# Shareholder Wealth Effects of Anticipated Tax Aggressiveness Transfers


## Abstract

This paper investigates whether and how the relative tax aggressiveness of the acquirer and target affects value creation in corporate M&A. We find that acquisitions of more tax aggressive targets by less tax aggressive acquirers reduce M&A transaction value, on average. We also find that acquisitions of less tax aggressive targets by more tax aggressive acquirers create values only when the acquirer is well governed. The value-reducing effects of negative tax aggressiveness transfers are primarily accrued to acquirer shareholders. This paper contributes to the literature by using a strong setting to examine the value of tax aggressiveness to shareholders.



**Keywords:** Tax Aggressiveness, Mergers and Acquisitions

**JEL Classifications:** G34; H25; M41

*We have identified…an additional $50 million of tax related savings synergies amounting from the new structure. The ongoing effective tax rate of about 24% to 26% reflects the new company's structure before any incremental tax planning initiatives… We have over $90 million in synergies right from the start through one corporate structure and greater tax efficiencies.*

—— Randall Hogan, Chairman and CEO, Tyco; and John Stauch, CFO, Pentair, from the Tyco-Pentair merger conference call

# I. Introduction

Andrade, Mitchell, and Stafford (2001) estimate that, for a sample of 3,688 mergers and acquisitions (M&A) completed between 1973 and 1998, the average combined three-day abnormal return for acquirers and targets is about 1.8 percent. While the extent of acquisition gains or losses are well-documented in the literature, Andrade et al. (2001) emphasize that identifying the underlying sources of the valuation effects in M&A transactions remains a challenging issue. A stream of this literature considers tax to be one source of value creation in M&A (e.g., Auerbach and Reishus, 1988; Hayn, 1989; Erickson and Wang, 2007). These studies, however, have mainly focused on acquisition taxes.[1] As noted in Hanlon and Heitzman (2010), little is known about how tax-planning aggressiveness affects M&A value. Our study provides a better understanding of whether and how tax aggressiveness can be a source of gains or losses in M&A transactions.

This study starts with the premise that the acquirer's propensity for tax planning is transferred to its target's tax function after the change in ownership.[2] That is, a newly merged firm will share the tax aggressiveness features of the acquirer upon the change in ownership in M&A. This transfer creates an exogenous change in the tax aggressiveness of the target.

[1] Hanlon and Heitzman (2010) and Shackelford and Shevlin (2001) provide a comprehensive review of the literature on the roles of taxes in the structure and pricing of M&A.

[2] As described more fully below, this assertion is consistent with the influence of CEOs as they change firms (Dyreng et al., 2010).

Aggressive tax planning is believed to have value implications for firms as the tax authority takes a smaller fraction of the firm's profits (Desai, Dyck, and Zingales, 2007; Desai and Dharmapala, 2009), yet the value implication have been difficult to document. We extend this line of literature by empirically examining whether acquisitions of targets with lower tax aggressiveness by acquirers with higher tax aggressiveness generate higher acquisition gains, and vice versa.[3]

We determine the transfer of tax aggressiveness by measuring the difference between the acquirer's and the target's tax aggressiveness; i.e., the relative tax aggressiveness of the two firms prior to the acquisition. We assume shareholders expect this difference to be largely eliminated upon acquisition. To investigate separately whether increases in tax aggressiveness create value and decreases in tax aggressiveness reduce value, we segment the measure of tax aggressiveness difference into positive and negative values. We use four common proxies of tax aggressiveness advanced in the literature to provide triangulating evidence. These proxies include total book-tax differences (Manzon and Plesko, 2002), abnormal book-tax differences (Desai and Dharmapala, 2006), discretionary permanent book-tax differences (Frank, Lynch, and Rego, 2009), and cash effective tax rates (Dyreng, Hanlon, and Maydew, 2008). Using a sample of 844 U.S. M&A transactions completed between 1990 and 2010, we find that, on average, acquirers have a wider book-tax difference and a lower cash effective tax rate than targets have.

Following Bradley, Desai, and Kim (1988), we measure acquisition gains for each transaction by computing the cumulative abnormal return for a value-weighted portfolio of the acquirer and the target during the five-day event window surrounding the acquisition

[3] We define tax aggressiveness as the reduction of explicit taxes per dollar of pre-tax accounting earnings or cash flows through a continuum of tax planning strategies, where strategies such as tax favored municipal bond investments are at the one end and more complicated strategies such as tax sheltering are at the other end. Throughout this paper, we use the generic term "tax aggressiveness"; this term can be used interchangeably with "tax avoidance."

announcement date. We also compute the cumulative abnormal returns separately for the acquirers and targets to better understand the way that the acquisition gains are divided between the shareholders of the acquirers and those of the targets.

For acquirers with lower levels of tax aggressiveness than their targets, the overall findings are that the difference between acquirer's and target's tax aggressiveness is positively related to total acquisition gains, consistent with our prediction that the anticipated reduction in the target's tax aggressiveness is value decreasing. However, there is little evidence that acquisitions of less tax aggressive targets by more tax aggressive acquirers generate higher acquisition gains. This finding suggests that the primary wealth effects of tax aggressiveness transfers are for the value-destroying effect of decreases in tax aggressiveness. Further analysis indicates that this value-destroying wealth effect of negative tax aggressiveness transfers most reliably accrues to shareholders of the acquirers rather than to those of the targets. Results are generally consistent across various proxies of tax aggressiveness.

Next, we examine the role of the acquirer's corporate governance in the wealth effects of tax aggressiveness. Using the index of shareholder rights developed in Gompers et. al (2003) to measure corporate governance, we find that the acquirer's governance has a significant impact on the shareholder wealth effects in transfers of tax aggressiveness. Specifically, we find that, when acquirers are well governed, acquisitions of targets with lower tax aggressiveness by acquirers with higher tax aggressiveness are value enhancing. Similarly, acquisitions of targets with higher tax aggressiveness by acquirers with lower tax aggressiveness are value reducing. Such relations do not hold for poorly governed acquirers. Our findings are consistent with prior research that finds corporate governance to be a significant determinant of the association between tax aggressiveness and firm value (Desai and Dharmapala, 2009; Wilson, 2009).

This study contributes to both the tax avoidance literature and the M&A literature. First, the M&A setting allows separate examination of the valuation implications of increases and decreases in tax aggressiveness, thus providing new insights into the ways in which tax aggressiveness affects shareholder wealth. Although prior literature (e.g., Desai and Dharmapala, 2009; Wilson, 2009) has shown that there is a positive valuation effect of tax aggressiveness for well-governed firms, those studies do not examine the valuation effects of increases and decreases in tax aggressiveness separately, in part because of the research setting they employ. For example, firms' tax planning policies do not typically change within a short period of time, so the year-to-year changes in tax aggressiveness measures are particularly noisy measures of *changes* in tax aggressiveness. In contrast, the M&A setting allows a clear identification of positive and negative anticipated changes in the target's level of tax aggressiveness, depending on which firm (i.e., the target or the acquirer) was more tax aggressive prior to the deal. Disentangling the direction of changes in tax aggressiveness in the analysis also enables us to understand the degree to which the value-destroying and value-creating effects are shared between the acquirer and target shareholders. Our findings that the value-destroying effect of negative tax aggressiveness transfers is primarily accrued to acquirer shareholders are consistent with the M&A literature that acquirer shareholders tend not to benefit from corporate takeovers (Jarrell, Brickley, and Netter, 1988; Jensen and Ruback, 1983).

Second, this study contributes to understanding M&A. Prior literature documents that the benefits of change in ownership are, on average, negative for acquirer shareholders and positive for the acquirer and target combined (Andrade et al., 2001); nevertheless, the underlying sources of these valuation effects remain unclear. Devos, Kadapakkam, and Krishnamurthy (2009) investigate the relative importance of the underlying source of acquisition gains. Based on Value Line post-merger capital cash flow forecasts for a sample of 264 transactions, the authors

estimate that tax savings contribute only 1.64 percent of the 10.02 percent of average acquisition gains. The tax savings estimate in Devos et al. (2009) only accounts for the increase in debt tax shields based on the debt level forecast for the merged firm. However, as documented in prior studies (e.g., Dyreng et al., 2008), there is ample empirical evidence that firms engage in different forms of aggressive tax avoidance to reduce taxes and that the tax savings from these avoidance activities could represent significant non-debt tax shields for firms (Graham and Tucker, 2006).[4]

Using the cross-sectional variation in tax aggressiveness between acquirers and targets, this study improves the estimates of tax-related acquisition gains by considering tax savings generated by a broader spectrum of corporate tax avoidance strategies. In keeping with the research on the role of taxes in the pricing of M&A transactions (e.g., Ayers, Lefanowicz, and Robinson, 2003, Dhaliwal, Erickson, and Heitzman, 2004; Erickson and Wang, 2000; 2007; Hayn, 1989; Mescall and Klassen, 2013), this study contributes to the literature by showing that the relative tax aggressiveness of the acquirer and target explains acquirer shareholder gains from M&A. Our results also indicate that this value-destroying wealth effect of negative tax aggressiveness transfers is mainly accrued to shareholders of the acquirers rather than to those of the targets. This finding adds to extent literature that examines the sources of value destruction in corporate takeovers (Harford, Humphery-Jenner, and Powell, 2012).

The rest of this paper is organized as follows. Section II discusses related literature and develops hypotheses. Section III discusses research design, describes the sample selection, and

[4] Examples of aggressive tax avoidance strategies include cross-border tax avoidance such as the use of foreign operations located in low-tax jurisdictions (Hines and Rice, 1994; Klassen and Laplante, 2012) and tax sheltering such as the use of Corporate-Owned Life Insurance transactions (Brown, 2011) or reportable transactions (Lisowsky, 2010; Lisowsky, Robinson, and Schmidt, 2013).

presents the main findings. Section IV presents results of additional analyses and robustness checks, and Section V concludes.

