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Tax Aggressiveness and Auditor Resignation

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Abstract

We examine the relation between client tax aggressiveness and auditor's resignation decision. Consistent with the agency view of tax avoidance which suggests that client tax aggressiveness can increase litigation and reputational risk to auditors and increase the potential conflict with managers, we find a positive association between our proxies for tax aggressiveness and the likelihood that an auditor resigns from an audit engagement. Further, this association is stronger when external monitoring of the client firm is less effective, when there is greater potential for agency problems in the client firm, and when the economic importance of the fees received from the client firm is lower. Overall, our study identifies client tax risk as an important determinant of auditors' resignation. This result should be of interest to auditors who actively manage client audit risks and to tax authorities who have incentives to identify firms with abusive tax reporting behavior.

1. Introduction

Corporate tax avoidance has generated much academic interest with researchers investigating its consequences. Some of these studies examine how equity investors/shareholders view tax avoidance with somewhat mixed results but generally consistent with investors viewing it as value increasing in better governed firms (e.g., Desai and Dharmapala 2009; Hanlon and Slemrod 2009; Wilson 2009; Koester 2012; Goh et al. 2013). Others examine how debt markets and lenders view tax avoidance and find that private lenders view it positively (Lisowksy et al. 2012a; Kim et al. 2010) while public lenders via bond issues view it negatively (Shevlin et al. 2012). In this paper, we extend the consequences literature to examine how auditors view tax aggressive behavior in client firms. Specifically we examine whether client tax aggressiveness is related to an auditor's decision to resign from an audit engagement. Auditor resignation is an important corporate event dealing with the fundamental relationships between an auditor and management and an auditor and shareholders. The event is economically important because investors react most negatively when these relationships are terminated by auditors while there is no reliable market reaction when the relationships are terminated by clients (Griffin and Lont 2010). Furthermore, because these relationships are linked to questions on auditor independence and auditor's legal responsibilities to shareholders, our study provides insights into how auditors' perceived independence and legal liability are affected by client tax aggressiveness.

Prior studies show that a principal reason for auditors to resign is the desire to limit exposure to litigation risk stemming from the auditor's private information on client misrepresentations or errors (e.g., Stice 1991; Johnstone and Bedard 2004). We expect auditors to face higher litigation risks with regards to their clients' risky tax behavior because shareholders might attempt to hold auditors responsible for tax-related deficiencies in the

financial statements (Donohoe and Knechel 2013).[1] In the event that the firm is sued for abusive tax sheltering activity, the auditor could be accused of failure to ensure disclosure of adequate tax reserves. In addition, if tax abusive transactions are challenged by the IRS on audit, a substantial tax claim and related interest and penalties can lead the client to financial problems and restatements of financial reports, both of which are closely related to auditors' litigation risk and reputational penalty (Stice 1991; Hennes et al. 2011).

The agency view of tax aggressiveness lends further support to the link between tax aggressiveness and auditor resignation. Under this view, managers have incentives to conceal their opportunistic behavior from the investigations of auditors and investors by maintaining the complexity and opacity of tax avoidance activities (Kim et al. 2011). This increased opacity makes it harder for auditors to uncover any accounting irregularities embedded within tax avoidance activities. Moreover, the agency problems embedded within tax avoidance activities can cause a serious breakdown in auditor-client relationship, making it harder for auditors to peacefully remediate the problems without conflicts with managers. Finally, tax aggressiveness behavior calls into question the integrity and risk profile of management (Deasi and Dharmapala 2006; Hanlon et al. 2012, footnote 11), casting doubts about the quality of other compliance activities and the overall control environment. To the extent that aggressive tax behavior is interpreted as weak "tone at the top" or doubtful management integrity, auditors will lose confidence in management representations and perceive a higher litigation and reputational risk.

While the above discussion suggests that tax aggressiveness is related to an auditor's higher litigation and reputational risk, agency problems and doubts about management integrity,

[1]According to Bryan-Low (2004), after facing costly tax audits and SEC scrutiny over aggressive tax positions, several companies filed lawsuits against their auditors claiming they failed to identify material reporting issues. In other cases, clients claimed the auditors committed fraud and misrepresentation when marketing aggressive tax strategies.

tax aggressiveness might not be associated with auditor resignation for the following two reasons. First, resignation is a costly act for auditors because they have to give up the fees which could have been earned from the current appointment and those which would probably be payable in future periods (DeAngelo 1981). Hence, it is possible for auditors to continue to serve a tax aggressive client as long as they view the risk as not material enough to trigger a resignation or they are able to offset the risk through exerting more effort and charging higher fees.[2] Second, when the external audit firm provides tax services, its tax professionals become client advocates that develop favorable tax positions. This conflict can create a disincentive for the auditor to take a conservative view of tax risk or to challenge managers of tax aggressive clients over tax issues.[3] Thus, if the client tax advocacy role prevails over the auditor's desire to limit exposure to litigation risk, we expect no relation between client tax aggressiveness and auditor resignation.

