyses of the 2003 dividend tax cuts. Jacob and Michaely (2017) examine small private firms and find that the effect of dividend taxes on payout policy decreases as differences in shareholder tax preferences increase. See Allen and Michaely (2003) and DeAngelo et al. (2008) for reviews of the mixed literature on shareholder-level taxes and dividend policy.

In addition to the limitations associated with previous settings, studying the effect of tax-sensitivity on dividend payout policy has been limited by a lack of agreement on how to categorize institutional owners based on tax-sensitivity (Sikes, 2014; Blouin, Bushee, Sikes, 2017). Some research categorizes tax-sensitive ownership as 1 minus the percent of shares held by institutional investors, effectively treating all institutions as tax-insensitive (e.g., Ayers, Lefanowicz, and Robinson, 2003; Dhaliwal, Li and Trezevant, 2003). Other papers broadly classify certain groups of institutions as tax-sensitive or insensitive (see Blouin et al. (2017) for a summary of several alternative groupings, as used in Grinstein and Michaely (2005), Jin (2006), Chyz and Li (2012), and Sikes (2014)). However, Blouin et al. (2017) develop a new measure of institutional tax-sensitivity which is based on tax-motivated trading activity (i.e., institutions' revealed preferences) that allows for variation within categories of institutional investors.[7] This measure enables researchers to use a more powerful proxy for tax-sensitivity in payout policy studies by identifying heterogeneous shareholder-level taxes within groups of institutions.

Therefore, we provide new evidence on the impact of shareholders' tax-sensitivity on dividend payout policy using the periods prior to the expiration of JGTRRA, which offers previously discussed advantages over other settings, combined with the improved measure of

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[7] Brian Bushee makes his categorizations of institutional investors, which we use in this study, available to the public on his website: http://acct.wharton.upenn.edu/faculty/bushee/IIclass.html.

institutional tax-sensitivity developed by Blouin et al. (2017).[8] Tax-sensitive institutions, individuals, and insiders reap the benefit of a reduction in taxes on future cash flows if the firm accelerates payouts. Therefore, firms with larger ownership by these investors should be more likely to accelerate dividends (Blouin et al. 2011; Hanlon and Hoopes 2014).[9] Conversely, tax-insensitive institutions will not realize the benefits of tax savings and should have relatively less reason to encourage firms to accelerate dividends than tax-sensitive investors. We therefore propose the following hypothesis, in the alternative form:

Hypothesis 1: Firms owned by a higher proportion of tax-insensitive investors are less likely to accelerate dividends relative to firms owned by a higher proportion of tax-sensitive investors.

However, it is not clear that this hypothesis will hold, on average. While tax-insensitive institutions, relative to tax-sensitive investors, are less likely to prefer dividend acceleration for tax reasons, it is also possible that these investors anticipate non-tax benefits to dividend acceleration. In a concurrent working paper, Hribar et al. (2013) find that the market rewards firms that accelerate dividends into the period prior to the expiration of JGTRRA with abnormal returns that outweigh the imputed tax savings from these payouts. Similarly, the overall monitoring ability of institutional investors, regardless of their tax preferences, could encourage managers to pay more dividends overall (Jensen, 1986).

Relatedly, it is possible that the relation between tax preferences and dividend acceleration varies based on institution type. Specifically, the monitoring role, or the willingness

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[8] Blouin et al. (2017) note that their measure may not be appropriate for testing *portfolio rebalancing* around dividend rate changes, because tax-sensitive investor rebalancing comes with costs associated with capital gains taxes incurred to rebalance. We examine the effects of the tax-sensitivity of current owners on payout policy, rather than examining rebalancing following rate changes, mitigating this concern.

[9] The actual tax savings to investors of a firm paying a dividend in 2012 versus 2013 equals 8.8% (5% dividend rate change + new 3.8% net investment income tax). However, anecdotal evidence during this period suggests that investors were bracing for increases of over 24.6% if the dividend tax rate increased from 15% back to the original rate of 39.6%.

and ability to focus on non-tax benefits over an institutions own tax preferences, could apply only to a subset of institutions. To better understand the firm's decision to accelerate dividends, we turn to a common proxy for sophisticated external monitors: dedicated institutional investors (Bushee, 1998, 2001).

Generally, institutions have a strong incentive and ability to monitor management (e.g., Coffee, 1991; Huddart, 1993, Gillan and Starks, 2000; Hartzell and Starks, 2003) and can exercise "voice" to influence managerial decisions (Black, 1992). However, institutional investors vary in their investment horizons and involvement in the managerial decision-making process. Bushee (1998, 2001) develops a classification of institutional owners based on their trading strategies and portfolio holdings.[10] Bushee (1998) finds that his class of "dedicated" institutional investors act more as "owners" than as "traders" and hold firms for longer periods of time, developing stronger relationships with firm management. These institutions represent sophisticated investors that provide a robust monitoring role for firms, reducing myopic investment decisions by management and focusing firms on longer-term value (Bushee, 1998, 2001). Additional research also suggests that dedicated institutional investors play an important role in corporate oversight (Hartzell and Starks, 2003; Ayers, Ramalingegowda, and Yeung, 2011; Ramalingegowda and Yu, 2012; An and Zhang, 2013).

Examining the differential effect of tax-insensitive dedicated institutional owners on firms' decision to accelerate dividends during this period provides insight into the ex-ante anticipation of non-tax benefits from dividend acceleration (e.g., price appreciation; Hribar et al. 2013). Unlike tax-sensitive owners, tax-insensitive dedicated institutions will not realize the

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[10] Bushee (2001) classifies institutions as either dedicated, transient, or quasi-indexers. Transient institutions and quasi-indexers are treated as non-dedicated for our study. As with tax-sensitive and tax-insensitive institutions, Brian Bushee makes his classification of dedicated, transient, and quasi-indexer institutions available on his website.

immediate tax benefits of an accelerated dividend; but, as sophisticated monitors, they may

anticipate the potential non-tax benefits of abnormal price appreciation associated with dividend

acceleration. If dedicated tax-insensitive institutional ownership is positively associated with

dividend acceleration, it may indicate that these institutions anticipated the positive market

reaction to dividend acceleration during this period, regardless of the direct implications for their

own taxes. Conversely, if tax-insensitive *non-dedicated* owners are less likely to monitor firms

or to consider the market's reaction to dividends, firms may be more likely to focus on the actual

tax preferences of these investors in their decision to accelerate dividends. Additionally, if tax-

insensitive non-dedicated owners, who by definition trade more frequently than dedicated

institutions, focus on the tax consequences of a dividend, they may be more likely to divest

themselves of firms that accelerated dividends, appearing to ignore their tax needs, thus limiting

management's desire to accelerate dividends. Although we expect the relation between tax-

sensitivity and dividend policy to vary based on the type of institution, the ultimate direction of

the effect is unclear. As such, we pose the following non-directional hypothesis:

Hypothesis 2: The effect of institutional ownership on dividend acceleration differs between
dedicated and non-dedicated institutional investors.

Hanlon and Hoopes (2014) find that the likelihood and magnitude of dividend

acceleration in 2011 and 2013 increases with insider ownership. They suggest that this indicates

that insiders' motivations are aligned with shareholders. However, the literature suggests that

insiders' decisions are often strongly motivated by their personal taxes, even if those decisions

are not always best for the firm or the manager (e.g., Jin and Kothari, 2008; Hanlon, Verdi, and

Yost 2018; Yost, 2018; Goldman and Ozel 2019). Blouin et al. (2011) find that corporate

insiders, but not other individuals, were most likely to rebalance their portfolios to maximize

after-tax returns following the 2003 tax rate reduction under JGTRRA. Likewise, Brown et al. (2007) find that insiders were particularly influential among firms initiating dividends after the enactment of JGTRRA. More generally, Chetty and Saez (2005) find that firms with greater insider ownership are more sensitive to investor-level dividend tax rate changes.

This poses a question about whether firms accelerated dividends due to managers' tax preferences without fully accounting for other shareholders' tax preferences. Managers play a dual role in this setting as they are responsible for determining dividend policy and are also investors that have large stockholdings, frequently with inadequate diversification (Blouin et al., 2011; Yost, 2018). If managers myopically focus on their own tax benefits, they likely accelerate dividends in our setting without regard for the tax preferences of other shareholders. However, to the extent this behavior is myopic or self-serving, sophisticated institutional investors, especially tax-insensitive institutions, may constrain this behavior. However, this result it not certain to hold. If managers accelerate dividends to obtain non-tax benefits (e.g., Hribar et al. 2013), there is no reason to believe that institutional owners would constrain this behavior. As such, we propose the following null hypothesis:

Hypothesis 3a: The positive effect of insider ownership on accelerated dividends does not vary with increased tax-insensitive institutional ownership.