# II. Prior Research and Hypothesis Development

### 2.1 The Effects of a Change in Ownership in M&A

In M&A, the acquirer's management replaces the target's management after a change in ownership (e.g., Lang, Stulz, and Walkling, 1989; Servaes, 1991). Prior literature has examined the change in the quality of management or corporate governance as a source of value creation. For example, Lang et al., (1989) and Servaes (1991) find that gains from acquisitions are greater when targets have low Tobin's *q* and acquirers have high Tobin's *q*, suggesting that acquisitions of poorly managed targets by better managed acquirers generate higher acquisition gains. Utilizing the cross-country variation in investor protection regimes, Bris, Brisley, and Cabolis (2008) study how changes in shareholder protection through cross-border M&A improve industry value. They find that industry value (i.e., industry Tobin's *q*) increases after firms from foreign countries that have strong investor protection regimes and high accounting standards acquire firms within the industry. Similarly, using the Gompers et al. (2003) index of shareholder rights to measure corporate governance, Wang and Xie (2008) find that acquisition gains are increasing in acquirers' governance relative to targets' governance. Their results suggest that acquisitions of targets with weaker corporate governance by acquirers with stronger governance create higher acquisition gains. Our study builds on this literature by exploring another source of gains created by change in ownership: corporate tax aggressiveness.

### 2.2 Tax Aggressiveness Transfers in M&A

Prior literature on the determinants of tax aggressiveness supports the view that newly merged firms will share the tax aggressiveness features of the acquirers. In particular, Dyreng,

Hanlon, and Maydew (2010) track the movement of 899 executives across firms over time and find that individual executives play a significant role in determining the level of tax aggressiveness of a firm. Using data from a survey of Chief Financial Officers, Robinson, Sikes, and Weaver (2010) find that firms that choose to evaluate a tax department as a profit center are associated with significantly lower effective tax rates, suggesting that the organization of tax function has a strong influence on a firm's tax aggressiveness. Badertscher, Katz, and Rego (2011) find that private equity backed portfolio firms engage in significantly more non-conforming tax planning and have lower marginal tax rates than other private firms, suggesting that managers in private equity firms create economic value through aggressive tax planning. Similarly, investigating the role of hedge fund activism in corporate tax avoidance, Cheng, Huang, Li, and Stanfield (2012) find that tax-savvy hedge fund activists improve the tax efficiency of their portfolio firms. Taken as a whole, evidence from existing literature suggests that management styles, corporate culture, and ownership profiles strongly influence a firm's aggressiveness in tax practices.

**2.3 Tax Aggressiveness and Shareholder Wealth**

The traditional view of tax planning suggests that shareholder wealth should increase with tax aggressiveness (Desai et al., 2007; Desai and Dharmapala, 2009). If aggressive tax planning were costless to the firm, firm value would increase because the tax authority takes a smaller fraction of the firm's profits. However, tax aggressiveness can be costly to the firm. Firms incur high compliance and implementation costs when they engage in aggressive tax planning strategies. Aggressive tax planning may have reputational costs if the firm is labeled as overly aggressive or abusive for tax purposes (Hanlon and Slemrod, 2009). Tax aggressive firms may also have higher tax risk than less tax aggressive firms as they are subject to a high level of scrutiny from the IRS (Mills, 1998).

In addition to the direct costs of the underlying aggressive tax positions, there are agency costs that can offset the marginal benefits of reduced tax payments. Desai et al. (2007) argue that the complexity and obscurity of tax avoidance arrangements can provide self-serving managers with tools and justifications for rent-diverting activities such as earnings manipulation and insider trading. Building on this idea, Desai and Dharmapala (2009) find that the strength of a firm's governance mechanism is an important determinant of investors' cross-sectional valuation of tax aggressiveness. In particular, using abnormal book-tax difference to measure tax aggressiveness, Desai and Dharmapala (2009) find with that higher quality firm governance there is a positive correlation between tax aggressiveness and firm value, but the association between tax aggressiveness and firm value is not statistically significant for poorly governed firms. Using a sample of tax shelter firms identified in Graham and Tucker (2006), Wilson (2009) finds that active tax shelter firms with strong corporate governance earn positive abnormal returns, whereas tax shelter firms with weak governance earn significantly lower abnormal returns. In sum, empirical results from extant research are consistent with the notion that aggressive tax planning is a tool for wealth creation for well-governed firms.

**2.4 Hypotheses**

Based on extant literature, we expect a change in ownership will result in an increase or a decrease in the target's tax aggressiveness, depending on whether the acquirer is more or less tax aggressive than the target is. We examine how these anticipated changes in targets' tax aggressiveness affect values. We make no directional predictions about the main effect and state our hypotheses H1 and H2 in null form:

**H1:** *Acquisitions of less tax aggressive targets by more tax aggressive acquirers are not associated with acquisition gains, on average.*

**H2:** *Acquisitions of more tax aggressive targets by less tax aggressive acquirers are not associated with acquisition gains, on average.*

The hypotheses incorporate our expectation that the tax aggressiveness of the acquirers will apply to the targets post-acquisition. Extant research, described above, provides support for this view. However, this may not be the case. Blouin, Collins, and Shackelford (2005) examine the impact of foreign-controlled firms on tax aggressiveness by comparing changes in taxable income of 31 U.S. domiciled firms before and after being acquired by non-U.S. shareholders in 1996. They find no evidence that foreign-controlled firms increase the tax aggressiveness of their newly acquired U.S. targets. Further, although tax considerations are important in M&A, they are rarely the primary reason for a transaction. Thus, it might be difficult to detect the effects of changes in tax aggressiveness in this setting.

# III. Research Design

### 3.1 Measures of Acquisition Gains

We measure acquisition gains in percentage returns using the method developed by Bradley et al. (1988). For each transaction, we form a value-weighted portfolio of the acquiring and target firms, determining weights based on the firms' respective market capitalizations on the $11^{th}$ trading day prior to the acquisition announcement date. Announcement dates are obtained from Securities Data Corporation (SDC) Platinum Mergers and Acquisitions database. The target's capitalization is adjusted by subtracting the value of the target equity held by the acquirer before the acquisition announcement. Acquisition gains are defined as the portfolio cumulative abnormal return (*PCAR*) during the event window [-2, +2], in which event day 0 is the announcement date. To calculate portfolio abnormal returns, we use the simple market model to

estimate expected stock return for portfolio *i* on day *t* following the standard methodology for event study analysis (Brown and Warner, 1985):

$$AR_{i,t} = R_{i,t} - \alpha_i - \beta_i R_{m,t} \quad (1)$$

where $R_{i,t}$ is the realized return to portfolio *i* on day *t*. The parameters $\alpha_i$ and $\beta_i$ are estimated over the 200-day window before the announcement period [-210, -11] using CRSP value-weighted return as the market return ($R_{m,t}$). The five-day announcement period cumulative abnormal return (*CAR*) for portfolio *i* is computed as follows:

$$CAR_i(-2, 2) = \sum_{t=-2}^{2} AR_{i,t} \quad (2)$$

Although the focus of this study is on the combined acquisition gains of both the acquirer and target, we are also interested in the acquisition gains accruing to the shareholders of the two firms. To examine the division of acquisition gains between the shareholders of the acquirer and target, we separately compute the five-day cumulative abnormal returns for the acquirer (*ACAR*) and the target (*TCAR*).

**3.2 Measures of Tax Aggressiveness Differences**

Our primary proxy for tax aggressiveness is the total book-tax difference (*BTD*) based on Manzon and Plesko (2002). Total BTD measures the extent to which estimated taxable income deviates from reported book income. A positive gap between reported book income and taxable income indicates aggressive non-conforming tax planning. We choose total BTD to be the primary measure of tax aggressiveness because BTD maps the footprints of firms' tax aggressive behaviors. For example, Mills (1998) finds that firms with higher BTD are more likely to be audited by the IRS and are subject to more audit adjustments, suggesting that the tax authority uses BTD to identify potential tax avoiders. In addition, Wilson (2009) and Lisowsky (2010) find

that total BTD is a useful proxy for explaining the incidence of tax shelter activities.[5] Our research question focuses on whether the tax aggressiveness of the acquirer relative to that of the target is associated with acquisition gains under the assumption that the change in tax aggressiveness of the target is, on average, proportional to this difference in aggressiveness. To construct a measure of the relative tax aggressiveness, we use the difference in tax aggressiveness (*D_BTD*) between acquirer *i* and target *j* as follows:

$$D\_BTD_{i,j,t\text{-}1} = BTD_{i,t\text{-}1} - BTD_{j,t\text{-}1} \quad (3)$$

As noted in Hanlon and Heitzman (2010), total BTD only captures aggressive behavior in non-conforming tax planning activities that generate a difference between book and taxable income; thus, cross-sectional variation in total BTD is a noisy proxy for tax aggressiveness across firms with varying financial reporting incentives. Specifically, this measure may be biased if the acquirers engage in earnings management prior to the completion of stock-for-stock acquisitions to boost their stock prices (Erickson and Wang, 1999). To mitigate the potential bias in our measure, we estimate BTD one fiscal year prior to the acquisition announcement.[6] To check the importance to our results from the use of this BTD proxy, we use three additional measures of tax aggressiveness to provide corroborating evidence. We briefly discuss each measure below. Detailed definitions of these proxies are provided in the appendix.

The second proxy for tax aggressiveness is a measure of abnormal BTD (*ABTD*), a residual-based BTD measure obtained from a fixed-effect regression of total BTD on a proxy for earnings management. We use the discretionary accruals estimated from Dechow, Sloan, and Sweeney's (1995) model to measure earnings management.

[5] Lisowsky et al. (2013) show that FIN 48 tax reserve is a good measure for predicting tax shelter activity. However, using FIN 48 tax reserve as a measure of tax aggressiveness in this study would result in a very small sample because these data are only available after 2007.

[6] The results are qualitatively similar when we measure tax aggressiveness at the most recent fiscal year ending prior to the acquisition announcement.

The third measure we employ is based on the DTAX measure advanced by Frank et al. (2009). It is another residual-based BTD measure obtained from a regression of permanent BTD or ETR differentials (Hanlon and Heitzman, 2010) on predictable determinants such as intangible assets, minority interest, and income from unconsolidated subsidiaries. A firm's foreign operations may contribute to higher ETR differentials for the firm (Rego, 2003), but having these foreign operations does not necessarily indicate that the acquirer is more tax aggressive than the target. To alleviate the concern that our measure of tax aggressiveness transfers may be affected by cross-sectional differences in foreign operations between the merging parties, we modify the *DTAX* measure by controlling for a firm's foreign operations. Armstrong, Blouin, and Larcker (2012) make a similar adjustment to their *DTAX* measure.