To empirically test the association between tax aggressiveness and auditor resignation, we construct two main measures of client tax aggressiveness: (1) the estimated probability of engaging in tax shelters (*Shelter*) based on Wilson's (2009) tax sheltering prediction model and (2) discretionary permanent book-tax differences (*DTAX*) based on the prediction model of nondiscretionary permanent differences in Frank et al. (2009). Hanlon and Heitzman (2010) recommend that researchers carefully consider the appropriateness of tax avoidance measures for the research question at hand. They also state, "If tax avoidance represents a continuum of tax planning strategies where something like municipal bond investments are at one end (lower explicit tax, perfectly legal), then terms such as "noncompliance," "evasion," "aggressiveness," and "sheltering" would be closer to the other end of the continuum." Given that our study is

[2] Consistent with this view, Donohoe and Knechel (2013) find that audit fees are associated with low long-run effective tax rates, their proxy for tax avoidance, implying that audit fees are increasing in tax avoidance.
[3] For example, McGuire et al. (2012) find that external auditors providing both audit and tax services who are either industry tax or overall specialists are associated with a higher level of client tax avoidance, which implies that joint service providers significantly assist their clients in avoiding taxes.

motivated by an agency perspective of tax avoidance and is aimed at exploring the consequence of aggressive and opaque management tax behavior, we choose two measures that capture the more extreme form of tax avoidance activities.

Using a sample of client firms that change auditors over the period 2000-2010, we find a positive association between our proxies for tax aggressiveness and the likelihood that an auditor resigns from an audit engagement. This result suggests that client tax aggressiveness raises the concerns of auditors over litigation and reputational losses and a potential conflict with managers and that these concerns on average outweigh the opportunity cost of resignation such as foregone fees. To further explore whether the agency problems arising from tax aggressiveness contribute to auditor resignations, we test whether the extent of external monitoring (proxied by institutional ownership and analyst following) and potential for agency problems in the client firm (proxied by free cash flow and managerial ownership) moderate the relation between tax aggressiveness and resignation decision. We find that the likelihood of auditor resignation from a tax aggressive client is greater when external monitoring of the client is likely less effective and when there is greater potential for agency problems in the client. These results are consistent with the complementarities between tax avoidance activities and rent diversion such that when external monitoring is weak or the potential for agency problems in the client firm is high, it is harder for the auditor to disentangle, understand, and resolve tax-related accounting irregularities arising from opportunistic managerial behavior without conflicts with managers. The auditor's difficulty in resolving the potential problems further heighten the litigation and reputational risks and trigger a resignation. Finally, we find that the association between auditor resignation and tax aggressiveness is weaker when the client fee importance or the ratio of tax fees to total fees is

higher. These results suggest that the economic importance of the client and the provision of non-audit tax service lower auditors' incentives to resign from tax aggressive clients.

We conduct several additional analyses to test the robustness of our results. First, we examine how the results vary with alternative measures of tax aggressiveness. We find that the positive relationship between tax aggressiveness and auditor resignation continues to be significant when we use the unrecognized tax benefit disclosed by the firm pursuant to FIN 48 as an alternative more aggressive tax avoidance measure. When we use measures that capture less extreme forms of tax avoidance such as permanent book-tax difference, total book-tax difference and cash effective tax rate, the results are either weakly significant or insignificant, thus supporting our choice of more aggressive tax avoidance measures. Second, we control for alternative metrics of financial reporting risk such as predicted restatement score (Dechow et al. 2011), total accruals (Hanlon et al. 2012), and accruals quality (Francis et al. 2005) in our resignation model and find that our main results are not sensitive to these alternative metrics. Further analyses reveal that our main results are not driven by a subsample of client firms with high financial reporting riskiness (where subsamples are formed by partitioning the sample based on the median of the financial reporting risk variables). Third, we repeat our auditor resignation test without restricting the sample to firms that switch auditors. Our inferences remain qualitatively the same.[4] Fourth, we examine how the association between tax aggressiveness and auditor resignation differs between the pre- and post-the Sarbanes-Oxley Act of 2002 (SOX) period and find that the association is stronger in the post-SOX period relative to the pre-SOX period. Fifth, when we further control for abnormal audit fees in our regressions, the effect of tax

[4] In the main sample, we only include client firms that switch auditors because Krishnan and Krishnan (1997) argue that firms that switch auditors are different in many perspectives from the population of firms that do not switch auditors. They suggest that a finding from the comparison of resignation cases and non-switching cases is not necessarily interpretable as active risk management by the auditor because all auditor switching cases, whether they are dismissals or resignations, are partially explained by high risk.

aggressiveness on auditor resignation still remains significant. This result suggests that charging higher audit fees does not totally eliminate the auditor risk associated with client tax aggressiveness, leading to auditor resignation. Finally, we repeat our analysis after restricting the sample to Big N auditor clients and obtain similar results.