We next explore whether the effect of tax-insensitive institutions on the relation between insider ownership and dividend policy varies for dedicated versus non-dedicated institutions, given the previously described differences between these investors. While we expect dedicated institutions to provide better monitoring, these institutions should only constrain managers if they view managers' as being overly aggressive in accelerating dividends. Because non-dedicated institutions have less of a monitoring role, it is not clear that they will have any effect

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on the relation between insider ownership and dividend policy. Therefore, we pose the following

hypothesis in the null form:

Hypothesis 3b: The effect of tax-sensitive institutions on the relation between insider ownership and dividend policy does not vary based on whether the tax-insensitive institutions are dedicated.

IV.   Sample Selection and Research Design

4.1. Sample Selection – Special Dividends

Following Hanlon and Hoopes (2014), we obtain monthly dividend data from CRSP and

retain all firm-distribution observations from January 1991 through December 2017.[11] For our

main analysis of special dividend acceleration, we follow Hanlon and Hoopes (2014) and keep

only observations with share code 10 or 11. Thus, we eliminate all securities that represent

Mutual Funds, American Depository Receipts, closed-end funds, and firms incorporated outside

of the United States. These firms have divergent dividend characteristics and may not produce

the qualified dividends relevant for this study, because only qualified dividends were eligible for

the reduced JGTRRA rates (Hanlon and Hoopes, 2014). REITs are also excluded from the main

sample because their dividends are not qualified and because of the unique timing of the taxation

of their dividends. Unlike traditional dividends which are taxed when paid, REIT dividends

declared in October, November, or December, but not paid until January, are taxed in the year of

declaration.[12] Finally, we eliminate any observations within the utilities industry (SIC 4900

through 4949).[13] This results in a sample of 162,593 firm-distributions.

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[11] 1991 represents the first date of available for institutional tax-sensitivity classifications. To ensure that we are not picking up spurious relationships because of the high statistical power in our long window special dividend tests, we re-perform all primary special dividend tests using only data from 2004 through 2017. Results are unchanged.
[12] See IRS Publication 550.
[13] Utilities, like financials, are subject to regulations that may limit their ability to accelerate dividends but likely face dividend acceleration incentives similar to other firms. However, utilities represent a far smaller segment of the U.S. economy than financial firms. CRSP data between 2010 and 2017 shows that utilities represent only 1.8% of all firms (untabulated).

We then utilize the Compustat quarterly database to obtain firm-level control variables, resulting in 154,298 firm-distributions with the necessary data. To evaluate institutional ownership, we utilize 13-F filing data from Thomson Reuters and classify institutions as tax-sensitive [*TSI*], tax-insensitive [*TII*], tax-insensitive and dedicated [*TII_DED*], or tax-insensitive and not dedicated [*TII_NOTDED*] as coded by Brian Bushee.[14] 112,238 firm-distributions remain after requiring the relevant institutional ownership data. To assess the impact of insider ownership on firm decisions, we require ExecuComp insider holdings data. This results in 78,521 firm-distributions with a subset of 62,637 firm-distributions with both insider ownership and institutional ownership data. Table 1, Panel A displays the sample selection.

INSERT TABLE 1 HERE

Table 2, Panel A presents descriptive statistics and Panel B presents Pearson correlations between variables utilized in the tests of special dividend payouts. Firm-distributions exhibit an average tax-insensitive (tax-sensitive) institutional ownership of 44.7% (6.9%). Tax-insensitive ownership breaks into 39.6% non-dedicated and 5.0% dedicated. Among firm-distributions with insider ownership data, insiders have 3.9% ownership, on average. Finally, 36.8% of our sample is comprised of financial services institutions. For the full sample of firm-distributions, institutional ownership measures are generally negatively correlated with the likelihood and magnitude of special dividend payments, while insider ownership is positively correlated with the likelihood and magnitude of special dividends. However, the focus of this study is the interactions with these ownership measures and the periods of November/December of 2010 and 2012. Thus, we defer discussion of results to the multivariate analyses below.

INSERT TABLE 2 HERE

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[14] http://acct.wharton.upenn.edu/faculty/bushee/IIclass.html accessed in May of 2018.

4.2. Sample Selection – Dividend Shifting

To examine the cross-sectional differences among firms shifting dividends prior to JGTRRA's expiration, following Hanlon and Hoopes (2014), we first identify firms that paid a regular dividend in either January of 2010 or 2012. These periods act as a control to identify firms likely to regularly pay a dividend in January. This results in 3,027 firm-distributions between 2010 and 2013. Next, out of this set of firms, we identify firms that paid a dividend in December 2010, but not January 2011 (December 2010 shifters) and firms that paid a dividend in December 2012, but not January 2013 (December 2012 shifters). When analyzing the data, we find that only 8.2% of potential shifters actually shifted payment from January to December in 2010, compared to 46.3% in 2012. Therefore, in contrast to Hanlon and Hoopes (2014), we focus the sample on December 2012 shifters [*SHIFT*], resulting in a sample of 404 firms.

Table 1, Panel B presents sample selection results. Table 3, Panel A displays descriptive statistics and Panel B presents the Pearson correlations between variables utilized in the cross-sectional tests of shifting firms.[15] These descriptive statistics represent the sub-sample of firms that generally pay dividends in January, following Hanlon and Hoopes (2014). On average, shifters are smaller firms with higher ROA and cash. This table shows that *TII_DED* (*TII_NOTDED*) is positively (negatively) correlated with *SHIFT* (0.1208 versus -0.1257 respectively). This provides initial evidence on hypothesis 2, suggesting that tax-insensitive dedicated investors encourage shifting, while the opposite is true of other tax-insensitive dedicated investors. We defer further discussion to the multivariate analysis.

<center>INSERT TABLE 3 HERE</center>

4.3. Research Design

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[15] In our final sample, 50.4% of firms shift their dividends. This differs from the 46.3% reported above because we lose some observations when requiring control variables, as detailed in Table 1, Panel B.

To test our research questions regarding the likelihood and magnitude of special dividend payments, we estimate the following linear probability model, extending Hanlon and Hoopes (2014):[16]

$$SpecialDiv_{it} = \beta_1 OWNERSHIP_{it} + \beta_2 NOVDEC2010_{it} + \beta_3 NOVDEC2012_{it} +$$
$$\beta_4 NOVDEC2010 * OWNERSHIP_{it} + \beta_5 NOVDEC2012 * OWNERSHIP_{it} + \beta_6 CASH_{it} +$$
$$\beta_7 ASSETS_{it} + \beta_8 ROA_{it} + \sum MonthFE + \sum YearFE \qquad (1)$$

where *NOVDEC2010* (*NOVDEC2012*) represents an indicator variable for firm-months during November and December prior to the potential (actual) dividend tax-rate change. *OWNERSHIP* represents the independent variables of interest for each research question. β_4 and β_5 represent the interactive effect of the variables of interest on the likelihood and magnitude of payouts during the respective November/December period. A positive (negative) coefficient indicates that the variable of interest increases (decreases) the likelihood/magnitude of special dividend payout in November or December of 2010 or 2012.

SpecialDiv is either a) an indicator variable set equal to 1 for the presence of a special dividend and 0 otherwise, or b) the magnitude of the special dividend scaled by the total dividends paid in the same year.[17] *CASH*, *ASSETS*, and *ROA* are used to control for the firm's size and ability to pay special dividends. Additionally, larger firms are more likely to have higher levels of institutional ownership. We control for month and year fixed effects and cluster standard errors by firm. See Appendix A for a comprehensive list of variable descriptions

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[16] As with Hanlon and Hoopes (2014), we use a linear probability model to aid with interpretation of results, particularly as it relates to interaction variables.

[17] This differs slightly from the Hanlon and Hoopes's (2014) magnitude calculation which scales the special dividend by the total dividends paid by the firm in the given *month*. Using Hanlon and Hoopes's (2014) measure of magnitude in our sample mechanically generates results similar to the likelihood of a special dividend. This occurs because special dividends are large relative to regular dividends, leading to a correlation of 94.3% between Special (indicator) and Special (magnitude), calculated using Hanlon and Hoopes's (2014) methodology.