The last measure of tax aggressive is the cash effective tax rate (*CETR*), estimated as the sum of cash tax paid over a three-year period before the acquisition, scaled by the sum of pre-tax income over the same period. One benefit of using cash taxes is that this measure avoids the problem of overstated current tax expense due to differential book-tax treatment of employee stock option deductions (Dyreng et al., 2008).

Similar to our *D_BTD* measure in Equation (3), we construct difference measures from these alternative proxies, denoted as *D_ABTD*, *D_DTAX*, and *D_CETR*, respectively.

While extent research suggests that taxes play an important role in cross-border M&A (e.g., Arulampalam, Devereux, Liberini, 2012; Huizinga and Voget, 2009; Mescall and Klassen, 2013), the focus of this study is on U.S. transactions because the construction of the dependent variable requires consistent measures of the acquirer's and the target's tax aggressiveness. In the context of cross-border transactions, constructing a reliable measure of the relative tax aggressiveness of a U.S. acquirer and a foreign target would be a challenging task; differences in

tax laws and accounting standards between the U.S. and the foreign country may adversely affect the validity of the measure.

### 3.3 Regression Specifications

To test hypotheses H1 and H2, we run the following piecewise regression model (deal and time subscripts suppressed):

$$PCAR = \alpha_0 + \alpha_1 ID\_BTD\_POS + \beta_1 D\_BTD\_POS + \beta_2 D\_BTD\_NEG + \boldsymbol{X}'\zeta + t + \varepsilon \qquad (4)$$

The main dependent variable, *PCAR*, is the abnormal return of a value-weighted portfolio of the acquirer and the target, and *D_BTD* is the difference in total BTD between the merging firms. We break down *D_BTD* into two variables based on the sign of the values. That is, *D_BTD_POS* and *D_BTD_NEG* equal *D_BTD* the level of tax aggressiveness transfers for transactions in which the acquirer is more aggressive than the target and in which the acquirer is less aggressive than the target, respectively; and zero otherwise. *ID_BTD_POS* is an indicator variable equals one if *D_BTD* is greater than zero. A positive $\beta_1$ in Equation (4) would allow us to reject the null form of hypothesis H1 and suggest that increases in targets' tax aggressiveness are associated with higher acquisition gains. Similarly, a positive $\beta_2$ would lead us to reject the null form of hypothesis H2 and support the idea that decreases in targets' tax aggressiveness are associated with lower acquisition gains. Negative estimates of $\beta_1$ and $\beta_2$ reject the null hypotheses in favor of negative relations. $\boldsymbol{X}$ is a vector of firm-specific and deal-specific observable determinants of acquisition gains, and *t* is calendar year fixed-effects.

Following existing research on M&A (e.g., Moeller, Schlingemann, and Stulz, 2004; Travlos, 1987; and Wang and Xie, 2008), we control for three categories of determinants of acquisition gains in Equation (4): target, acquirer, and deal characteristics. Detailed definitions of these variables are provided in the Appendix. For firm characteristics, we control for the

acquirer's and target's firm size (*SIZE*), Tobin's *q* (*TOBINSQ*), profitability (*ROA*), and leverage (*LEV*), all measured at the fiscal year end prior to the acquisition announcement. We expect portfolio abnormal returns to be negatively associated with acquirer size, consistent with Moeller et al.'s (2004) findings. Prior studies (Lang et al., 1989; Servaes, 1991) show that, for acquisitions of public targets, announcement abnormal returns are higher when acquirers have high Tobin's *q* and targets have low Tobin's *q*. However, Moeller et al. (2004) provide evidence that acquirer return is negatively related to the acquirer's Tobin's *q*. Given the mixed findings documented in existing literature, we make no directional prediction on the coefficient on the acquirer's Tobin's *q*. Wang and Xie (2008) find that abnormal returns are positively associated with acquirers' and targets' profitability. Thus, we control for profitability by including returns on assets (*ROA*) in the return regression. Finally, we expect acquirer leverage to be positively associated with acquirer returns and negatively associated with target returns, consistent with the findings in Dong, Hirshleifer, Richardson, and Teoh (2005).

For deal characteristics, we include relative deal size (*DEALRATIO*) and indicator variables for whether the deal is a tender offer (*TENDER*), a stock-financed transaction (*ALLSTOCK*), a high-tech acquisition (*HIGHTECH*), and a within-industry acquisition (*INDMATCH*). In light of prior literature which finds that tender offers generate higher gains (e.g., Bhagat, Dong, Hirshleifer, and Noah, 2005), we expect *TENDER* to be positively associated with abnormal returns. To control for the possibility that the method of financing can provide signals that affect abnormal returns (Myers and Majluf, 1984), we include an indicator variable for stock-for-stock transactions (*ALLSTOCK*). Consistent with the empirical findings by Travlos (1987), we expect stock-for-stock transactions to generate negative abnormal returns. Moeller et al. (2004) find a positive association between acquirer returns and relative deal size, although a negative association is observed in a subsample of large acquirers. Following Moeller

et al. (2004), we control for the relative deal size (*DEALRATIO*), defined as the ratio of total consideration paid (excluding fees) to the acquirer's market value of equity. We do not have an ex ante prediction regarding the sign of *DEALRATIO*.

Masulis, Wang, and Xie (2007) and Wang and Xie (2008) find that high-tech acquisitions are negatively associated with abnormal returns, suggesting that acquirers are more likely to underestimate the costs but to overestimate the synergies in high-tech combinations. Therefore, we also include a dummy variable *HIGHTECH* to indicate whether the transaction is a transaction between firms in the high-technology industries. Finally, following Wang and Xie (2008), we include a dummy variable *INDMATCH* to control for the potential higher synergies related to economies of scale in mergers between firms in related industries.

**3.4 Sample Selection**

We draw the sample from the SDC Platinum Mergers & Acquisitions database. We identify 844 M&A transactions announced between January 1, 1990 and December 31, 2010 that satisfy the following criteria:

(a) The acquisition is completed.

(b) Both acquirer and target are publicly listed U.S. firms.

(c) The deal value disclosed in SDC is no less than $1 million and is at least 1% of the acquirer's market capitalization measured on the 11$^{th}$ trading day prior to the acquisition announcement date.

(d) The acquirer owns less than 50% of the shares of the target prior to the acquisition announcement date and owns 100% of the target after the transaction.

(e) Both acquirer and target have daily stock return data available from CRSP and annual financial statement data available from COMPUSTAT .

(f) Neither acquirer nor target belongs to the financial industries (SIC codes 6000-6999).

Table 1 presents the descriptive statistics for our sample. The mean (median) difference between acquirers' and targets' BTD is 0.03 (0.01). These differences between acquirers' and

targets' tax aggressiveness also present in the abnormal book-tax difference (*ABTD*) and in the discretionary book-tax difference (*DTAX*) measures. On average, the acquirers' cash effective tax rate (*CETR*) is 2.1 percentage points lower than the target's *CETR*. All the differences are statistically significant at the 5% level (one-tailed test). Overall, the statistics suggest that acquirers are slightly more tax aggressive than targets are in our sample. Note that the mean total BTD for acquirers and mean the total BTD for targets are negative due to the presence of firms with negative pre-tax income in our sample. Across distribution, the values of total BTD are lower than those reported in extent studies (e.g. Chen et al., 2010), but are comparable once loss firms have been removed. In contrast, the values of other tax aggressiveness proxies (i.e., *ABTD*, *DTAX*, and *CETR*) indicate that our sample firms are somewhat more tax aggressive than those in other studies (e.g., Chen, Chen, Cheng, and Shevlin, 2010; Dyreng et al., 2008; Frank et al., 2009).

Table 1 also reports characteristics of the acquirers, the targets, and the transactions. In terms of firm size, the mean (median) market capitalization for acquirers and for targets is $10.5 ($1.3) billion and $1.1 ($0.16) billion, respectively. The mean (median) total deal value is about 49 (24) percent of the market capitalization of the acquirers.

Turning to the performance measures, the mean (median) *PCAR* is 2.1 (1.3) percent, a figure that is consistent with prior research (e.g. Moeller et al., 2004; Wang and Xie, 2008). On average, the acquirers earn a negative abnormal return of -0.8 percent (*ACAR*), whereas the targets earn a positive abnormal return of 24.5 percent (T*CAR*). These findings are consistent with the findings in Fuller, Netter, and Stegemoller (2002) that abnormal stock returns are negative for acquirer shareholders and are positive for target shareholders in acquisitions of public targets. *PCAR* and *TCAR* are significantly different from zero at the 1% level, and *ACAR* is significant at the 5% level.

Correlations among the main variables are reported in Panel A of Table 2. The correlations indicate that *D_BTD*, *D_ABTD*, and *D_DTAX* are positively related to all return variables (*PCAR*, *ACAR*, and *TCAR*). *D_CETR* is negatively correlated with *PCAR* only. Reported in Panel B of Table 2, the correlations among the control variables indicate that some firm-level characteristics such as firm size, leverage, and return on assets are highly correlated between the acquirers and targets. To ensure that multicollinearity is not a problem in the regressions, we examine the variance inflation factors (VIF). VIF values are less than four for all regressors, suggesting that multicollinearity does not negatively impact our results.

**3.5 Empirical Results**

Table 3 presents the results of estimating Equation (4). The coefficient on *D_BTD_POS* is not statistically different from zero using a 10% cut-off value, whereas the coefficient on *D_BTD_NEG* is positive, at the 1% level of statistical significance, in the model with *PCAR* as the dependent variable. Tests of equality of coefficients confirm the significant difference between the two regression coefficients. These results suggest that acquisitions of more tax aggressive targets by less tax aggressive acquirers reduce acquisition gains. To gauge the economic significance of the estimates, consider a less tax aggressive acquirer (BTD = -0.069 at the first quartile) acquires a more tax aggressive target (BTD = 0.016 at the third quartile). This hypothetical transaction would yield an abnormal return of -0.86 percent.[7]

Similar results are found using *ACAR* as the dependent variable, where the coefficient on *D_BTD_NEG* is significantly positive at the 1% level of statistical significance, but the coefficient on *D_BTD_POS* is not significant at conventional levels. However, the coefficients on *D_BTD_POS* and *D_BTD_NEG* are both positive (significant at the 10% level using a one-tailed test) in the regression with *TCAR* as the dependent variable. These results suggest that the

[7] (-0.069 – 0.016) × 10.09 = -0.86.

value-reducing effect is suffered most reliably by the shareholders of the acquirers rather than to those of the targets.[8] Overall, the results allow us to reject the null hypothesis H2 and suggest that acquisitions of more tax aggressive targets by less tax aggressive acquirers generate lower acquisition gains, but they do not lead us to reject hypothesis H1.