Our study makes important contributions to the literature. First, while there have been a number of studies investigating how debt and equity market participants perceive a firm's tax aggressiveness (e.g., Crabtree and Maher 2009; Kim et al. 2010; Ayers et al. 2010; Lisowsky et al. 2012a; Shevlin et al. 2012; Hanlon and Slemrod 2009; Koester 2012), not much is known about how a firm's tax aggressiveness affects the external auditor's behavior. Donohoe and Knechel (2013) show that audit fees are positively associated with lower long-run effective tax rates, their proxy for tax avoidance. Hanlon et al. (2012) show that audit fees are positively associated with book-tax differences but in sensitivity analysis conclude that this relation is driven by book-tax differences proxying for earnings management rather than tax avoidance. Our study differs from these two studies in that we focus on how the auditor resignation decision is affected by the agency problems and conflicts with management exacerbated by tax aggressiveness. Further, we find that our main results are robust when we explicitly control for various proxies for earnings management and that the severity of earnings management has no incremental effect on the association between tax aggressiveness and auditor resignation. These results suggest that earnings management associated with tax aggressiveness is not the dominating force that drives the breakdown of the auditor-client relationship. Rather, our finding that the association between auditor resignation and tax aggressiveness is more pronounced for firms with greater potential for agency problems implies that despite auditors' role to mitigate agency problems, they are often constrained in their ability to remediate the problems because of

managers' conflicting incentives, and thus resign from the audit engagement. This finding is consistent with the agency perspective of tax aggressiveness and provides new insights into both the sophistication and limitations of auditors in mitigating agency problems related to tax aggressiveness.

Second, this study contributes to the literature on auditor resignation. While the literature suggests that auditors' litigation risk is the most salient reason why auditors resign (e.g., Krishnan and Krishnan 1997; Shu 2000; Stice 1991), no studies have explicitly examined clients' tax risk as an important determinant of auditor resignation. Whilst prior studies focus on other client risk factors such as financial distress, substandard reporting, and stock return volatility, this study provides new evidence regarding the effect of tax aggressiveness on auditor resignation. In this regard, our results will be of interest to auditors who actively manage client audit risks and to tax authorities who have incentives to identify firms with abusive tax reporting behavior.

The remainder of our paper proceeds as follows. Section 2 discusses related literature and develops our hypotheses. Section 3 describes the data and research methodology. Section 4 and 5 present and discuss the results and sensitivity checks, respectively. Section 6 concludes.

2. Related literature and hypothesis development

2.1. Prior literature on auditor resignation

Auditor resignations are auditor-client relation terminations that are initiated by the auditor rather than the client. All auditor resignations involve some costs. The client firm will have to search for a suitable replacement and bear a share of the incoming auditor's setting up costs. The uncertainty created by the resignation can also signal negative messages to the market and adversely affect the share price of the firm (Shu 2000; Wells and Loudder 1997). The

resigning auditor will lose the fees which could have been earned from the current appointment and those which would probably be payable in future periods (DeAngelo 1981). Thus, it is reasonable to expect that neither party would initiate a resignation without some serious reasons. For example, auditors might resign because of a severe breakdown in the relationship with management, such as a serious conflict with management and lack of confidence in the management's integrity (Dunn and Sikka 1999). Resignation could be motivated by professional considerations, such as the discovery of an impediment to independence and the auditor's doubts about their ability to provide a satisfactory quality of audit.

Prior research provides evidence that various audit and litigation risk factors affect the auditor resignation decision. Krishnan and Krishnan (1997) report evidence that the likelihood of litigation is positively associated with the probability that the auditor will resign rather than be dismissed from the engagement. Johnstone and Bedard (2004) find evidence that audit firms shed riskier clients in their client portfolio, and that audit risk factors related to client controls, financial reporting quality, and management integrity are more important in client portfolio decisions than are financial risk factors. Finally, Bockus and Gigler (1998) present a theoretical model which shows that increased auditor liability leads to more auditor resignation and lower-quality audits.

In addition to the litigation concerns, Shu (2000) shows that auditor resignations can be due to clientele adjustments by auditors. She demonstrates that the resignations from clientele adjustments are likely driven by changes in auditor supply-side characteristics such as auditor's production cost and opportunity cost considerations.[5] Ettredge et al. (2011) find that the strength

[5] Following Shu (2000), we control for the effect of this client misalignment (*Mismatch*). We determine an optimal cut-off probability that predicts whether a client is better matched with a Big N or a non-Big N auditor. If the actual auditor is a Big N (non-Big N) auditor when the predicted auditor is a non-Big N (Big N) auditor (that is, the actual

of clients' internal control is also related to auditor turnover (dismissals and resignations). They show that firms receiving adverse SOX 404 opinions are more likely to experience auditor turnover. Lastly, studies document that auditor resignations cause an adverse stock market reaction and potential mistrust by investors over the firm's financial reporting quality (Griffin and Lont 2010; Whisenant et al. 2003; Shu 2000; Wells and Loudder 1997).