To test our research questions related to the firm's decision to shift dividends into December 2012, we estimate the following model, extending Hanlon and Hoopes (2014):

$$SHIFT_i = \gamma_1 OWNERSHIP_i + \gamma_2 CASH_i + \gamma_3 ASSETS_i + \gamma_4 ROA_i \tag{2}$$

SHIFT represents an indicator variable set to 1 if a firm shifted their regular dividend from January 2013 into December 2012 and 0 otherwise. *OWNERSHIP* is a placeholder for all independent variables of interest based on our research questions.[18] Reported statistics are robust to heteroscedasticity in the standard error terms, but are not clustered because we only have one observation per firm.

V.   Results

5.1. Hypothesis 1

To analyze hypothesis 1, examining whether institutional investors' tax preferences affect firms' decision to pay special dividends, we begin by examining the decision to pay special dividends. We first modify equation (1) to include both tax-insensitive (*TII*) and tax-sensitive (*TSI*) institutional ownership separately as the *OWNERSHIP* measures.[19] Because we include both tax-insensitive and tax-sensitive institutions, non-institutional (i.e., taxable retail) investors comprise the reference group in the model. That is, our coefficients on *OWNERSHIP* variables must be interpreted relative to the reference group, taxable retail investors. Table 4, Panel A

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[18] To obtain control variables, given the multiple firm-distributions that could be used in the shifting tests, we separate the sample into 2 subsets. If a firm shifted its dividend into December 2012, we use the control variables from that firm-distribution observation. If a firm did not make a distribution in December of 2012, we use the most recent available observation prior to December of 2012.

[19] While our focus is on tax-insensitive ownership, we separate tax-sensitive institutional owners from the baseline reference group of tax-sensitive individuals because institutional and individual investors likely have differing effects on firm responses to the tax rate increases we examine.

displays results from this regression.[20] Columns 1 and 2 replicate the results of Hanlon and

Hoopes (2014) in our sample, indicating that firms were significantly more likely to pay specials

in November/December of 2010 and 2012. Columns 3 and 4 include tax-insensitive and tax-

sensitive institutional ownership and their interaction with the November/December of 2010 and

2012 periods. We find that, for each additional 1% of tax-insensitive ownership in

November/December 2010 (2012), there is a 0.108% (0.097%) decrease in the likelihood of a

special dividend and a 0.083% (0.087%) decrease in the magnitude of the special dividend

($p<0.01$). These effects fully offset the baseline increased likelihood and magnitude of special

dividends during the November/December 2010 and 2012 periods (0.1078 - 0.1075 = 0.0003,

p=0.99, for 2010 and 0.1173 - 0.0967 = 0.0206, p=0.30, for 2012). This suggests that, on

average, firms consider the tax-sensitivity of investors when formulating their dividend payout

policy and the tax benefits of paying a special dividend are highest when tax-insensitive

ownership is low (and taxable ownership is high), supporting hypothesis 1.

<div align="center">INSERT TABLE 4 HERE</div>

In contrast to our results for tax-insensitive institutions, our results show that tax-

sensitive institutional ownership does not have an incremental effect on the likelihood and

magnitude of dividend payouts during November/December 2010 and 2012. This suggests that

the effect of tax-sensitive institutional ownership on the decision to pay dividends does not differ

from that of non-institutional (individual) owners. This is not surprising given that the tax

preferences of tax-sensitive institutions and taxable investors are likely similar.

We next test hypothesis 1 using the sample of potential dividend shifting from 2013 to

2012. Table 4, Panel B displays the results from the cross-sectional regression using equation (2)

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[20] Variance Inflation Factors (VIFs) are below 8 (untabulated), mitigating concerns of multicollinearity.

to analyze the effects of tax-insensitive ownership on a firm's decision to accelerate regular

dividends from January 2013 into December 2012.[21] The results qualitatively mirror those from

the test of special dividends, supporting hypothesis 1. Of the sample of traditional January

dividend payers, a 1% increase in tax-insensitive ownership is correlated with a 0.23% decrease

in the likelihood of shifting dividends. Given that the standard deviation of tax-insensitive

ownership is 24.60%, this indicates that a one standard deviation increase in tax-insensitive

ownership results in a 5.66% decrease in the likelihood of shifting dividends, which is

economically significant compared to the mean percentage of firms that shift dividends of

50.04% (i.e., an 11.3% decrease in likelihood of shifting). The negative association between tax-

insensitive ownership and dividend shifting, while not necessarily surprising, is certainly

interesting given that firms in this sample already plan to pay a dividend (e.g., issues related to

monitoring of free cash flows should not play a role in the decision), only the timing of the

dividend payment changes.

5.2. Hypothesis 2

We investigate the possibility that different types of institutional investors have divergent

impacts on the decision to accelerate dividends based on their monitoring role. If certain types of

institutional investors expect capital market benefits from broadening their investor base to

additional tax-sensitive investors (e.g., Merton, 1987), or if their monitoring role broadly

encourages firms to pay out their free cash flow (Jensen, 1986), there may be differences in

dividend acceleration across different types of institutions. In a concurrent working paper, Hribar

et al. (2013) find that cumulative abnormal returns to firms accelerating dividends exceed the

implied tax benefits associated with dividend acceleration during this period, confirming the

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[21] Again, in contrast to Hanlon and Hoopes (2014), we focus on 2012 because the substantial majority of dividend shifting occurs in this time period and examining a single year provides a cleaner test.

existence of non-tax benefits for the firm's long-term investors.

Tax-insensitive dedicated institutions provide a proxy for long-term investors unlikely to obtain tax benefits from dividend acceleration, but able to anticipate non-tax benefits such as price appreciation. Additionally, dedicated institutional investors have greater ownership stakes in firms and a longer investment horizon, enhancing their role as corporate monitors (Bushee, 1998). We test whether these investors differentially affect the payment of special dividends by modifying equation (1) to partition tax-insensitive institutional investors between dedicated (*TII_DED*) and non-dedicated (*TII_NOTDED*) investors. As with Table 4, the reference group in this table is all non-institutional (i.e., taxable retail) investors. Panel A of Table 5, Columns 1 and 2, display the effects of *TII_DED* and *TII_NOTDED* on the likelihood and magnitude of special dividend payouts in the November/December 2010 and 2012 periods. Non-dedicated institutions (quasi-indexers and transient institutions) are significantly negatively related with the likelihood and magnitude of a special dividend payout in November/December of both 2010 and 2012 ($p<0.01$), consistent with the full sample results for tax-insensitive institutional investors. For each additional 1% ownership by tax-insensitive non-dedicated institutions in 2010 (2012), there is a 0.12% (0.11%) decrease in the likelihood of a special dividend during these periods. In contrast, tax-insensitive dedicated institutions exhibit an insignificant, yet positive, interaction with the November/December 2010 and 2012 periods.[22] Overall, we find that the average effects of tax-insensitive institutional ownership on special dividends, presented in Table 4, are concentrated in non-dedicated investors.

<div align="center">INSERT TABLE 5 HERE</div>

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[22] Given the very limited ownership by tax-sensitive dedicated institutions in our sample (and broadly, e.g., Blouin et al., 2017), we focus on the results of tax-insensitive dedicated versus non-dedicated institutional ownership and do not split tax-sensitive institutions by type.

These results suggest that tax-insensitive dedicated institutional ownership does not decrease special dividends during this period. That is, these investors have no effect on the elevated level of special dividends during this period (indicated by the positive coefficients on the main effects of *NovDec2010* and *NovDec2012*). However, there are fewer dedicated institutional owners than quasi-indexers and transient institutions. This results in a significant number of firm-distribution observations with 0 reported tax-insensitive dedicated institutional ownership, potentially biasing against finding results. In an untabulated test of 74,451 firm-distributions with non-zero tax-insensitive dedicated ownership, we find that the likelihood and magnitude of special dividends during November/December 2010 and 2012 is *increasing* in tax-insensitive dedicated ownership (two-tailed p=0.022 and p=0.089 respectively). This provides some limited evidence that these investors potentially encourage the payment of special dividends to obtain non-tax benefits (e.g., capital appreciation).