**3.6 Specification Checking Procedures**

As a first specification-checking procedure, we estimate Equation (4) with alternative measures of tax aggressiveness: abnormal book-tax differences (*ABTD*), discretionary book-tax differences (*DTAX*), and cash effective tax rates (*CETR*). The results are reported in Tables 4. Using *ABTD* and *DTAX* to measure tax aggressiveness produces similar results. In particular, the coefficient on the negative portion of each *BTD* proxy is positive and statistically significant at the 5% level, consistent with the main results that reject the null form of hypothesis H2. These specification checks differ from the main results for the coefficient on *D_DTAX_POS*, which is positive at the 10% level of statistical significance with the *DTAX* proxy. This estimate suggests that controlling for the predictable components of total BTD may allow stronger tests of the hypothesis. However, we are reluctant to draw strong conclusions from a single estimate.[9]

The last regression reported in Table 4 show the results using *CETR* as the tax aggressiveness measure. Note that smaller values of *CETR* capture greater tax aggressiveness, reversing the signs on previous predictions. Thus, the coefficient on *D_CETR_POS*, for example, tests hypothesis H2, and the reported negative coefficient is consistent with the results

[8] While the coefficient on *D_BTD_NEG* is approximately the same across the three regressions, note that the inter-quartile ranges for *PCAR* and *ACAR* are approximately 9%, whereas the inter-quartile range for *TCAR* is 28%, suggesting that the relative magnitude of the effect is also smaller for the target shareholders. The results are also consistent with prior literature that suggests the gains from corporate acquisitions are mainly captured by shareholders of the targets rather than by those of the acquirers (Jensen and Ruback, 1983; Jarrell et al., 1988).

[9] When we repeat the specification checking with *ACAR* and *TCAR* as the dependent variables, the untabulated results support the findings in Table 3, or provide more reliable evidence. For example, with *TCAR* as the dependent measure and *DTAX* as the proxy, the coefficients on *D_DTAX_POS* and *D_DTAX_NEG* are 8.37, t-statistic of 1.71, and 7.71, t-statistic of 1.32, respectively.

using other tax aggressiveness measures. The coefficients on *D_CETR_NEG* are significantly positive at the 10% level using a two-tailed test, providing further evidence that acquisitions of less tax aggressive targets by more tax aggressive acquirers do not create acquisition gains.[10]

A second specification checking procedure is reported in Table 5. Hanlon and Slemrod (2009) document a negative stock price reaction to news about firms' involvements in tax shelters, suggesting that investors may view tax planning negatively when the firm is overly aggressive. In relation to this study, their results may imply that the reaction to an anticipated transfer of tax aggressiveness may relate to how aggressive the target is. Thus, we explore the association between tax aggressiveness transfers and acquisition gains as the target's tax aggressiveness increases.

To examine the degree to which the target's tax aggressiveness affects the association between tax aggressiveness transfers and acquisition gains, we include a measure of the target's tax aggressiveness ($BTD_{target}$) and its interaction with our tax aggressiveness transfer proxies in Equation (4). As shown in Table 5, the results indicate that the association between positive differences in BTD and acquisition gains (*PCAR* and *ACAR*) is significantly weaker when the target is more tax aggressive. This is consistent with the following interpretation. In general, there is no benefit to a target becoming more aggressive through a M&A deal; however, for target that are more aggressive prior to the deal, acquisitions by even more aggressive acquirers is valued negatively by the market. This implication is consistent with Hanlon and Slemrod (2009). However, we do not find a similar interaction effect for negative tax aggressiveness

[10] Because *CETR* exhibits significant cross-industry variation (Dyreng et al., 2008), our measure *D_CETR* may capture features of tax function of the acquirers that are non-transferrable such as industry-specific tax attributes (e.g., oil and gas extraction industry) or the extent of foreign operations. To ensure that this inconsistent result is not related to the differences in industry environment, we compute industry-mean-adjusted cash effective tax rates by subtracting the industry mean CETR from each firm's CETR. We then use the industry-mean-adjusted CETR to compute *D_CETR_POS* and *D_CETR_NEG* and re-estimate Equation (4). The results (untabulated) using industry-mean-adjusted CETR are similar to those using unadjusted CETR.

transfers. These findings suggest that, on average, investors view negatively reductions in the target's tax aggressiveness, independent of how aggressive the target is; however, they also view negatively the anticipated increase in the target's aggressiveness if the target is already on the more aggressive end of the spectrum.

As discussed in Section 3.4, there are some acquirers and targets with large negative pre-tax income in our sample; these loss firms lead to negative mean values of total BTD. Because it may be difficult to interpret the meaning of book-tax difference for firms with negative pre-tax income, we exclude these loss firms and re-estimate Equation (4) as a third specification check. In this untabulated test, the coefficients on *D_BTD_NEG* remain significantly positive in the regressions with *PCAR* and *ACAR* as the dependent variables (coefficients of 9.26 and 12.08, respectively, and t-statistics of 2.48 and 2.77, respectively). The coefficient on *D_BTD_NEG* is positive in the regressions with *TCAR*, but only at the 10% level of statistical significance using a one-tailed test. None of the coefficients on *D_BTD_POS* are statistically different from zero. Overall, the results suggest that the main results are not affected by the presence of loss firms in the sample.

In a final specification check, we note that our tax aggressiveness transfer measures are constructed based on the merging firms' BTD one fiscal year prior to the acquisition announcement date. Such a one-year measure could contain considerable measurement error. Thus, we conduct the main analyses using a proxy based on the merging firms' three-year average BTD measures, calculated by taking the BTDs over three years prior to the acquisition announcement date before scaling by average lagged assets.

The untabulated results of this exercise are similar to those using a single-year BTD measures: the coefficients on negative tax aggressive transfers are significantly positive in regressions with *PCAR* and *ACAR* as the dependent variables, and not statistically significant in

the regression with *TCAR* as the dependent variable. We so not find the coefficients on the positive three-year average BTD to be statistically significant with any of the dependent measures. Again, we consider these results to be consistent with our main conclusions.

# IV. Additional Analyses

### 4.1 The Role of the Acquirer's Corporate Governance

Prior research finds that the strength of corporate governance alters the association between tax aggressiveness and firm value (Desai and Dharmapala, 2009; Wilson, 2009). If aggressive tax planning is a tool for creating value in well-governed firms only, the observed associations between tax aggressiveness transfers and acquisition gains should be largely driven by the acquirer's corporate governance. To test this idea, we include an indicator variable of well-governed acquirers and its interaction with our tax aggressiveness transfer measures in the regressions. Following Wang and Xie (2008) and Hanlon and Slemrod (2009), we employ Gompers et al.'s (2003) index of shareholder rights to measure the acquirer's governance.

Gompers et al. (2003) construct a governance index based on 24 anti-takeover provisions that capture firms' shareholder rights, published by the Investor Responsibility Research Center (IRRC). Firms with many anti-takeover provisions are viewed as having weak corporate governance because it is difficult and costly for their shareholders to remove managers at those firms. We obtain the data for Gompers et al.'s (2003) shareholder rights index from Andrew Metrick's website.[11] The data period is between 1990 and 2009, based on IRRC publications in years 1990, 1993, 1995, 1998, 2000, 2002, 2004, and 2006. Following the method of Gompers et al. (2003), we assume that firms have the same governance provisions as they did in the previous publication year during the gap between each publication. We do not use the 2008 vintage of

[11] http://faculty.som.yale.edu/andrewmetrick/data.html

RiskMetrics governance data because it is not comparable with the data in the earlier IRRC publications (Bebchuk, Cohen, and Wang, 2013). Thus, for constructing the index between 2006 and 2009, we assume that the governance provisions remain unchanged from the 2006 IRRC volume until 2009.[12] Since IRRC covers large firms (e.g., firms included in the S&P 500 index or the corporation lists published by Fortune, Forbes, and BusinessWeek), our sample size is reduced to 464 M&A transactions after excluding acquirers that were not covered by IRRC.

To test whether acquirer corporate governance is a determinant of the associations observed in our previous findings, we estimate the following piecewise regression model (deal and time subscripts suppressed):

$$PCAR = \alpha + \alpha_1 ID\_BTD\_POS + \beta_1 D\_BTD\_POS + \beta_2 D\_BTD\_NEG \quad (5)$$
$$+ \beta_3 GOV + \beta_4 D\_BTD\_POS \times GOV + \beta_5 D\_BTD\_NEG \times GOV + \boldsymbol{X}'\zeta + t + \varepsilon$$

where *PCAR* is the abnormal return of a value-weighted portfolio of the acquirer and the target, *D_BTD_POS* (*D_BTD_NEG*) is our proxy for positive (negative) tax aggressiveness transfers, *ID_BTD_POS* is an indicator variable equals one if *D_BTD* is greater than zero, *GOV* is an indicator variable that equals one if the acquirer is well-governed. We define an acquirer as well governed if it has a below-median Gompers et al.'s (2003) shareholder rights index in the sample. We interact *GOV* with each of *D_BTD_POS* and *D_BTD_NEG* to examine whether the acquirer's governance affects the associations between tax aggressiveness transfers and acquisition gains. If the shareholder wealth effects are significantly stronger for well-governed acquirers than for poorly governed acquirers, we expect $\beta_4$ and $\beta_5$ to be significantly positive.