In sum, extant research suggests that concern about client risk in making client retention decisions is mainly due to the potential consequences of undiscovered reporting problems in terms of litigation costs and reputational losses. Litigation against auditors is often premised on the allegation of an audit failure (Stice 1991). Palmrose (1987) shows that about 46 percent of auditor litigation cases involved instances where financial reporting irregularities, predominantly management fraud, took place. Cases involving these types of irregularities were also much more likely to result in auditors making costly litigation settlement payments. Thus, tax aggressiveness could affect an auditor's client retention decision if the auditor's perception of audit and litigation risk changes with the level of the client's tax aggressiveness or if the client firm's tax aggressiveness casts some doubts about the management's integrity and representations.

2.2. Tax aggressiveness and auditor resignation

The primary role of auditors is to express an opinion as to whether the financial statements and related disclosures present fairly, in all material respects, the client firm's financial condition in conformity with generally accepted accounting principles. Because income taxes can amount up to nearly one-half of a public firm's net income, an auditor should always consider the amount as material to financial statements. Hence, auditors evaluate the validity of accrued taxes payable and tax contingent liabilities on the balance sheet, income tax expense on

auditor of the client is opposite to the prediction in the prior year), then we consider the client to be mismatched with its current auditor.

the income statement, and the related note disclosures to provide adequate assurance to the investing public about the appropriateness of these items and disclosure (Barrett 2004). Because any material information about risky tax transactions tends to be hidden in these accounts and disclosure, auditors also have to assess whether their clients engage in potentially abusive tax transactions that can be challenged if uncovered by the IRS.

Firms that engage in tax aggressiveness have a higher chance of misstatements and restatements because managers can use various accounts such as valuation allowances, tax contingency reserves, and estimates of accrued taxes to manipulate earnings (e.g., Hanlon and Heitzman 2010; Frank and Rego 2006; Gupta et al 2011; Dhaliwal et al. 2004). Because a client's aggressive financial reporting is positively associated with auditor litigation risk (Heninger 2001; Palmrose and Scholz 2004), tax aggressiveness can increase the litigation risk of the auditor. Furthermore, aggressive tax positions involve complex and risky techniques, which require additional research, specialized audit procedures, documentation, and consultations with tax professionals to audit (Donohoe and Knechel 2013). Even when auditors expend additional effort, auditing sophisticated transactions with questionable legal grounds has a high risk of error that can expose them to potential litigation, regulatory, and reputational costs.

Auditors could face even higher litigation risks in the post-SOX era because of the increase in litigation suits against tax shelter firms and promoters, including auditors (IRS 2005). Due to the heightened reporting regulations on the aggressive forms of corporate tax avoidance, shareholders can hold auditors responsible for tax-related deficiencies in the financial statements. [6] For instance, while auditors assess uncertain tax benefits under Financial

[6] We obtain the following examples of lawsuits filed against the auditors for tax-related deficiencies from Donohoe and Knechel (2013). In *Overton v*. *Trodman* (478 F. 3d. 479), investors of Direct Brokerage Inc sued the firm's auditor, Todman & Co, for its failure to ensure that its tax liabilities have been properly stated. Navistar International Corporation also filed a lawsuit against its auditor alleging that erroneous tax accruals contributed to

Interpretation No. 48 (FIN 48) (Hanlon et al. 2012),[7] several studies argue that the tax reserve disclosed pursuant to FIN 48 is a reliable indicator of a firm's tax sheltering activity (e.g., Frischmann et al. 2008; Song and Tucker 2008). In the event that the firm is sued for abusive tax sheltering activity, the auditor could be accused of failure to ensure disclosure of adequate tax reserves.

Auditor litigation risk can be further heightened in the event that tax transactions are discovered or alleged by the IRS on audit to be abusive. The client will likely spend considerable sums for legal and accounting assistance in defending its tax strategies. At some point, a decision will have to be made to settle or contest the tax liability. Settlement likely entails a substantial tax claim and related interest or penalties, which often lead the client firm to financial problems such as illiquidity and debt servicing inability (Beale 2004). As such, investors who suffer losses from client financial distress may attempt to recover their losses through lawsuits against the auditors (Kinney and McDaniel 1989; Stice 1991). Moreover, recent studies have shown that news about a firm's involvement in tax shelters reduces stock price (Hanlon and Slemrod 2009) and a firm's stock price crash risk increases with tax aggressiveness (Kim et al. 2011). The potential loss in shareholders' wealth can also precipitate lawsuits against the firm and its auditor (e.g., Francis et al. 1994; Grundfest and Perino 1997).