Table 5, Panel B provides additional evidence that tax-insensitive dedicated institutions anticipate the positive market implications of dividend acceleration despite the fact that these investors do not obtain direct tax benefits from dividend acceleration. Here, we present the results of a modified version of equation (2) which examines the effect of tax-insensitive dedicated and non-dedicated institutional ownership on the likelihood of shifting regular dividends into December of 2012. The results show a significant difference between the effects of tax-insensitive dedicated and non-dedicated institutional investors. Similar to the special dividend tests, tax-insensitive non-dedicated institutions are negatively associated with the likelihood of shifting a dividend. Conversely, tax-insensitive dedicated institutions are positively associated with the likelihood of shifting a regular dividend. For every additional 1% of tax-insensitive dedicated institutional ownership, firms are 1.8% more likely to shift dividends from

January 2013 into December 2012. Compared to special dividends, the opportunity costs are likely significantly lower for firms to shift regular dividends. Thus, while tax-insensitive dedicated institutions are indifferent to special dividends, they appear to push for shifted dividends to realize the non-tax benefits of price appreciation from additional market interest.[23] Overall, results support hypothesis 2; institution type affects the relation between institutional ownership and dividend acceleration.

5.3. Hypothesis 3

Next, we examine whether increased tax-insensitive institutional ownership mitigates the positive interaction between insider ownership and the likelihood/magnitude of special dividend payments documented by Hanlon and Hoopes (2014). Hanlon and Hoopes (2014) acknowledge that there may be an agency issue associated with insiders' myopic focus on their own tax benefits. They offer a preliminary test by interacting the negative value of firms' G-index (Gompers, Ishii, and Metrick, 2003) with the November/December 2010 and 2012 periods and find a positive interaction, indicating that firm's with stronger shareholder protections were more likely to pay dividends.[24] However, this test does not capture an interaction between insider ownership and governance characteristics, or between insiders' tax preferences compared to other shareholders' tax preferences, leaving an open question about whether managers accelerate dividends based on personal preferences or the preferences of the overall shareholder base.

In Table 6, Panel A, we modify equation (1) to evaluate the interaction between ExecuComp insider ownership (*INSIDER*) and the likelihood of special dividend payments

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[23] As discussed earlier, monitoring related to free cash flows is less likely to play a role in dividend shifting, because the dividends are expected to be paid out either just before or just after the tax rate change. Therefore, effects around dividend shifting are likely attributable to the anticipation of price appreciation (i.e., Hribar et al., 2013).

[24] The G-Index is calibrated so that higher values equal lower quality governance. Thus Hanlon and Hoopes (2014) invert the value to ease interpretation.

during November/December 2010 and 2012.[25] Column 1 shows the interaction results for the full

dataset with available institutional ownership, replicating Hanlon and Hoopes (2014) and

providing a baseline for the tests of our research question.[26] Insider ownership is positive and

significantly associated with the likelihood of paying a special dividend in November/December

of 2010 and 2012. In order to examine our research question regarding the effect of tax-

insensitive institutions on the relation between inside ownership and special dividends without

turning to a three-way interaction term, we split the sample based on the level of tax-insensitive

ownership and compare the coefficients on the interaction between November/December 2010

and 2012 and insider ownership across subsamples. If tax-insensitive institutional ownership

deters managers from paying special dividends, the magnitude of the interaction coefficients

should decrease for high tax-insensitive institutional ownership samples. Columns 2 and 3

display the results of the regression split on the bottom and top terciles of tax-insensitive

institutional ownership. In these columns, the reference group is all non-insider ownership,

bearing in mind that this ownership consists of relatively low (high) tax-insensitive institutional

ownership in column 2 (3). The positive interactions between insider ownership and

November/December 2010 and 2012 remain significant in the top tercile of tax-insensitive

institutional ownership ($p<0.05$, one-tailed) and ($p<.0.01$, one-tailed) respectively.

<center>INSERT TABLE 6 HERE</center>

We perform a Chow test of the statistical relationship between the coefficients in the

bottom and top tercile of tax-insensitive institutional ownership. For the test of November/

December 2012 interaction, there is no evidence of a statistical difference between the bottom

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[25] For brevity, we only report effects on the likelihood of a special dividend. Inferences are unchanged when replacing the dependent variable with magnitude of special dividend payouts.

[26] Because the positive relationship between insider ownership and the periods before the tax rate change is identified in Hanlon and Hoopes (2014), we report one-tailed p-values for the *INSIDER* coefficients.

and top tercile and weak evidence of a statistical difference for November/December 2010. As such, we fail to reject null hypothesis 3a. Overall, we find little evidence of a difference in the effect of insider ownership on special dividends across tax-insensitive institutional ownership deciles, suggesting that insiders' tax preferences dominate those of outside investors.

To put these results in perspective, Panel B of Table 5 displays descriptive statistics for the levels of tax-insensitive institutional ownership. The average level of tax-insensitive ownership for the full sample with data for insider ownership is 59% with a range of ownership between 0% through 97%. At the top tercile, the average level of tax-insensitive institutional ownership is 78%, with a range between 68% and 97%. These results suggest that insiders were able to push for payment of a tax-favored special dividend when a significant majority of current owners were tax-insensitive. However, this could also suggest that sophisticated tax-insensitive institutions understand the benefits of paying special dividends to appear responsive to shareholder needs, potentially attracting new shareholders and delivering capital markets benefits to the firm (e.g., Merton 1987). We explore this possibility in more detail below (see Table 8).

We next turn to the sample of firms shifting dividends from January 2013 to December 2012. Table 7 displays the interactive effect between insider ownership and the two categories of institutional tax-sensitivity.[27] As in Hanlon and Hoopes (2014), we find that insider ownership is positively associated with a firm's likelihood of shifting regular dividends into December 2012. Further, dividend shifting increases in insider ownership for both tax-sensitive and tax-insensitive institutional owners. Thus, results mirror those in Table 6, suggesting that insiders' ability to push for shifted dividends is uninhibited by tax-insensitive institutional ownership.

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[27] Unlike the interactive effects in other models between continuous and indicator variables, these interactions are between two strictly positive continuous variables. Analyses of VIFs suggest there is multicollinearity. Therefore, Table 7 (and later Table 9) utilize centered continuous variables, reducing the VIFs to less than 2.

It is possible that insiders, rather than accelerating dividends for personal tax benefits, anticipate the potential for non-tax benefits to dividend acceleration (e.g., price appreciation) through purchases by outside investors (Merton, 1987; Hribar et al., 2013). Thus, the results in Table 6 and 7 may indicate that institutional investors do not constrain managers because of the non-tax benefits associated with dividend acceleration. Given our previous assertion that tax-insensitive *dedicated* institutions act as monitors that focus on the non-tax benefits of dividend acceleration, we next examine the effect of insider ownership on the decision to pay special dividends after partitioning between the bottom and top tercile of tax-insensitive dedicated institutional ownership. If tax-insensitive dedicated institutions' exercise their role as monitors, we expect that tax-insensitive dedicated institutions will constrain the effect of insider ownership if insiders are myopically focused on their own tax benefits. Conversely, if insiders appropriately anticipate the non-tax benefits of dividend acceleration, then we do not expect tax-insensitive dedicated institutions to constrain insiders.

INSERT TABLE 8 HERE

Table 8, Panel A displays the outcomes of a modified equation (1) examining the interaction between insider ownership and the November/December 2010 and 2012 periods. In these columns, the reference group is all non-insider ownership, bearing in mind that this ownership consists of low (high) tax-insensitive dedicated institutional ownership in column 2 (3). Results indicate that, within the bottom tercile of tax-insensitive dedicated institutional ownership, the likelihood of a special dividend increases with insider ownership (p<0.01). However, the insider effect on the likelihood of a special dividend during these periods weakens to the point of statistical insignificance when examining the top tercile of tax-insensitive

dedicated institutional ownership. This suggests that tax-insensitive dedicated institutional owners constrain insiders' ability to accelerate special dividends during these periods.

In Table 9, we modify equation (2) to evaluate the effect of institutional ownership on insiders' ability to increase the likelihood of shifting dividends into December 2012. We split the institutional ownership between tax-insensitive dedicated, tax-insensitive non-dedicated, and tax-sensitive. The insider effect on dividend shifting is not mitigated by either tax-sensitive or tax-insensitive *non-dedicated* institutions. However, similar to the results for special dividends, tax-insensitive *dedicated* ownership constrains insiders' ability to shift dividend payments.[28] Thus, we can reject the null hypothesis 3b, finding that the relation between insider ownership and dividend policy varies with the type of institutional ownership.