Since the governance index data is only available for large firms, the sample size is reduced substantially after excluding acquirers with missing governance data. To ensure that the

[12] The results are qualitatively similar if we assume that the governance provisions remain unchanged for two years (instead of three years) from the 2006 IRRC volume to the 2008 volume.

results are not sensitive to a sample of larger firms, we estimate the base-line model of Equation (4) using the subsample. As shown in Table 6 (columns 1), the results on the subsample are similar to those using the full sample as shown in Table 3 with respect to hypothesis H2; however, with the reduced sample of larger firms, the results also allow us to reject the null form of hypothesis H1 at the 5% level of statistical significance.

The estimation results of Equation (5) are presented in Table 6 (columns 2 to 4). In both regressions of *PCAR* and *ACAR*, the coefficients on the interaction terms (*D_BTD_POS*×*GOV* and *D_BTD_NEG*×*GOV*) are both significantly positive at the 1% level, suggesting that the shareholder wealth effects of tax aggressiveness transfers are significantly more pronounced for well-governed acquirers. The total effects of tax aggressiveness transfers on acquisition gains for well-governed acquirers (i.e., *D_BTD_POS* + *D_BTD_POS*×*GOV* and *D_BTD_NEG* + *D_BTD_NEG*×*GOV*) are also significantly positive. These results suggest that when the acquirer's governance is strong, acquisitions of targets with lower tax aggressiveness by acquirers with higher tax aggressiveness generate significantly higher acquisition gains, and vice versa. Compared to the results reported in Table 3, the results from Equation (5) portray a richer picture of the relationship between tax aggressiveness transfers and shareholder wealth.

We document an opposite result for poorly governed acquirers; the coefficients on *D_BTD_NEG* are significantly negative on both *PCAR* and *ACAR* regressions, at the 10% and 1% levels, respectively, suggesting that for poorly-governed acquirers, acquisitions of more tax aggressive targets by less tax aggressive acquirers generate higher acquirer returns. This finding is consistent with the interpretation that, for poorly governed acquirers, acquirer shareholders consider decreases in tax aggressiveness favorable because tax avoidance facilitates rent extraction in entrenched firms (Desai et al., 2007; Desai and Dharmapala, 2009). Consistent with the general conclusions from previous results, we find no significant coefficients on test

variables when the dependent variable is TCAR. Overall, our findings indicate that tax aggressiveness transfers in M&A has a valuation impact on acquirer shareholders and that the impact hinges on the strength of the acquirers' corporate governance. These results are consistent with the agency view of tax avoidance that argues corporate governance is an important determinant of the shareholder wealth effects of tax aggressiveness.[13]

**4.2 The Role of the Target's Corporate Governance**

In the previous section, we examine the role of the acquirer's corporate governance in the shareholder wealth effects of tax aggressiveness transfers. Because our hypotheses consider both the acquirer's and the target's tax aggressiveness, it is likely that the target's corporate governance may also affect the association between tax aggressiveness transfers and acquisition gains. In particular, compared to a well-governed target, a poorly governed target is expected to benefit more from the acquirer's strong governance, thus having a stronger tax aggressiveness transfer effect on acquisition gains. To investigate this possibility in untabulated analyses, we follow the approach of Wang and Xie (2008) to measure the difference in shareholder rights between target *j* and acquirer *i* as follows:

$$DGOV_{i,j,t\text{-}1} = GOV\_INDEX_{j,t\text{-}1} - GOV\_INDEX_{i,t\text{-}1} \quad (6)$$

where *GOV_INDEX* is Gompers et al.'s (2003) governance measure. The higher the value of DGOV, the stronger the acquirer's governance strength relative to the target's. We include this relative governance strength measure (*DGOV*) and its interaction with our dependent variables of interest (*D_BTD_POS* and *D_BTD_NEG*) in our baseline model Equation (4). Since we predict a stronger tax aggressiveness transfer effect when the acquirer's governance is stronger than the

[13] As a specification check, we use a continuous (normalized) measure of the acquirer's governance index following the approach of Hanlon and Slemrod (2009). In addition, we also employ the entrenchment index developed by Bebchuk, Cohen, and Ferrell's (2009) as an alternative measure of corporate governance. In either approach, we reach similar conclusion that the association between tax aggressiveness transfers and acquisition returns is significantly stronger for well-governed acquirers.

target's, we expect a positive coefficient on both interaction terms. Note that due to the high number of targets with missing *GOV_INDEX*, the inclusion of *DGOV* substantially reduces the sample size to 153 transactions. However, following Hanlon and Slemrod's (2009) approach, when the target's *GOV_INDEX* is missing, we impute their missing value with zero (i.e., the mean of normalized *GOV_INDEX*) before we compute *DGOV*. We include an indicator variable (*MISS_TGOV*) indicating the target with an imputed *GOV_INDEX* in the regressions.

Consistent with our expectations, the coefficients on the *D_BTD_NEG*×*DGOV* are significantly positive in the *PCAR* and *ACAR* regressions (untabulated). The coefficient on *D_BTD_POS*×*DGOV* is also positive and significant in the PCAR regression. Again, the relative governance strength does not have a significant influence on the tax aggressiveness effect for target shareholders. Taken together with our results in the previous section, our findings are consistent with the agency view of tax avoidance (Desai et al., 2007; Desai and Dharmapala, 2009) that the effects of tax aggressiveness transfers are more pronounced in acquisitions where the acquirer's governance is stronger than the target's.

**4.3 The Role of Tax Internal Control Weaknesses**

In this section, we investigate whether tax internal control quality affects the wealth effects of tax aggressiveness transfers. Bauer (2012) argues that firms with tax-related internal control weaknesses (tax ICWs) are less effective tax planners. He finds that firms with tax ICWs have higher cash effective tax rates than firms without tax ICWs. Based on his findings, we predict that the existence of tax ICWs would reduce the transfer of tax aggressiveness and hence its effect on firm value. For example, deficiencies in tax internal control may substantially increase the risk of future IRS disputes and reduce the efficiency of post-acquisition integration of the target's tax function into the acquirer's. Thus, we predict an asymmetric effect of tax ICWs on the wealth effects of tax aggressiveness transfers: tax ICWs impede value creation when the

acquirer was more tax aggressive than the target, while tax ICWs intensify the value destruction when the acquirer was less tax aggressive than the target.

To examine the effects of tax ICWs, we create a dummy variable *TAX_ICW* indicating acquirers that report at least one tax ICW over the past three fiscal years prior to the acquisition announcement year. We identified 20 acquirers with tax ICWs out of a sample of 252 transactions (7.9 percent). We include *TAX_ICW* and its interaction with our tax aggressiveness variables in Equation (4). Reported in Table 7, the results show that the coefficients on the interaction terms (*D_BTD_POS*×*TAX_ICW* and *D_BTD_NEG*×*TAX_ICW*) are of the predicted signs, and are generally statistically significant at the 5% level. As a specification check, we also include the acquirer's auditor (*Big 4*) and the target's discretionary accruals (*ACCQ*) in the regressions to control for the potential effects of the acquirer's auditor choice and the target's accounting information quality on acquisition gains in our sample (Louis, 2005; McNichols and Stubben, 2012; Raman et al., 2013). The untabulated results show that the coefficients reported in Table 7 are not affected by the target's accounting information quality or the acquirer's auditor choice. While we recognize that the results of the above tests are based on a relatively small sample, they offer interesting insights into how the wealth effects of tax aggressiveness transfers are moderated by the acquirer's tax internal control quality.

# V. Conclusions

In this study, we examine the valuation effect of changing tax aggressiveness in the context of M&A. Building on the assumption that the acquirer's level of tax aggressiveness will apply to its target upon a successful acquisition, we test whether acquisitions of targets with low tax aggressiveness by acquirers with high tax aggressiveness generate higher acquisition gains,

and vice versa. To test our predictions, we use the relative tax aggressiveness of the acquirer and the target to proxy for tax aggressiveness transfers from the acquirer to the target.

Consistent with our predictions, the results suggest that acquisitions of targets with higher tax aggressiveness by acquirers with lower tax aggressiveness generate significantly lower returns, while acquisitions of less tax aggressive targets by more tax aggressive acquirers generate higher acquisition gains. However, the evidence is weaker in the latter direction. Overall, our findings suggest that the shareholder wealth effects of tax aggressiveness transfers are driven by the value-reducing effect of decreases in tax aggressiveness. Our results also indicate that this wealth effect of negative tax aggressiveness transfers is predominately accrued to acquirer shareholders rather than to target shareholders.

Furthermore, we examine the role of the acquirer's governance in the valuation effects of tax aggressiveness transfers. Consistent with extant research (Desai and Dharmapala, 2009; Wilson, 2009), we find that the acquirer's corporate governance is a key determinant of the shareholder wealth effects of tax aggressiveness. In particular, we find that acquisitions of more tax aggressive targets by well-governed, less tax aggressive acquirers generate lower acquisition gains, and vice versa. Our results are robust to the subsample of firms with non-negative pre-tax income.

This paper contributes to the literature that examines the consequences of tax avoidance by documenting shareholder wealth effects of tax aggressiveness in a setting where the change in tax aggressiveness is observable and exogenous to the (target) firm's activities. It also contributes to the M&A literature by exploring tax aggressiveness transfers as a source of both gains and losses in an M&A transaction.