The agency problems embedded within corporate tax avoidance can further heighten the litigation risks facing the auditor, leading to her resignation. In particular, Slemrod (2004) stresses the differences between individual and corporate tax compliance, arguing that the

costly debt refinancing and stock delisting (Stempel 2011). In *Endo v. Albertine* (863 F. Supp. 708), shareholders of Fruit of the Loom filed a lawsuit against auditor Arthur Andersen alleging they were misled by misrepresentations of future tax obligations and prior tax deficiencies. Finally, the Public Company Accounting Oversight Board (PCAOB) also faulted BDO for audit deficiencies involving clients' provisions for income tax (Aubin 2012).

[7] The auditor must also assess contingent tax liabilities under the SFAS 5 regime and potential permanent losses of tax benefits due to IRS restrictions on certain leasing activities (e.g., SILO, LILO) under SFAS No. 13.

latter should be analyzed in a principal-agent framework. He develops a theoretical framework that embeds aggressive tax decisions within a managerial agency context and emphasizes the importance of interactions between rent diversion and tax avoidance. Consistent with the agency view, several studies suggest that complex tax avoidance transactions provide management with the tools, masks, and justifications for opportunistic managerial behavior, such as earnings manipulations, related party transactions, and other resource-diverting activities (e.g., Chen et al. 2010; Desai and Dharmapala 2006; Kim et al. 2011). For example, complex tax shelters created by Enron allowed managers to manipulate earnings while preventing investors from understanding the sources (Desai and Dharmapala 2009). The tax avoidance activities arranged by Tyco facilitated the centralization of power by management and enabled them to obscure their rent diversion through means such as unauthorized compensation, abuse of corporate funds for personal uses, and insider trading (Desai 2005). In line with this view, studies document that aggressive tax reporting leads to lower earnings quality, a higher likelihood of managerial fraud, and higher stock price crash risk (e.g., Badertscher et al. 2009; Ettredge et al. 2008; Frank et al. 2009; Hanlon 2005; Kim et al. 2011).

Under this view in which a hidden intention of tax aggressiveness is to pursue managerial opportunism and rent diversion, managers have incentives to conceal their opportunistic behavior from auditors and investors by maintaining the complexity and opacity of tax avoidance activities (Kim et al. 2011). This behavior makes it more difficult for auditors to uncover any accounting irregularities embedded within tax avoidance activities. Further, the agency problems caused by tax avoidance activities can cause a serious breakdown in the relationship between the auditor and management, making it harder for auditors to peacefully remediate the problems

without conflicts with managers.[8] The inability to resolve potential conflicts and accounting irregularities can further increase the likelihood of accounting misstatements and heighten the litigation and reputational risks of the auditors.

Finally, tax aggressiveness behavior calls into question the integrity and risk profile/appetite of management.[9] Ethridge et al. (2007) survey 60 audit partners and find that management integrity is ranked as the most important factor in determining audit engagement risk among 10 components of client business risk, audit risk, and auditor's business risk,. Jonstone and Bedard (2004) also argue that audit risk factors such as client controls and management integrity provide more useful measures of litigation risk than financial risk factors in auditor's client retention decision.[10] The auditor might infer from aggressive tax behavior that management integrity is weak and they are excessively risk-taking in financial reporting as well. Such managers are more likely to circumvent internal controls to achieve fraudulent reporting objectives and are also more likely to unduly influence the audit, make inaccurate representations to the auditors, and interfere with the auditor's discussion with the board of directors or the audit committee. Moreover, tax aggressiveness could indicate management's attitude towards compliance with rules and regulations (Hanlon et al. 2012, footnote 11). A weak tone at the top

[8] An alternative traditional view in the literature, however, argues that managers undertake tax aggressiveness activities for the sole purpose of reducing corporate tax obligations, which result in greater wealth for the firm and its shareholders (e.g., Swenson 1999; Graham and Tucker 2006). Under this view, managers are likely to be cooperative in resolving the problems because no agency problems are involved.

[9] Studies have shown that aggressive tax behavior is driven by "tone at the top" (e.g., Dyreng et al. 2010; Desai and Dharmapala 2006). Further, Rego and Wilson (2012) argue that tax avoidance is a risky activity, which imposes costs on both firms and managers and thus, managers must be incentivized to engage in tax avoidance that involves uncertain outcomes. They find that equity risk incentives motivate managers to undertake more aggressive (i.e., risky) tax positions.

[10] The authors measure management integrity based on the number of risk factors present from a set of nine questions with dichotomous responses dealing with a possible lack of management integrity, including those related to management's autocratic tendencies, questionable resignations of management, contentious termination of a relationship with a financial advisor, a history of suing financial advisors, a history of litigation against the entity, a history of management attempts to unduly influence the audit, a history of management attempts to unduly influence the auditor's discussions with the board of directors or the audit committee, a history of inaccurate management representations, and integrity problems for individuals associated with the entity's financial reporting.

and its effect on overall control environment can increase the likelihood that the auditor might not be able to uncover financial misstatements. Therefore, to the extent that aggressive tax behavior is interpreted as weak tone at the top or doubtful management integrity, auditors will lose confidence in management representations and perceive a higher litigation and reputational risk.