INSERT TABLE 9 HERE

Taken together, tests of hypothesis 3 suggest that insider ownership plays a role in accelerating dividends around tax rate changes and that tax-insensitive institutions, which do not have a tax preference, do not constrain this acceleration (hypothesis 3a). This could reflect either excessive tax-motivated dividend payments by insiders, or that insiders accelerate dividends given an ex-ante knowledge of non-tax benefits associated with the acceleration. The tests of hypothesis 3b suggest that tax-insensitive *dedicated* institutions mitigate the insider effect on dividend acceleration. This indicates that insiders overweight their tax-benefits when evaluating the tax and non-tax benefits of dividend acceleration to shareholders. Dedicated institutions appear to exercise their monitoring role to limit insiders' ability to accelerate dividends.

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[28] In tests of *INSIDER* plus interactions with *TII_DED*, *TII_NOTDED*, and *TSI* presented at the bottom of Table 9, *INSIDER+INSIDER*TII_DED* is not significantly different from zero (p=0.45) while the other sums are significantly greater than zero (both p<0.01)

VI.   Additional Analyses

6.1 Additional Analysis – Financial Services Industry

We also use our research setting to examine potential differences between the payout policies of financial and non-financial firms. While financial firms are often excluded from accounting and finance research, these firms represent a significant portion of the U.S. economy. Like non-financial firms, financial firms (SIC 6000 to 6999) likely consider tax consequences to owners when setting dividend policy. In untabulated tests, we modify equations (1) and (2) to examine potential differential relations between financial firms and the likelihood and magnitude of dividend acceleration.

Our findings suggest that financial firms were just as likely to increase special dividends during November and December of 2010 as other non-financial firms. However, financial firms were less likely to accelerate dividends during November and December of 2012, possibly suggesting that these firms faced regulatory backlash or capital constraints due to dividend acceleration in 2010. In November/December of 2010 (2012), 19 out of 63 (22 out of 126) special dividend payments came from financial institutions, resulting in $1.27 ($2.05) billion of special dividends compared to $4.22 ($7.64) billion paid by non-financial firms.

We also evaluate the differential effect of financial firms on the likelihood of shifting dividends from January 2013 into December 2013. In untabulated tests, we find that financial firms are just as likely as non-financials to shift dividends during this period. Shifting of dividends that were already going to be paid has a limited impact on financial firms' capital adequacy ratings, explaining the lack of a difference between financial firms and other firms. Untabulated analysis of shifted dividends indicates that, in our sample, financial firms shifted $1.5 billion of regular dividends into December of 2012. This resulted in $132.0 million in actual

taxes saved (8.8% savings) and $426.0 million in potential taxes saved if the dividend tax rate increased to the personal rate of 43.4% (39.6% + 3.8%). These results suggest that financial firms also pay attention to dividend taxes when setting dividend policy. Overall, financial services firms need not be broadly excluded from research studies, but rather only need to be excluded when a clear reason for a difference exists.[29]

6.2 Additional Analysis – Share Repurchases

Finally, we examine the effect of institutional ownership on share repurchases during November/December of 2010 and 2012. Dividends and share repurchases are two methods for distributing capital to investors. Thus, on one hand, an acceleration in dividends may substitute for and reduce repurchases. However, while dividend payouts are proportionate across all investors, share repurchases require investors to actively sell shares in order to realize capital gains in a timely manner (i.e. before the capital gains tax rate increase in 2013). In general, sophisticated institutions are more likely to benefit from repurchases because of their information advantage (Brennan and Thakor 1990). Thus, on the other hand, certain investors may still prefer repurchases. From a tax perspective, in all cases, repurchases are a tax-favored method for shareholder distribution because the shareholder is allowed to offset part of the distribution with the original cost basis of the stock. Thus, the likelihood of share repurchases during the "dividend acceleration" periods may vary by ownership structure.

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[29] We also evaluate the dividend declaration patterns of real estate investment trusts (REITs) in the fourth quarter of 2012. REIT investors in the top tax bracket in 2012 face an increase in the top marginal rate (REIT dividends are not qualified and thus subject to the ordinary tax rate) plus the new net investment income tax. REIT dividends declared in the fourth quarter, but paid in January, are taxed in the year of declaration. Thus, REITs potentially face the lowest cost of "dividend acceleration" because they can accelerate dividends by simply declaring their traditional January dividend in the prior quarter. However, we find no clear evidence of dividend acceleration by REITs in 2012. This either indicates that REIT investors are not in the top marginal tax bracket (e.g., Graham and Kumar, 2006) or that REITs are subject to regulatory constraints preventing this shifting.

Table 10, column 1, displays results of the likelihood of a repurchase (1 if a repurchase occurs, 0 otherwise) for firm-distribution observations during the fourth calendar quarter of 2010 and 2012.[30] Consistent with Hanlon and Hoopes (2014), we find no significant difference in the overall likelihood of a share repurchase during these periods. However, column 2 displays results when controlling for the interactive effects of tax-sensitive and tax-insensitive institutional ownership. Here, the variables *NovDec2010* and *NovDec2012* represent the likelihood of a share repurchase during the months prior to the potential and actual increase to the capital gains tax rate when owned by non-institutional investors. We find a baseline negative association between repurchases and the November/December of 2012 time period ($p<0.05$), providing evidence of a substitution effect (fewer repurchases in the dividend acceleration period) when owners are less-sophisticated, non-institutional shareholders. We find that this effect reverses when a firm is owned by tax-sensitive institutional investors ($p<0.05$), suggesting that these investors prefer repurchases as a tax-favored distribution method and actually encourage repurchases as an additional method for firms to accelerate distributions prior to the tax rate increase.[31] F-tests also indicate that tax-insensitive institutions offset the general substitution relation between repurchases and dividends documented non-institutional investors.

VII.   Conclusion

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[30] Because repurchase data come from Compustat, we have data by quarter, not month. We exclude non-calendar-quarter-end firms. The sample includes only firms in our main sample, but is limited to 2004 to 2015 because repurchase data begins in 2004 and institutional ownership date ends in 2015. Following Hanlon and Hoopes (2014) we match the quarterly data to the firm-distributions from our main tests and control for month and year fixed effects.

[31] We perform similar tests for the overall magnitude of share buybacks, scaled by assets. Results are statistically insignificant, with additional analysis suggesting that those firms that regularly buy-back shares continued to do so during this period at a similar rate to other periods. This suggests that the magnitude of the change in repurchases was small, and dividends were the main method for distribution of cash prior to the JGTRRA expiration.

33

Using the setting presented by the potential (2010) and actual (2012) dividend tax rate hike following the expiration of JGTRRA, we examine the effect of the investors' tax-sensitivity on firms' decisions to accelerate dividends into a tax-favored period. We find that dividend acceleration is negatively associated with tax-insensitive institutional ownership. This provides evidence that firms consider shareholder-level dividend taxes when setting dividend policy.

We find that this negative relation is concentrated in tax-insensitive *non-dedicated* institutions, whereas tax-insensitive *dedicated* institutions show no differential preferences, relative to tax-sensitive investors, for special dividends acceleration and appear to encourage dividend shifting into tax-favored periods. Because these shareholders will not realize direct tax benefits associated with accelerated dividends, the positive effect indicates that tax-insensitive dedicated investors anticipate potential positive market reaction for firms accelerating dividends. Thus, our results suggest that both investor taxes and type affect dividend policy.

Further, we find evidence that tax-insensitive institutional ownership, overall, does not limit insiders' push for dividend acceleration. However, we find that the likelihood of dividend acceleration no longer increases in managerial ownership in the presence of tax-insensitive *dedicated* ownership. This indicates that tax-insensitive dedicated institutions monitor firm payout policy and mitigate potential self-serving behavior by insiders.

Finally, we find some evidence that the likelihood of share repurchases during the "dividend acceleration" period around the JGTRRA expiration varies based on investors' taxes. In sum, we provide important extensions of Hanlon and Hoopes (2014), Chetty and Saez (2005), and Jacob and Michaely (2017) by using a powerful setting to show that the previously documented relation between institutional ownership and dividend payout policy varies based on tax preferences, institution type (dedicated versus non-dedicated), and insider ownership.