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## Appendix
## Variable Definitions and Construction

| Variable | Definitions and Construction |
|---|---|
| *BTD* | Total book-tax difference, based on Manzon and Plesko (2002):<br><br>[(Pre-tax income – taxable income – state income taxes – other income taxes – equity in earnings) / lagged assets ]<br>where taxable income = {[ (current federal tax expense + current foreign tax expense ) – change in tax loss carry-forward ] / statutory tax rate}<br><br>Observations with negative taxable income are excluded. |
| *ABTD* | Abnormal total book-tax difference, based on Desai and Dharmapala (2006) is the residuals from the following regression:<br><br>$$BTD_{i,t-1} = \beta DA_{i,t-1} + \mu_i + \varepsilon_{i,t-1}$$<br><br>where *BTD* is total book-tax difference as defined above. DA is discretionary accruals following the methodology in Dechow et al. (1995). This variable is winsorized at the 1% and 99% level. |
| *DTAX* | Discretionary permanent differences based on Frank et al. (2009) is the residuals from the following regression:<br><br>$$PERMDIFF_{i,t-1} = \alpha_0 + \alpha_1 INTANG_{i,t-1} + \alpha_2 UNCON_{i,t-1} + \alpha_3 MI_{i,t-1} + \alpha_4 CSTE_{i,t-1} + \alpha_5 \Delta NOL_{i,t-1} + \alpha_6 PERMDIFF_{i,t-2} + \alpha_7 FOREIGN_{i,t-1} + \varepsilon_{i,t-1}$$<br><br>where *PERMDIFF* = [(Pre-tax income – taxable income) – (deferred tax expense/statutory tax rate)], *INTANG* is goodwill and other intangibles, *UNCON* is income (loss) reported under the equity method, *MI* is income (loss) from minority interest, *CSTE* is current state income tax expense, $\Delta NOL$ is change in net operating loss carry-forwards, *FOREIGN* is an indicator variable that equals one if the firm has foreign income, and zero otherwise. *PERMDIFF*, *INTANG*, *UNCON*, *CSTE*, and $\Delta NOL$ are all scaled by lagged assets. |
| *CETR* | Three-year cash effective tax rate based on Dyreng et al. (2008):<br><br>$$CETR_{t-1,i} = \frac{\sum_{n=t-3}^{t-1} Cash\ Tax\ Paid_{n,i}}{\sum_{n=t-3}^{t-1} PTBI_{n,i} - Special\ \ Items_{n,i}}$$<br><br>This variable is truncated at [0, 1]. Observations with a negative denominator are excluded. |
| *ID_POS* | Indicator variable: 1 for positive tax aggressiveness transfers (i.e., D_BTD > 0), and zero otherwise. |
| *PCAR* | Five-day cumulative abnormal return for a value-weighted portfolio of the acquirer and the target returns over the event window [-2, +2], where day 0 is the announcement date of the merger. The weights for the acquirer and the target are based on their market capitalizations at the 6th trading day prior to the acquisition announcement. The target weight is adjusted for the acquirer's ownership before the merger. Abnormal return is calculated using the market model with parameters estimated over the 200-day window between acquisition announcement day -210 and day -11. |

| | |
|---|---|
| *ACAR* | Five-day acquirer cumulative abnormal return over the event window [-2, +2], where day 0 is the acquisition announcement date. |
| *TCAR* | Five-day target cumulative abnormal return over the event window [-2, +2], where day 0 is the acquisition announcement date. |
| *SIZE* | Natural logarithm of market value of outstanding equity. |
| *TOBINSQ* | Market value of assets over book value of assets, where the market value of assets is computed as the book value of assets plus the market value of common stock less the sum of the book value of common stock. |
| *ROA* | Pre-tax income, scaled by lagged assets. |
| *LEV* | Book value of debts, scaled by lagged assets. |
| *GOV_INDEX* | Gompers et al.'s (2003) index of shareholder rights. |
| *GOV* | Indicator variable: 1 for an acquirer with a below-median GOV_INDEX in the sample, and 0 otherwise. |
| *ACCQ* | Discretionary accruals, estimated from Dechow et al.'s (1995) model. |
| *BIG 4* | Indicator variable: 1 for acquirers that employ a Big 4 auditor in the fiscal year of the acquisition announcement, and 0 otherwise. |
| *TAX_ICW* | Indicator variable: 1 for acquirers that report at least one tax internal control weakness over the past three fiscal years prior to the acquisition announcement year, and 0 otherwise. |
| *TENDER* | Indicator variable: 1 for tender offer, and 0 otherwise. |
| *ALLSTOCK* | Indicator variable: 1 for 100% stock-financed deal, and 0 otherwise. |
| *DEALRATIO* | The total deal value (sum of all considerations paid, excluding fees) divided by the acquirer's pre-announcement market value of equity; market value of equity is defined as the number of shares outstanding multiplied by the stock price at the $6^{th}$ trading day prior to the acquisition announcement date. |
| *HIGHTECH* | Indicator variable: 1 if acquirer and target are both in a high-tech industry, and 0 otherwise.<br><br>High-tech industries are as those in SIC codes 2833-2836 (Pharmaceuticals), 3570-3577 (Computers), 3600-3674 (Electronics), 7371-7379 (Programming), or 8731-8734 (R&D Services). |
| *INDMATCH* | Indicator variable: 1 if acquirer and target share a 2-digit SIC industry, and 0 otherwise. |

**Table 1**
**Descriptive Statistics**

| Variable | N | Mean | Standard Deviation | Q1 | Median | Q3 |
|---|---|---|---|---|---|---|
| **Tax Aggressiveness Measures** | | | | | | |
| *BTD* $_{Acquirer}$ | 844 | -0.068 | 0.192 | -0.069 | -0.013 | 0.022 |
| *BTD* $_{Target}$ | 844 | -0.092 | 0.218 | -0.135 | -0.027 | 0.016 |
| *D_BTD* $_{(Acquirer - Target)}$ | 844 | 0.030 | 0.235 | -0.038 | 0.009 | 0.092 |
| *ABTD* $_{Acquirer}$ | 844 | 0.081 | 0.196 | 0.073 | 0.130 | 0.164 |
| *ABTD* $_{Target}$ | 844 | 0.045 | 0.242 | 0.023 | 0.117 | 0.165 |
| *D_ABTD* $_{(Acquirer - Target)}$ | 844 | 0.036 | 0.246 | -0.045 | 0.008 | 0.087 |
| *DTAX* $_{Acquirer}$ | 844 | 0.018 | 0.412 | -0.032 | 0.044 | 0.091 |
| *DTAX* $_{Target}$ | 844 | 0.011 | 0.285 | -0.017 | 0.045 | 0.087 |
| *D_DTAX* $_{(Acquirer - Target)}$ | 844 | 0.032 | 0.249 | -0.065 | 0.000 | 0.068 |
| *CETR* $_{Acquirer}$ | 758 | 0.266 | 0.148 | 0.173 | 0.265 | 0.339 |
| *CETR* $_{Target}$ | 758 | 0.271 | 0.185 | 0.149 | 0.264 | 0.357 |
| *D_CETR* $_{(Acquirer - Target)}$ | 758 | -0.006 | 0.209 | -0.090 | 0.000 | 0.101 |
| *BTD* $_{Acquirer\ [PI \geq 0]}$ | 496 | -0.003 | 0.081 | -0.035 | 0.001 | 0.033 |
| *BTD* $_{Target\ [PI \geq 0]}$ | 496 | 0.006 | 0.104 | -0.028 | 0.004 | 0.036 |
| *D_BTD* $_{(Acquirer - Target)\ [PI \geq 0]}$ | 496 | -0.009 | 0.122 | -0.044 | 0.000 | 0.038 |
| **Acquirer Characteristics** | | | | | | |
| *Total Assets* [MM] | 844 | 6,133 | 16,936 | 224.7 | 892.2 | 3,772 |
| *TOBINSQ* | 844 | 2.968 | 4.917 | 1.353 | 1.921 | 3.073 |
| *LEV* | 844 | 0.197 | 0.201 | 0.023 | 0.161 | 0.310 |
| *ROA* | 844 | 0.113 | 0.181 | 0.078 | 0.138 | 0.202 |
| *GOV_INDEX* | 464 | 9.127 | 2.717 | 7.000 | 9.000 | 11.00 |
| *ACCQ* | 252 | 0.015 | 0.441 | -0.066 | 0.002 | 0.056 |
| *BIG4* | 252 | 0.865 | 0.343 | 1.000 | 1.000 | 1.000 |
| *TAX_ICW* | 252 | 0.079 | 0.271 | 0.000 | 0.000 | 0.000 |
| **Target Characteristics** | | | | | | |
| *Total Assets* [MM] | 844 | 1,287 | 10,290 | 51.05 | 127.0 | 436.1 |
| *TOBINSQ* | 844 | 2.250 | 2.628 | 1.641 | 1.574 | 2.374 |
| *LEV* | 844 | 0.202 | 0.261 | 0.005 | 0.110 | 0.331 |
| *ROA* | 844 | 0.034 | 0.261 | 0.006 | 0.104 | 0.159 |

**Table 1 (continued)**
**Descriptive Statistics**

| Variable | N | Mean | Standard Deviation | Q1 | Median | Q3 |
|---|---|---|---|---|---|---|
| **Deal Characteristics** | | | | | | |
| *PCAR* (%) | 844 | 2.096 | 9.892 | -2.544 | 1.326 | 6.449 |
| *ACAR* (%) | 844 | -0.831 | 10.60 | -5.373 | -0.659 | 3.564 |
| *TCAR* (%) | 844 | 24.48 | 27.25 | 7.506 | 20.10 | 35.33 |
| *TENDER* (dummy) | 844 | 0.236 | 0.434 | 0.000 | 0.000 | 1.000 |
| *ALLSTOCK* (dummy) | 844 | 0.336 | 0.473 | 0.000 | 0.000 | 1.000 |
| *DEALRATIO* | 844 | 0.489 | 0.869 | 0.075 | 0.241 | 0.576 |
| *HIGHTECH* (dummy) | 844 | 0.362 | 0.481 | 0.000 | 0.000 | 1.000 |
| *INDMATCH* (dummy) | 844 | 0.679 | 0.467 | 0.000 | 1.000 | 1.000 |

This table presents descriptive statistics of the sample. Please refer to the Appendix for variable description.

**Table 2 – Panel A**
**Correlation Matrix for Test Variables**

| | Variable | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|---|
| (1) | *PCAR* | | | | | | |
| (2) | *ACAR* | **0.85** | | | | | |
| (3) | *TCAR* | **0.33** | **0.16** | | | | |
| (4) | $D\_BTD_{Acquirer - Target}$ | **0.07** | **0.13** | **0.13** | | | |
| (5) | $D\_ABTD_{Acquirer - Target}$ | **0.06** | **0.12** | **0.12** | **0.85** | | |
| (6) | $D\_DTAX_{Acquirer - Target}$ | **0.06** | **0.08** | **0.14** | **0.68** | **0.64** | |
| (7) | $D\_CETR_{Acquirer - Target}$ | **-0.07** | 0.04 | -0.06 | **-0.17** | **-0.18** | -0.03 |

This table presents Pearson correlation coefficients for the return and tax aggressiveness transfer variables. The coefficients in bold are all statistically significant at less than the 10% level in two-tailed tests. Please refer to the Appendix for variable description.