In sum, the above discussion suggests that tax aggressiveness is related to an auditor's higher litigation and reputational risks, severe agency problems, and the doubts about management representation and integrity, all of which are potential drivers of auditor resignation. Hence, we formulate our hypothesis in alternative form as follows:

H1: Tax aggressiveness is positively associated with auditor resignation.

Although we expect tax aggressiveness to be positively associated with auditor resignation, we recognize that there are at least two arguments that are consistent with a null hypothesis. First, auditors could view tax aggressiveness a risk that is not "material enough" to trigger a resignation. Given that an audit firm that resigns will forego the value of future audit fees and possibly fees from other services provided to the client, the auditor is likely to sacrifice these revenues only when the risk arising from tax aggressiveness is serious enough and cannot be substantially reduced with additional audit efforts. To the extent that auditors are able to offset the risk through exerting more audit effort and charging higher audit fees, there will not be a significant association between tax aggressiveness and auditor resignation.[11]

Second, prior studies suggest that auditors play a role as an advocate of their client's aggressive tax avoidance strategies. Evidence indicates that when the external auditor provided

[11] Using a compound measure of two long-run effective tax rates, Donohoe and Knechel (2013) find evidence of an audit fee premium attributable to tax aggressiveness that is incremental to premiums relating to an auditor's general concerns about earnings management via the tax accounts. In addition, they find that auditor-provided tax services are associated with knowledge spillovers that offset the fee premium for tax aggressiveness, unless tax uncertainty is high.

tax services to an audit client in the pre-SOX period, the client exhibited a higher level of tax avoidance (AICPA 2000; Bobek et al. 2010), suggesting that the auditors were client advocates who work to develop tax avoidance strategies. Although the use of auditor-provided tax services substantially declined after the passage of SOX, McGuire et al. (2012) continue to find that the tax-specific industry expertise and overall industry expertise (i.e., combined tax and audit expertise) of an external auditor is associated with a higher level of tax avoidance in the post-SOX period, [12] suggesting that auditors employ their tax and general industry knowledge to help their clients devise a higher level of tax avoidance strategies rather than using their expertise to constrain the tax avoidance activities. Moreover, Cook and Omer (2012) find that approximately two-thirds of the public firms in their sample continue to purchase at least a portion of their tax consulting and compliance services from their external auditor in the post-SOX period, which implies that the external audit firm can still simultaneously affect many of its clients' tax avoidance activities. Thus, to the extent that clients value auditor assistance that extends beyond basic audit-related services, it is possible that despite the risk associated with tax aggressiveness, auditors can continue to serve their clients and aid them in developing favorable tax positions in pursuing high fees.

2.3 Cross-sectional difference in the effect of tax aggressiveness on auditor resignation

To the extent that an auditor is more likely to resign from a tax aggressive client (H1), we expect this likelihood to further vary with client- and engagement-specific characteristics. We first predict that the likelihood will differ with the strength of external monitoring. As highlighted earlier, one of the arguments for the association between tax aggressiveness and auditor resignation is based on the agency tension between managers and shareholders, which

[12] Their main analysis excludes clients that do not purchase tax services from their auditor, but they show that the results are consistent when they use a sample that includes those firms (see Table 8 of McGuire et al. 2012).

gives rise to opportunistic managerial behavior and rent diversion. Hence, strong external monitoring mechanisms can moderate the complementarities between tax aggressiveness and both managerial opportunism and rent diversion, alleviating the effect of tax aggressiveness on auditors' resignation decisions. Prior studies suggest that effective external monitoring attenuates adverse consequences of tax aggressiveness and managerial opportunism. Kim et al. (2011) find that the positive relation between tax avoidance and stock price crash risk is diminished for firms with strong external monitoring mechanisms such as high institutional ownership and analyst coverage.[13] Based on the discussion above, we expect that the association between tax aggressiveness and auditor resignation, if any, will be diminished for firms with strong external monitoring mechanisms. This argument leads to the following hypothesis in alternative form:

H2a: The association between tax aggressiveness and auditor resignations is weaker when external monitoring in the client firm is effective, all else being equal.

Next, we examine how the association between tax aggressiveness and auditor resignation varies with the potential for agency problems in client firms. As discussed earlier, managerial opportunism and rent diversion associated with tax avoidance activities will be important concerns in auditors' client retention decisions. The concerns will be aggravated when their clients are subject to greater potential for agency problems. In particular, we consider free cash flows and managerial ownership to gauge the potentials for agency problems. We argue that free cash flows is a proxy for the extent of potential damages caused by the agency problems because when there is little free cash flow, managers have fewer incentives and resources to squander. Studies suggest that managers with access to free cash flows have incentives to

[13] We acknowledge that an alternative channel of monitoring is internal monitoring by audit committee measured by attributes such as independence, size, and financial expertise. However, the lack of readily available data for our sample restricts us from examining this channel. While such data are available in machine readable form for S&P 1500 firms, a majority of our sample firms are not covered.