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Appendix A

SpecialDiv (Likelihood)	An indicator variable set to 1 if a firm-distribution share code [SHRCD] is classified as 1262, 1272, 1212, 1222, 1232, or 1242.
SpecialDiv (Magnitude)	The value of the special dividend scaled by the total dividends paid by a firm throughout the year. This can range between 0 and 1 depending on the value of other regular dividends paid throughout the year, with 1 indicating that the special is the only dividend paid by the firm. Note that this magnitude diverges from Hanlon and Hoopes (2014) which utilizes a scale based on the total monthly dividends.
NovDec2010	An indicator variable set to 1 if a distribution is made in either November or December of 2010, 0 otherwise.
NovDec2012	An indicator variable set to 1 if a distribution is made in either November or December of 2012, 0 otherwise.
Financial	An indicator variable set to 1 if a firm's SIC code ranges between 6000 and 6999. Note that this does not include REITs as these are eliminated from the main regression.
OWNERSHIP	The relevant insider or institutional ownership variables, *TII*, *TSI*, *INSIDER*, *TII_NOTDED*, or *TII_DED*, defined as follows.
TII	The percentage of Tax-Insensitive Institutional Ownership as categorized by Blouin, Bushee, and Sikes (2017). This is calculated as the total shares owned by tax-insensitive institutions during the quarter of the firm-dividend observation divided by the shares outstanding as reported by Compustat. Institutional ownership data comes from Thomson Reuters Institutional 13f Holdings - S34 master file.
TSI	The percentage of Tax-Sensitive Institutional Ownership as categorized by Blouin, Bushee, and Sikes (2017). This is calculated as the total shares owned by tax-sensitive institutions during the quarter of the firm-dividend observation divided by the shares outstanding as reported by Compustat. Institutional ownership data comes from Thomson Reuters Institutional 13f Holdings - S34 master file.
INSIDER	The percentage of executive ownership for each firm-dividend observation. This is calculated as the total shares owned (options excluded) by executive owners during the month of the firm-dividend observation divided by the shares outstanding as reported by Compustat. Executive ownership data comes from ExecuComp - Monthly Updates Annual Compensation file.

TII_NOTDED	The percentage of Tax-Insensitive Institutional Ownership that is categorized as either transient (TRA) or quasi-indexer (QIX) by Blouin, Bushee, and Sikes (2017) and Bushee (1998, 2001). This is calculated as the total shares owned by institutions that are classified as both dedicated and tax-insensitive during the quarter of the firm-dividend observation divided by the shares outstanding as reported by Compustat. Institutional ownership data comes from Thomson Reuters Institutional 13f Holdings - S34 master file.
TII_DED	The percentage of Tax-Insensitive Dedicated Institutional Ownership as categorized by Blouin, Bushee, and Sikes (2017) and Bushee (1998, 2001). This is calculated as the total shares owned by institutions that are classified as both dedicated and tax-insensitive during the quarter of the firm-dividend observation divided by the shares outstanding as reported by Compustat. Institutional ownership data comes from Thomson Reuters Institutional 13f Holdings - S34 master file.
ROA	Return on assets calculated as the sum of the pre-tax income (PIQ) over the current and prior three quarters divided by the ending balance of total assets in the current quarter (ATQ). Variables retrieved from Compustat quarterly fundamentals.
CASH	Cash and short term investments from the quarter prior (CHEQ) to dividend distribution scaled by current quarter's assets (ATQ). Variables retrieved from Compustat quarterly fundamentals. We use the lagged value of cash rather than the current quarter value of cash, used in Hanlon and Hoopes (2014), to eliminate the negative relation between payment of a dividend in a quarter and that quarter's cash balance.
ASSETS	Current quarter assets (ATQ) as reported by Compustat quarterly fundamentals. Assets are not lagged, following Hanlon and Hoopes, 2014.

Table 1

Panel A: Sample Selection for Tests of Special Dividends	
Sample of Firm-Distributions Between 1991 and 2017	162,593
With Data for Compustat Controls	154,298
With Data for Institutional Ownership	**112,238**
With Data for Insider Ownership	78,512
With Data for Both Insider and Institutional Ownership	**62,637**

Panel B: Sample Selection for Tests of Dividend Shifting	
Sample of Dividend Paying Firms in 2012	404
With Data for Compustat Controls	374
With Data for Institutional Ownership	**341**
With Data for Institutional and Insider Ownership	**236**

Table 2
Special Dividend Sample

Panel A: Descriptive Statistics

VARIABLES	N	Mean	S.D.	Min	Max
SpecialDiv (Likelihood)	112,238	0.013	0.111	0.000	1.000
SpecialDiv (Magnitude)	112,238	0.007	0.076	0.000	1.000
FINANCIAL	112,238	0.368	0.482	0.000	1.000
ROA	112,238	0.076	0.081	-0.119	0.362
CASH	112,238	0.094	0.116	0.001	0.591
ASSETS	112,238	9,443	28,650	20	212,405
TII	112,238	0.447	0.256	0.002	0.968
TSI	112,238	0.069	0.059	0.001	0.306
TII_DED	112,238	0.050	0.072	0.000	0.372
TII_NOTDED	112,238	0.396	0.246	0.002	0.925
INSIDER	62,637	0.039	0.084	0.000	0.466

Panel B: Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) SpecialDiv (Likelihood)	1									
(2) SpecialDiv (Magnitude)	0.8325*	1								
(3) FINANCIAL	0.001	-0.0199*	1							
(4) ROA	0.0354*	0.0374*	-0.4119*	1						
(5) CASH	0.0968*	0.1139*	-0.1431*	0.3389*	1					
(6) ASSETS	-0.0260*	-0.0253*	0.1016*	-0.0775*	0.0023	1				
(7) TII	-0.0532*	-0.0376*	-0.4326*	0.2116*	0.0725*	0.1816*	1			
(8) TSI	-0.0086*	0.0016	-0.1142*	0.1107*	0.0597*	-0.0907*	0.1023*	1		
(9) TII_DED	-0.0308*	-0.0309*	-0.1928*	0.0655*	-0.0374*	0.0415*	0.2877*	-0.0141*	1	
(10) TII_NOTDED	-0.0485*	-0.0316*	-0.3964*	0.2003*	0.0857*	0.1782*	0.9544*	0.1127*	0.0181*	1
(11) INSIDER	0.0407*	0.0445*	-0.0356*	0.0786*	0.1076*	-0.1255*	-0.2955*	0.0071	-0.0487*	-0.2663*

This table presents descriptive statistics for the sample of firm-dividend observations between 1991 and 2017. These variables are utilized in all tests of special dividend distributions. We winsorize all continuous variables at 1% and 99% to mitigate the effect of outliers. In panel A we present the summary statistics for all main variables. Panel B presents the pairwise correlation matrix of all main variables. Bolded figures are statistically significant at greater than 5% threshold.

Table 3

Dividend Shifting Sample

Panel A: Descriptive Statistics

VARIABLES	N	Mean	S.D.	Min	Max
SHIFT	341	0.504	0.501	0.000	1.000
FINANCIAL	341	0.299	0.459	0.000	1.000
ROA	341	0.092	0.083	0.001	0.362
CASH	341	0.117	0.125	0.001	0.591
ASSETS	341	13,640	34,441	20	212,405
TII	341	0.552	0.246	0.004	0.968
TSI	341	0.066	0.051	0.001	0.306
TII_DED	341	0.006	0.028	0.000	0.372
TII_NOTDED	341	0.545	0.246	0.004	0.925

Panel B: Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) SHIFT	1							
(2) FINANCIAL	-0.0826	1						
(3) ROA	**0.1424***	**-0.4950***	1					
(4) CASH	**0.1466***	**-0.1093***	**0.4662***	1				
(5) ASSETS	**-0.1502***	**0.1250***	**-0.1374***	-0.0508	1			
(6) TII	-0.0821	**-0.2928***	0.0874	-0.0704	**0.1658***	1		
(7) TSI	0.0549	**-0.1438***	**0.1100***	0.0447	**-0.1600***	0.0413	1	
(8) TII_DED	**0.1208***	-0.0737	0.0817	-0.0022	-0.0772	0.0831	0.0366	1
(9) TII_NOTDED	**-0.1257***	**-0.2695***	0.0748	-0.0702	**0.1785***	**0.9878***	0.0288	-0.0733

This table presents descriptive statistics for the sample of firm observations in 2012. These variables are utilized in all tests of shifting dividends from January 2013 into December 2012. To obtain control variables, given the multiple firm-distributions that could be used, we separate the sample into 2 subsets. If a firm shifted its dividend into December 2012, we use the control variables from that firm-distribution observation. If a firm did not make a distribution in December of 2012, we use the most recent available observation prior to December of 2012. We winsorize all continuous variables at 1% and 99% to mitigate the effect of outliers. In panel A we present the summary statistics for all main variables. Panel B presents the pairwise correlation matrix of all main variables. Bolded figures are statistically significant at greater than 5% threshold.