**Table 2 – Panel B**
**Correlation Matrix for Control Variables**

| | Variable | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) | *SIZE* $_{Acquirer}$ | | | | | | | | | | | | |
| (2) | *TOBINSQ* $_{Acquirer}$ | **0.15** | | | | | | | | | | | |
| (3) | *LEV* $_{Acquirer}$ | **-0.13** | **-0.23** | | | | | | | | | | |
| (4) | *ROA* $_{Acquirer}$ | **0.33** | **-0.16** | 0.03 | | | | | | | | | |
| (5) | *SIZE* $_{Target}$ | **0.60** | **0.09** | 0.04 | **0.15** | | | | | | | | |
| (6) | *TOBINSQ* $_{Target}$ | **0.16** | **0.51** | **-0.18** | **-0.22** | **0.22** | | | | | | | |
| (7) | *LEV* $_{Target}$ | **-0.11** | **-0.18** | **0.55** | 0.05 | -0.05 | **-0.24** | | | | | | |
| (8) | *ROA* $_{Target}$ | **0.08** | **-0.17** | **0.18** | **0.45** | **0.29** | **-0.23** | **0.16** | | | | | |
| (9) | *TENDER* | **0.06** | **-0.06** | 0.01 | **0.14** | -0.02 | **-0.07** | 0.00 | 0.04 | | | | |
| (10) | *ALLSTOCK* | **-0.13** | **0.12** | **-0.15** | **-0.17** | **-0.06** | **0.19** | **-0.14** | **-0.11** | **-0.36** | | | |
| (11) | *DEALRATIO* | **-0.32** | -0.04 | **0.17** | **-0.23** | **0.10** | -0.02 | **0.14** | **0.08** | -0.04 | -0.01 | | |
| (12) | *HIGHTECH* | **0.09** | **0.09** | **-0.27** | -0.03 | 0.00 | **0.17** | **-0.28** | **-0.11** | -0.04 | **0.11** | **-0.08** | |
| (13) | *INDMATCH* | **-0.09** | 0.06 | -0.03 | -0.06 | 0.04 | 0.02 | -0.04 | **-0.07** | 0.01 | 0.03 | **0.09** | **0.21** |

This table presents Pearson correlation coefficients for the control variables. The coefficients in bold are all statistically significant at less than the 10% level in two-tailed tests. Please refer to the Appendix for variable description.

**Table 3**
**The Association between Tax Aggressiveness Transfers and Acquisition Gains**

| | *PCAR* | *ACAR* | *TCAR* |
|---|---|---|---|
| *D_BTD_POS* | 3.143 | 0.436 | 10.43 |
| | (1.073) | (0.143) | (1.506) |
| *D_BTD_NEG* | 10.09*** | 10.11*** | 10.56 |
| | (2.889) | (2.721) | (1.416) |
| **Acquirer Traits** | | | |
| *SIZE* | -1.029*** | -0.227 | 4.543*** |
| | (-4.124) | (-0.835) | (6.284) |
| *TOBINSQ* | 0.032 | -0.056 | 0.053 |
| | (0.474) | (-0.789) | (0.462) |
| *ROA* | -2.053 | -2.748 | -3.687 |
| | (-0.552) | (-0.836) | (-0.473) |
| *LEV* | 1.572 | 3.975* | -8.977 |
| | (0.879) | (1.905) | (-1.469) |
| **Target Traits** | | | |
| *SIZE* | -0.270 | -0.608** | -6.254*** |
| | (-1.059) | (-2.141) | (-7.438) |
| *TOBINSQ* | -0.612*** | -0.278 | -0.854*** |
| | (-3.345) | (-1.610) | (-2.769) |
| *ROA* | 0.982 | -1.175 | 0.791 |
| | (0.340) | (-0.378) | (0.138) |
| *LEV* | -2.493** | -1.593 | 2.269 |
| | (-2.020) | (-1.229) | (0.397) |
| **Deal Traits** | | | |
| *TENDER* | 2.146*** | 2.031** | 5.212** |
| | (2.594) | (2.290) | (2.201) |
| *ALLSTOCK* | -0.702 | -1.802* | -3.222 |
| | (-0.825) | (-1.831) | (-1.549) |
| *DEALRATIO* | 1.200*** | -0.610 | 1.252 |
| | (2.838) | (-0.882) | (1.556) |
| *HIGHTECH* | 0.280 | -1.139 | -1.592 |
| | (0.363) | (-1.335) | (-0.848) |
| *IND_MATCH* | -0.817 | -0.891 | 0.281 |
| | (-1.221) | (-1.239) | (0.142) |
| Intercept | 16.54*** | 8.970*** | 30.82*** |
| | (6.180) | (3.301) | (4.324) |
| *ID_POS* | -1.083 | 0.384 | -3.097 |
| | (-1.400) | (0.450) | (-1.390) |
| Adjusted $R^2$ | 0.176 | 0.142 | 0.191 |
| N | 844 | 844 | 844 |

This table reports regression results of acquisition gains on tax aggressiveness transfers. Calendar year fixed-effects are included. Reported in parentheses are t-statistics computed using heteroskedasticity-consistent standard errors adjusted for acquirer clustering; ***, **, * represent significance levels (two-tailed) at 1%, 5% and 10%, respectively.

**Table 4**
**The Association between Tax Aggressiveness Transfers and Acquisition Gains for *PCAR***

| | (1) *BTD* | (2) *ABTD* | (3) *DTAX* | (4) *CETR* |
|---|---|---|---|---|
| *D_Proxy_POS* | 3.143 | 3.340 | 4.025* | -3.157 |
| | (1.073) | (0.946) | (1.923) | (-1.334) |
| *D_Proxy_NEG* | 10.09*** | 9.612** | 8.779*** | 5.872 |
| | (2.889) | (2.153) | (2.772) | (1.889) |
| **Acquirer Traits** | | | | |
| *SIZE* | -1.029*** | -0.967*** | -0.996*** | -1.401*** |
| | (-4.124) | (-3.831) | (-3.983) | (-5.760) |
| *TOBINSQ* | 0.032 | 0.033 | 0.042 | 0.016 |
| | (0.474) | (0.491) | (0.631) | (0.070) |
| *ROA* | -2.053 | -2.804 | -2.283 | 0.396 |
| | (-0.552) | (-0.701) | (-0.630) | (0.098) |
| *LEV* | 1.572 | 0.912 | 1.948 | -0.756 |
| | (0.879) | (0.494) | (1.108) | (-0.396) |
| **Target Traits** | | | | |
| *SIZE* | -0.270 | -0.319 | -0.270 | -0.154 |
| | (-1.059) | (-1.230) | (-1.051) | (-0.656) |
| *TOBINSQ* | -0.612*** | -0.639*** | -0.643*** | 0.087 |
| | (-3.345) | (-3.477) | (-3.514) | (0.329) |
| *ROA* | 0.982 | 1.767 | 1.406 | 0.286 |
| | (0.340) | (0.541) | (0.598) | (0.085) |
| *LEV* | -2.493** | -1.819 | -2.784** | 0.187 |
| | (-2.020) | (-1.491) | (-2.376) | (0.131) |
| **Deal Traits** | | | | |
| *TENDER* | 2.146*** | 2.233*** | 1.984** | 2.137*** |
| | (2.594) | (2.625) | (2.299) | (3.179) |
| *ALLSTOCK* | -0.702 | -0.698 | -1.016 | -0.707 |
| | (-0.825) | (-0.819) | (-1.212) | (-0.932) |
| *DEALRATIO* | 1.200*** | 1.327*** | 1.290*** | 1.311** |
| | (2.838) | (2.813) | (3.204) | (2.219) |
| *HIGHTECH* | 0.280 | 0.196 | 0.212 | 0.451 |
| | (0.363) | (0.254) | (0.279) | (0.681) |
| *IND_MATCH* | -0.817 | -0.788 | -0.768 | -0.058 |
| | (-1.221) | (-1.199) | (-1.159) | (-0.107) |
| Intercept | 16.54*** | 15.75*** | 15.72*** | 14.21*** |
| | (6.180) | (5.794) | (4.784) | (6.006) |
| *ID_POS* | -1.083 | -0.028 | -0.055 | 0.156 |
| | (-1.400) | (-0.035) | (-0.032) | (0.193) |
| Adjusted $R^2$ | 0.176 | 0.172 | 0.182 | 0.189 |
| N | 844 | 844 | 844 | 758 |

This table reports regression results of acquisition gains on tax aggressiveness transfers. Calendar year fixed-effects are included. Reported in parentheses are t-statistics computed using heteroskedasticity-consistent standard errors adjusted for acquirer clustering; ***, **, * represent significance levels (two-tailed) at 1%, 5% and 10%, respectively.