overinvest in projects that satisfy their personal preferences rather than benefit shareholders (e.g., Jensen 1986; Richardson 2006), and that a reduction in the free cash flow available to opportunistic managers through the payment of cash dividends reduces agency costs (Chen et al. 2011; Christie and Nanda 1994). Managerial stock ownership has been viewed as a channel of aligning managerial interests with shareholders', thus reducing firms' agency conflicts (Jensen and Meckling 1976). Consistent with this view, Warfield et al. (1995) find a negative association between managerial ownership and opportunistic behavior relating to earnings management. If higher managerial ownership aligns managers' interests with shareholders', we expect managers to be less likely to use tax aggressive activities for opportunism.[14] In sum, to add more credence to the agency theory explanation for the possible association between tax aggressiveness and auditor resignations, we test the following hypothesis in alternative form:

H2b: The association between tax aggressiveness and auditor resignation is weaker when the potential for agency problems in the client firm is low, all else being equal.

Finally, we explore how auditors' possible fee dependence affects the relation between tax aggressiveness and resignation decisions. Existing research suggests that auditors act independently due to reputation and litigation costs (e.g., Watts and Zimmerman 1983; Palmrose 1988). However, an auditor's independence can be possibly harmed when its client is economically important to the auditor because the existence of client-specific quasi-rent creates an incentive for the auditor to compromise independence (DeAngelo 1981) and can cause the auditor to become more financially dependent on the client (DeFond and Francis 2005; Kinney

[14] On the other hand, Morck et al. (1988) argue that greater ownership would provide managers with deeper entrenchment and, therefore, greater scope for opportunistic behavior. In this case, there could be more opportunistic behavior by management of tax aggressive firms.

and Libby 2002).[15] When the economic importance of fees received from the client is high, the auditor could be more tolerant towards the client's tax aggressive behavior and less likely to resign. To empirically test this prediction, we measure the economic importance of fees by client fees relative to total fees earned by auditor at the office level (e.g., Chung and Kallapur 2003; Li 2009). In addition, we use the proportion of client tax fees to client total fees as an alternative proxy because a large number of clients purchases tax services from their external audit firms (Cook and Omer 2012) and the audit firms' tax advisory role in such a case can create a less conservative view of tax risk.[16,17] To test these possibilities, we propose the following hypothesis in alternative form:

H2c: The association between tax aggressiveness and auditor resignation is weaker when the economic importance of fees received from the client firm is high, all else being equal.

3. Research design

3.1 Measures of tax aggressiveness

There is currently no single measure that perfectly captures tax aggressiveness. Lisowsky et al. (2012b) provide a continuum of the ability of specific measures of firms' tax attributes to capture tax aggressiveness. For the purpose of our paper, we focus on more aggressive tax

[15] Prior studies provide mixed empirical evidence on this claim. While some studies show a positive relation between (audit and non-audit) fees and proxies for impaired independence (e.g., Frankel et al. 2002; Ferguson et al. 2004; Gaver and Paterson 2007; Ghosh et al. 2009), others fail to find evidence of compromised auditor independence (DeFond et al. 2002; Ashbaugh et al. 2003; Kinney et al. 2004, Chung and Kallapur 2003).

[16] When the proportion of tax fee to total client fee is high, it is possible that the audit firm will act as an advocate of their client's aggressive tax avoidance strategies and thus be less likely to resign. Alternatively, it is also possible that the auditor's provision of tax services increases the auditor's perceived litigation risk and the likelihood of resignation as long as the provision of tax services increases the probability of an auditor being sued for tax-related reasons, relative to auditors that do not provide tax services.

[17] The effect of auditors' tendency to charge higher fees to more tax aggressive clients (Donohoe and Knechel 2013; Hanlon et al. 2012) on our two measures of the client importance is minimal. For example, Hanlon et al. (2012) find that a 10 percent increase in the absolute book-tax difference increases audit fees by about $4,600, which translates into a +0.4 percent change in the ratio of client fees to total fees earned by the auditor at the office level and about -0.4 percent change in the ratio of the client tax fees to client total fees, for a client firm with our sample mean tax fees and total fees that is audited by our sample mean sized auditor office. In robustness tests, we also add abnormal audit fees to our model to control for any endogeneity in audit fees.