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Table 4
Panel A: Special Dividends and Tax-Sensitivities of Institutional Owners

VARIABLES	(1) Likelihood	(2) Magnitude	(3) Likelihood	(4) Magnitude
TII			-0.0251***	-0.0143***
			(-8.98)	(-8.30)
TSI			-0.0264***	-0.0043
			(-2.60)	(-0.66)
NovDec2010	0.0373***	0.0314***	0.1078***	0.0838***
	(4.84)	(5.08)	(3.83)	(3.74)
NovDec2012	0.0663***	0.0595***	0.1173***	0.1006***
	(8.78)	(9.38)	(4.74)	(4.56)
*NovDec2010*TII*			**-0.1075***	**-0.0827***
			(-3.02)	**(-2.79)**
*NovDec2012*TII*			**-0.0967***	**-0.0869***
			(-2.84)	**(-2.84)**
*NovDec2010*TSI*			**-0.1487**	**-0.0826**
			(-0.78)	**(-0.48)**
*NovDec2012*TSI*			**0.0770**	**0.1267**
			(0.48)	**(0.85)**
Constant	0.0183***	0.0039**	0.0212***	0.0057***
	(4.95)	(2.17)	(5.17)	(2.79)
Observations	154,298	154,298	112,238	112,238
Test NovDec2010 + TII Interaction =0	NA	NA	p=0.99	p=.95
Test NovDec2012 + TII Interaction =0	NA	NA	p=0.30	p=.42
R-squared	0.019	0.023	0.027	0.029
Controls	Yes	Yes	Yes	Yes
Fixed Effects	M/Y	M/Y	M/Y	M/Y
Cluster	Firm	Firm	Firm	Firm

Panel B: Likelihood of Dividend Shifting Into December 2012

VARIABLES	(1) DEC12SHIFT	(2) DEC12SHIFT	(3) DEC12SHIFT
TII	**-0.2313**		**-0.2325**
	(-2.06)		**(-2.07)**
TSI		**0.0799**	**0.1273**
		(0.15)	**(0.24)**
Constant	0.5648***	0.4388***	0.5572***
	(7.71)	(7.95)	(6.94)
Observations	341	341	341
R-squared	0.058	0.046	0.059
Controls	Yes	Yes	Yes

This table reports the effects of institutional tax-sensitivities on dividend acceleration. Panel A displays the effect on the magnitude and likelihood of dividend distributions in November/December of 2010 and 2012. Panel B displays the effect of institutional tax-sensitivity on the likelihood of shifting dividends from January 2013 into December 2012. Robust t-statistics in parentheses. Reported p-values are based on two-tailed tests except where predicted. If a sign is opposite of expectation, the p-value reverts to two-tailed. Signs are only predicted for the effect of insider ownership given this finding occurred in Hanlon and Hoopes (2014).
*** p<0.01, ** p<0.05, * p<0.1

Table 5
Panel A: Special Dividends and Dedicated Institutional Ownership

VARIABLES	(1) Likelihood	(2) Magnitude
NovDec2010	0.1095***	0.0832***
	(3.90)	(3.76)
NovDec2012	0.1162***	0.0992***
	(4.72)	(4.57)
TII_DED	-0.0064	-0.0050
	(-0.37)	(-0.94)
TII_NOTDED	-0.0280***	-0.0156***
	(-8.01)	(-7.98)
TSI	-0.0249**	-0.0036
	(-2.49)	(-0.55)
NovDec2010*TII_DED	**0.3023**	**0.0725**
	(1.09)	**(0.44)**
NovDec2012*TII_DED	**0.0908**	**0.0111**
	(0.48)	**(0.09)**
NovDec2010*TII_NOTDED	**-0.1198***	**-0.0857***
	(-3.32)	**(-2.86)**
NovDec2012*TII_NOTDED	**-0.1000***	**-0.0872***
	(-2.96)	**(-2.88)**
NovDec2010*TSI	**-0.1274**	**-0.0742**
	(-0.67)	**(-0.43)**
NovDec2012*TSI	**0.0780**	**0.1269**
	(0.48)	**(0.85)**
Constant	0.0203***	0.0053**
	(4.80)	(2.53)
Observations	112,238	112,238
Test NovDec2010 + TII_NOTDED interaction = 0	p=0.60	p=0.89
Test NovDec2012 + TII_NOTDED interaction = 0	p=0.42	p=0.50
R-squared	0.028	0.029
Controls	Yes	Yes
Fixed Effects	M/Y	M/Y
Cluster	Firm	Firm

Panel B: Tax Insensitive Dedicated Institution Effect on Dividend Shifting Into December 2012

VARIABLES	(1) *DEC12SHIFT*	(2) *DEC12SHIFT*
TII_DED	**1.8593***	**1.7971**
	(2.80)	**(2.57)**
TII_NOTDED		**-0.2643**
		(-2.36)
TSI		**0.1808**
		(0.35)
Constant	0.4390***	0.5617***
	(9.94)	(6.95)
Observations	341	341
R-squared	0.059	0.074
Controls	Yes	Yes

This table reports the effect of the subset of tax-insensitive institutions that are also classified as 'dedicated' by Bushee (1998, 2001). Panel A displays the effect on the likelihood and magnitude of dividend distributions in November/December of 2010 and 2012. Panel B displays the effect on the likelihood of shifting dividends from January 2013 into December 2012. Robust t-statistics in parentheses. Reported p-values are based on two-tailed tests except where predicted. If a sign is opposite of expectation, the p-value reverts to two-tailed. Signs are only predicted for the effect of insider ownership given this finding occurred in Hanlon and Hoopes (2014).

*** p<0.01, ** p<0.05, * p<0.1

Table 6
Panel A: Insider Ownership and Special Dividends across TII Terciles

VARIABLES	Expected Sign	(1) Likelihood Full Sample	(2) Likelihood TII - Bottom Tercile	(3) Likelihood TII - Top Tercile
INSIDER	+	0.0294**	0.0087	0.0240
		(2.49)	(0.67)	(1.06)
NovDec2010		0.0145*	0.0462	0.0056
		(1.73)	(1.29)	(0.53)
NovDec2012		0.0312***	0.0400	0.0227**
		(3.43)	(1.45)	(2.02)
NovDec2010*INSIDER	+	**0.5034****	**0.0700**	**0.8551****
		(2.30)	**(0.27)**	**(1.67)**
NovDec2012*INSIDER	+	**0.6313****	**0.4037****	**0.7496****
		(3.61)	**(1.66)**	**(2.44)**
Constant		0.0026	0.0090	-0.0077*
		(0.57)	(0.97)	(-1.96)
Observations		62,637	20,835	20,898
R-squared		0.023	0.023	0.024
Controls		Yes	Yes	Yes
Fixed Effects		M/Y	M/Y	M/Y
Cluster		Firm	Firm	Firm

Chow Test of Coefficients

1) Insider*NovDec2010[Bottom Tercile] - Insider*NovDec2010[Top Tercile] = 0	*Chi-Square = 1.88*	*P = 0.17*
2) Insider*NovDec2012[Bottom Tercile] - Insider*NovDec2012[Top Tercile] = 0	*Chi-Square = 0.78*	*P = 0.38*
3) NovDec2010[Bottom Tercile] - NovDec2010[Top Tercile] = 0	*Chi-Square = 1.18*	*P = 0.28*
4) NovDec2012[Bottom Tercile] - NovDec2012[Top Tercile] = 0	*Chi-Square = 0.34*	*P = 0.56*

Panel B: Tercile Descriptives

	TII Percentage			Insider Percentage		
	Mean	Min	Max	Mean	Min	Max
Full Sample	0.59	0	0.97	0.039	0	0.46
Bottom Tercile - TII	0.37	0	0.52	0.071	0	0.46
Top Tercile - TII	0.78	0.68	0.97	0.019	0	0.24

This table reports the interactive effect between insider ownership and the periods of accelerated special dividends on the likelihood of a special dividend. Panel A displays the coefficients for the full sample of firms with both insider ownership and institutional ownership, followed by firms in the bottom and top tercile of tax-insensitive institutional ownership. Panel B provides relevant information about the tax-insensitive and insider ownership at various terciles of tax-insensitivity. TII percentages are mechanically increasing between quartiles. Insider min and max are reported at the 1% and 99% respectively to remove the effect of outliers. Robust t-statistics in parentheses. Reported p-values are based on two-tailed tests except where predicted. If a sign is opposite of expectation, the p-value reverts to two-tailed. Signs are only predicted for the effect of insider ownership given this finding occurred in Hanlon and Hoopes (2014).