**Table 5**
**The Role of the Target's Tax Aggressiveness on the Association between Tax Aggressiveness Transfers and Acquisition Gains**

| | Pred. Sign | *PCAR* | *ACAR* | *TCAR* |
|---|---|---|---|---|
| *D_BTD_POS* | | -4.213 | -8.014 | 17.41 |
| | | (-0.691) | (-1.123) | (1.040) |
| *D_BTD_NEG* | | 9.947*** | 10.61*** | 11.74 |
| | | (2.785) | (2.827) | (1.538) |
| *D_BTD_POS×BTD$_{target}$* | – | -8.770* | -13.29** | 4.753 |
| | | (-1.487) | (-1.997) | (0.278) |
| *D_BTD_NEG×BTD$_{target}$* | – | -9.006 | 6.196 | -8.512 |
| | | (-0.769) | (0.518) | (-0.349) |
| **Acquirer Traits** | | | | |
| *SIZE* | | -0.994*** | -0.217 | 4.500*** |
| | | (-3.914) | (-0.792) | (6.170) |
| *TOBINSQ* | | 0.026 | -0.034 | 0.086 |
| | | (0.364) | (-0.425) | (0.672) |
| *ROA* | | -2.163 | -2.960 | -5.957 |
| | | (-0.542) | (-0.775) | (-0.731) |
| *LEV* | | 1.590 | 3.946* | -8.935 |
| | | (0.886) | (1.886) | (-1.455) |
| **Target Traits** | | | | |
| *BTD* | | 0.107 | 3.738 | 4.716 |
| | | (0.025) | (0.741) | (0.573) |
| *SIZE* | | -0.337 | -0.663** | -6.171*** |
| | | (-1.329) | (-2.339) | (-7.241) |
| *TOBINSQ* | | -0.601*** | -0.266 | -0.785** |
| | | (-3.411) | (-1.611) | (-2.471) |
| *ROA* | | 0.911 | -2.106 | -0.649 |
| | | (0.313) | (-0.668) | (-0.102) |
| *LEV* | | -2.588** | -1.726 | 2.339 |
| | | (-2.167) | (-1.341) | (0.402) |
| **Deal Traits** | | | | |
| *TENDER* | | 2.079** | 2.018** | 5.416** |
| | | (2.474) | (2.225) | (2.229) |
| *ALLSTOCK* | | -0.713 | -1.776* | -3.092 |
| | | (-0.846) | (-1.815) | (-1.469) |
| *DEALRATIO* | | 1.280*** | -0.600 | 1.173 |
| | | (3.000) | (-0.874) | (1.438) |
| *HIGHTECH* | | 0.266 | -1.081 | -1.504 |
| | | (0.350) | (-1.278) | (-0.802) |
| *IND_MATCH* | | -0.750 | -0.786 | 0.205 |
| | | (-1.119) | (-1.091) | (0.103) |
| Intercept | | 16.78*** | 9.346*** | 30.73*** |
| | | (6.217) | (3.423) | (4.302) |
| *ID_POS* | | -0.596 | 1.190 | -3.229 |
| | | (-0.682) | (1.209) | (-1.349) |

| | | | |
|---|---|---|---|
| Adjusted $R^2$ | 0.179 | 0.146 | 0.191 |
| N | 844 | 844 | 844 |

This table reports regression results of acquisition gains on tax aggressiveness transfers. Calendar year fixed-effects are included. Reported in parentheses are t-statistics computed using heteroskedasticity-consistent standard errors adjusted for acquirer clustering; ***, **, * represent significance levels (one-tailed for predicted variables, and two-tailed for others) at 1%, 5% and 10%, respectively.

**Table 6**
**The Role of the Acquirer's Governance on the Association between Tax Aggressiveness Transfers and Acquisition Gains**

| | Pred. Sign | *PCAR* | *PCAR* | *ACAR* | *TCAR* |
|---|---|---|---|---|---|
| *D_BTD_POS* | | 2.342* | -0.765 | -0.631 | -3.199 |
| | | (1.865) | (-0.579) | (-0.367) | (-0.265) |
| *D_BTD_NEG* | | 7.416*** | -10.59* | -18.46*** | 21.52 |
| | | (2.589) | (-1.891) | (-2.981) | (1.053) |
| *D_BTD_POS×GOV* | + | | 4.202*** | 3.714*** | 9.953 |
| | | | (3.240) | (2.445) | (0.798) |
| *D_BTD_NEG×GOV* | + | | 19.25*** | 25.48*** | -6.737 |
| | | | (3.248) | (4.099) | (-0.311) |
| **Acquirer Traits** | | | | | |
| *GOV* | | 0.455 | 0.773 | 0.808 | 0.961 |
| | | (0.809) | (1.209) | (1.187) | (0.358) |
| *SIZE* | | -0.900*** | -0.956*** | -0.308 | 4.015*** |
| | | (-3.279) | (-3.569) | (-0.885) | (3.363) |
| *TOBINSQ* | | 0.263 | 0.293 | 0.169 | -0.610 |
| | | (1.294) | (1.296) | (0.519) | (-0.811) |
| *ROA* | | 1.374 | 1.089 | 0.811 | 6.738 |
| | | (0.349) | (0.266) | (0.153) | (0.446) |
| *LEV* | | -0.246 | 0.490 | 3.519* | -25.04*** |
| | | (-0.131) | (0.258) | (1.750) | (-3.211) |
| **Target Traits** | | | | | |
| *SIZE* | | -0.296 | -0.238 | -0.225 | -5.318*** |
| | | (-1.166) | (-0.959) | (-0.766) | (-4.803) |
| *TOBINSQ* | | -0.319** | -0.345*** | -0.300* | -0.648 |
| | | (-2.205) | (-2.711) | (-1.721) | (-1.033) |
| *ROA* | | 1.855 | 0.886 | -0.793 | -7.140 |
| | | (0.907) | (0.443) | (-0.311) | (-0.578) |
| *LEV* | | -1.363 | -1.735* | -0.328 | 3.073 |
| | | (-1.286) | (-1.847) | (-0.337) | (0.492) |
| **Deal Traits** | | | | | |
| *TENDER* | | 0.293 | 0.424 | 0.047 | 3.108 |
| | | (0.450) | (0.649) | (0.068) | (1.094) |
| *ALLSTOCK* | | -0.245 | -0.466 | -0.827 | -2.189 |
| | | (-0.305) | (-0.578) | (-0.834) | (-0.740) |
| *DEALRATIO* | | 1.782* | 1.678* | -2.144** | 3.171 |
| | | (1.851) | (1.740) | (-2.227) | (1.130) |
| *HIGHTECH* | | -0.631 | -0.674 | -2.031** | -2.024 |
| | | (-0.891) | (-0.960) | (-2.563) | (-0.736) |
| *IND_MATCH* | | -0.618 | -0.752 | -0.416 | 0.216 |
| | | (-0.979) | (-1.187) | (-0.589) | (0.085) |
| Intercept | | 12.89*** | 12.76*** | 5.737* | 28.87*** |
| | | (4.880) | (4.798) | (1.826) | (2.812) |
| *ID_POS* | | -0.173 | 0.186 | 0.808 | -1.704 |
| | | (-0.290) | (0.305) | (1.112) | (-0.724) |

| | | | | |
|---|---|---|---|---|
| Adjusted $R^2$ | 0.182 | 0.203 | 0.164 | 0.214 |
| N | 464 | 464 | 464 | 464 |

This table reports regression results of acquisition gains on tax aggressiveness transfers. Calendar year fixed-effects are included. Reported in parentheses are t-statistics computed using heteroskedasticity-consistent standard errors adjusted for acquirer clustering; ***, **, * represent significance levels (one-tailed for predicted variables, and two-tailed for others) at 1%, 5% and 10%, respectively.

**Table 7**
**The Role of the Acquirer's Tax Internal Control Weakness on the Association between Tax Aggressiveness Transfers and Acquisition Gains**

| | Pred. Sign | *PCAR* | *ACAR* | *TCAR* |
|---|---|---|---|---|
| *D_BTD_POS* | | 4.712 | 1.132 | 17.65 |
| | | (1.482) | (0.321) | (1.309) |
| *D_BTD_NEG* | | 15.78* | 24.16*** | -14.46 |
| | | (1.952) | (4.469) | (-0.580) |
| *D_BTD_POS×TAX_ICW* | – | -30.13** | -27.43 | -142.7*** |
| | | (-1.663) | (-1.211) | (-2.946) |
| *D_BTD_NEG×TAX_ICW* | + | 38.97*** | 35.88*** | 71.76** |
| | | (3.460) | (3.182) | (1.898) |
| **Acquirer Traits** | | | | |
| *ACCQ* | | 0.190 | -0.503 | 0.124 |
| | | (0.238) | (-0.436) | (0.047) |
| *BIG4* | | 2.414 | 0.684 | 7.238 |
| | | (1.118) | (0.353) | (1.582) |
| *TAX_ICW* | | 2.853 | 3.789 | 12.42** |
| | | (1.110) | (1.206) | (2.156) |
| *SIZE* | | -1.182*** | -0.157 | 5.460*** |
| | | (-3.069) | (-0.337) | (3.253) |
| *TOBINSQ* | | 0.075 | -0.423 | -0.145 |
| | | (0.172) | (-1.131) | (-0.098) |
| *ROA* | | -0.014 | 2.122 | 9.767 |
| | | (-0.003) | (0.446) | (0.859) |
| *LEV* | | 0.782 | 3.615 | -5.465 |
| | | (0.270) | (1.145) | (-0.655) |
| **Target Traits** | | | | |
| *SIZE* | | -0.218 | -0.799 | -7.510*** |
| | | (-0.551) | (-1.623) | (-4.212) |
| *TOBINSQ* | | -0.448 | -0.025 | -1.171 |
| | | (-0.645) | (-0.102) | (-0.789) |
| *ROA* | | 1.525 | 0.336 | -17.65** |
| | | (0.723) | (0.146) | (-1.972) |
| *LEV* | | -2.536 | -1.937 | -1.610 |
| | | (-1.529) | (-1.197) | (-0.256) |
| **Deal Traits** | | | | |
| *TENDER* | | 0.113 | -0.002 | 2.240 |
| | | (0.106) | (-0.002) | (0.503) |
| *ALLSTOCK* | | -1.135 | -0.538 | -4.637 |
| | | (-0.515) | (-0.247) | (-1.007) |
| *DEALRATIO* | | 1.328 | 0.251 | 2.680 |
| | | (1.159) | (0.123) | (0.966) |
| *HIGHTECH* | | -1.393 | -2.357** | -5.402* |
| | | (-1.261) | (-1.972) | (-1.728) |
| *IND_MATCH* | | 0.190 | -0.352 | 0.446 |
| | | (0.201) | (-0.309) | (0.119) |
| Intercept | | 12.84*** | 8.387** | 19.81* |

| | | | |
|---|---|---|---|
| | (3.675) | (2.343) | (1.856) |
| *ID_POS* | -1.769 | -1.264 | 0.690 |
| | (-1.520) | (-1.100) | (0.203) |
| Adjusted $R^2$ | 0.184 | 0.180 | 0.372 |
| N | 252 | 252 | 252 |

This table reports regression results of acquisition gains on tax aggressiveness transfers. Calendar year fixed-effects are included. Reported in parentheses are t-statistics computed using heteroskedasticity-consistent standard errors adjusted for acquirer clustering; ***, **, * represent significance levels (one-tailed for predicted variables, and two-tailed for others) at 1%, 5% and 10%, respectively.