*** p<0.01, ** p<0.05, * p<0.1

Table 7
Likelihood of Dividend Shifting Into December 2012

VARIABLES	Expected Sign	(1) DEC12SHIFT
INSIDER	+	1.0344***
		(2.49)
TII		-0.3612*
		(-1.90)
TSI		-0.2330
		(-0.33)
INSIDER*TII	+	**3.2455****
		(2.10)
INSIDER*TSI	+	**35.1876*** **
		(3.25)
Constant		0.4730***
		(7.00)
Observations		236
INSIDER+ INSIDER*TII = 0		**p=0.003*** **
INSIDER+ INSIDER*TSI = 0		**p=0.001*** **
R-squared		0.097
Controls		Yes

This table reports the interactive effect of institutional ownership on insiders' ability to shift dividends from January 2013 into December 2012. All continuous variables are centered to reduce the effects of multicollinearity from interacting positive continuous variables. This results in VIFs below 2 for all variables. Robust t-statistics in parentheses. Reported p-values are based on two-tailed tests except where predicted. If a sign is opposite of expectation, the p-value reverts to two-tailed. Signs are only predicted for the effect of insider ownership given this finding occurred in Hanlon and Hoopes (2014).
*** p<0.01, ** p<0.05, * p<0.1

Table 8
Panel A: Insider Ownership and Specials across TII_DED Terciles

VARIABLES	Expected Sign	(1) Likelihood Full Sample	(2) Likelihood TII_DED - Bottom Tercile	(3) Likelihood TII_DED - Top Tercile
INSIDER	+	0.0295***	0.0370**	-0.0006
		(2.49)	(2.09)	(-0.06)
NovDec2010		0.0145*	0.0110	0.0635
		(1.73)	(1.24)	(1.20)
NovDec2012		0.0313***	0.0287***	0.0695**
		(3.43)	(2.72)	(2.09)
NovDec2010*INSIDER	+	**0.5034**	**0.5871***	**-2.4242**
		(2.30)	**(2.51)**	**(-1.24)**
NovDec2012*INSIDER	+	**0.6310***	**0.6743***	**1.1559**
		(3.61)	**(3.59)**	**(1.01)**
Constant		0.0026	-0.0206*	0.0001
		(0.57)	(-1.66)	(0.02)
Observations		62,637	20,945	20,823
R-squared		0.023	0.040	0.020
Controls		Yes	Yes	Yes
Fixed Effects		M/Y	M/Y	M/Y
Cluster		Firm	Firm	Firm

Chow Test of Coefficients		
1) Insider*NovDec2010[Bottom Tercile] - Insider*NovDec2010[Top Tercile] = 0	*Chi-Square = 2.33*	*P = 0.13*
2) Insider*NovDec2012[Bottom Tercile] - Insider*NovDec2012[Top Tercile] = 0	*Chi-Square = 0.17*	*P = 0.67*
3) NovDec2010[Bottom Tercile] - NovDec2010[Top Tercile] = 0	*Chi-Square = 1.96*	*P = 0.33*
4) NovDec2012[Bottom Tercile] - NovDec2012[Top Tercile] = 0	*Chi-Square = 1.37*	*P = 0.24*

Panel B: Tercile Descriptives

	TII_DED Percentage			Insider Percentage		
	Mean	Min	Max	Mean	Min	Max
Full Sample	0.06	0	0.371	0.04	0	0.46
Bottom Tercile – TII_DED	0	0	0.001	0.04	0	0.46
Top Tercile – TII_DED	0.14	0.069	0.371	0.03	0	0.44

This table reports the interactive effect between insider ownership and the periods of accelerated special dividends on the likelihood of a special dividend. Panel A displays the coefficients for the full sample of firms with both insider ownership and institutional ownership, followed by firms in the bottom and top tercile of tax-insensitive dedicated institutional ownership. Panel B provides relevant information about the tax-insensitive and insider ownership at the bottom and top tercile of dedicated tax-insensitivity. TII_DED percentages are mechanically increasing between quartiles. Insider min and max are reported at the 1% and 99% respectively to remove the interpretation of outliers. Robust t-statistics in parentheses. Reported p-values are based on two-tailed tests except where predicted. If a sign is opposite of expectation, the p-value reverts to two-tailed. Signs are only predicted for the effect of insider ownership given this finding occurred in Hanlon and Hoopes (2014). Robust t-statistics in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 9
Likelihood of Dividend Shifting Into December 2012

VARIABLES	Expected Sign	(1) DEC12SHIFT
INSIDER	+	1.0565***
		(2.57)
TII_DED		1.4858**
		(2.34)
TII_NOTDED		-0.4264**
		(-2.29)
TSI		-0.2015
		(-0.28)
INSIDER*TII_DED	+	**6.4973**
		(0.65)
INSIDER*TII_NOTDED	+	**3.6886****
		(2.25)
INSIDER*TSI	+	**31.9961*****
		(3.06)
Constant		0.4919***
		(7.24)
Observations		236
INSIDER+ INSIDER*TII_DED = 0		**p=0.448**
INSIDER+ INSIDER*TII_NOTDED = 0		**p=0.002*****
INSIDER+ INSIDER*TSI = 0		**p=0.002*****
R-squared		0.113
Controls		Yes

This table reports the interactive effect of institutional ownership on insiders' ability to shift dividends from January 2013 into December 2012. All continuous variables are centered to reduce the effects of multicollinearity from interacting positive continuous variables. This results in VIFs below 2 for all variables. Robust t-statistics in parentheses. Reported p-values are based on two-tailed tests except where predicted. If a sign is opposite of expectation, the p-value reverts to two-tailed. Signs are only predicted for the effect of insider ownership given this finding occurred in Hanlon and Hoopes (2014).
*** p<0.01, ** p<0.05, * p<0.1

Table 10
Likelihood of Share Repurchases

VARIABLES	(1) Likelihood of Repurchase	Expected Sign	(2) Likelihood of Repurchase
NovDec2010	0.0072	-	-0.0406
	(0.45)		(-0.99)
NovDec2012	0.0002	-	-0.0743**
	(0.02)		(-1.95)
TII			0.2448***
			(8.64)
TSI			-0.0678
			(-0.55)
*NovDec2010*TII_PCT*		?	0.0981
			(1.62)
*NovDec2012*TII_PCT*		?	0.0760
			(1.33)
*NovDec2010*TSI_PCT*		+	-0.0003
			(-0.00)
*NovDec2012*TSI_PCT*		+	0.5192**
			(1.79)
Constant	0.3746***		0.2866***
	(19.70)		(12.84)
Observations	46,814		46,814
NOVDEC2010 + NOVDEC2012*TII_PCT = 0		?	**p=0.14**
NOVDEC2012 + NOVDEC2012*TII_PCT = 0		?	**p=0.97**
NOVDEC2012 + NOVDEC2010*TSI_PCT = 0		+	**p=0.44**
NOVDEC2012 + NOVDEC2012*TSI_PCT = 0		+	**p=0.05****
R-squared	0.078		0.093
Controls	Yes		Yes
Fixed Effects	M/Y		M/Y
Cluster	Firm		Firm

This table reports the interactive effect of institutional ownership on the likelihood of a share repurchase in November and December of 2010 and 2012. With controls for institutional ownership, the non-interacted NovDec2010 and NovDec2012 variables represent the likelihood of a share repurchase for firms owned by individual shareholders. Reported p-values are based on two-tailed tests except where predicted. If a sign is opposite of expectation, the p-value reverts to two-tailed. Signs are predicted based on the results of the main tests of the paper. Robust t-statistics are in parentheses. ***p<0.01, **p<0.05, *p<0.10.