planning because auditors are likely to be more concerned about these very risky tax activities. At the most aggressive end of the continuum resides tax sheltering. Tax shelters are aggressive tax positions that have little or no business purpose and do not subject the firm to any pre-tax economic risk or loss (Treasury 1999). Identifying tax shelters is a key for regulators and investors concerned with the aggressive nature of the tax positions of large publicly-held corporations (Treasury 1999; Hanlon and Heitzman 2010). Tax shelters generate substantial savings for a firm, but also introduce risk because the underlying tax positions have the lowest likelihood of being sustained upon tax audit. Moreover, tax shelters can involve complicated business structures that lead to rent extraction (Desai et al. 2007) or indicate aggressive financial reporting practices (Frank et al. 2009) that obscure poor performance or risk associated with the firm's business activities. Hence our first measure of tax aggressiveness is the tax shelter prediction score (*Shelter*) developed by Wilson (2009) and used in prior literature (e.g., Kim et al. 2011; Rego and Wilson 2012). *Shelter* is computed as

$$Shelter_{it} = -\mathbf{4.86} + \mathbf{5.20} * BTD_{it} + \mathbf{4.08} * DAC_{it} - \mathbf{1.41} * LEV_{it} + \mathbf{0.76} * Size_{it} + \mathbf{3.51} * ROA_{it} + \mathbf{1.72} * Foreign\_Income_{it} + \mathbf{2.43} * R\&D_{it} \quad (1)$$

where *BTD* is book income less taxable income scaled by lagged total assets; *DAC* is the discretionary accruals from the performance-adjusted modified cross-sectional Jones Model; *LEV* is long-term debt divided by total assets; *Size* is the log of total assets. *ROA* is pre-tax earnings divided by total assets; *Foregin_Income* is foreign pre-tax earnings divided by lagged total assets; *R&D* is research and development expenditure divided by lagged total assets. We use the annual decile rank of *Shelter* to reduce noise in the estimates and to mitigate concerns with non-linearity. We standardize these decile ranks to range between zero and one, with observations in the bottom decile taking the value of zero and observations in the top decile taking the value of one. We denote this standardized rank-transformed variable as *Rank_ Shelter*.

Researchers typically consider permanent book-tax differences, a subset of *BTD*, as more aggressive because permanent *BTD* reduces the firm's tax liability while increasing after-tax reported financial income (Shevlin 2002). Hence our second measure that we utilize is discretionary permanent book-tax differences (*DTAX*) based on Frank et al. (2009), which is defined as the residuals from the regression of permanent differences on several determinants of nondiscretionary permanent differences unrelated to tax planning (estimated by year and two-digit Standard Industrial Classification (SIC) code, with at least 20 firms in each industry; firm and time subscripts omitted):

$$PERMDIFF_{it} = \alpha_0 + \alpha_1(1/ATLAG_{it}) + \alpha_2 INTANG_{it} + \alpha_3 UNCON_{it} + \alpha_4 MI_{it} + \alpha_5 CSTE_{it} + \alpha_6 \Delta NOL_{it} + \alpha_7 LAGPERM_{it} + \varepsilon_{it} \quad (2)$$

where *PERMDIFF* refers to total book-tax differences (*BTD*) less temporary book-tax-differences (TXDI/STR), *ATLAG* refers to lagged total assets (AT), *INTANG* refers to goodwill and other intangibles (INTAN), *UNCON* refers to income/loss reported under the equity method (ESUB), *MI* refers to income/loss attributable to minority interest (MII), *CSTE* refers to current state tax expense (TXS), *ΔNOL* refers to the change in net operating loss carry forwards (TLCF) and *LAGPERM* is the lagged *PERMDIFF*. *PERMDIFF*, *INTANG*, *UNCON*, *MI*, *CSTE* and *ΔNOL* are all scaled by lagged total assets. We also decile rank *DTAX* annually to reduce noise in the estimates, and standardize these decile ranks to range between zero and one, with observations in the bottom decile taking the value of zero and observations in the top decile taking the value of one. We denote this variable as *Rank_DTAX*.

3.2 Empirical models

3.2.1 Main analysis

To test whether tax aggressiveness (*TAXAGG*) is associated with auditor resignations, we estimate the following logistic regression model adapted from Landsman et al. (2009):

$$Resign_{it+1} = \beta_0 + \beta_1 TAXAGG_{it} + \beta_2 Sales\_Growth_{it} + \beta_3 Abs\_DA_{it} + \beta_4 Inv\_Rec_{it} + \beta_5 GCM_{it} + \beta_6 Clean_{it} + \beta_7 Tenure_{it} + \beta_8 ROA_{it} + \beta_9 Loss_{it} + \beta_{10} Leverage_{it} + \beta_{11} Cash_{it} + \beta_{12} Disagree_{it} + \beta_{13} Rep\_Event_{it} + \beta_{14} BigN_{it} + \beta_{15} Ln\_MV_{it} + \beta_{16} Merger_{it} + \beta_{17} Mismatch_{it} + Year\ Dummies + e_{it} \quad (3)$$

The details of the variables used in the model are defined in Table 1. Consistent with prior studies (e.g., Landsman et al. 2009; Kim and Park 2009), we estimate this model using auditor switch firms and measure all of the independent variables in the year prior to the auditor switch. Supporting the appropriateness of one-year lagged independent variables in the model, Grothe and Weirich (2007) report that most auditor changes occur in the months after a client's fiscal year-end and typically soon after the year's audit is completed. The dependent variable (*Resign*) is an indicator variable that equals 1 if the auditor resigns and 0 otherwise (i.e., if the auditor is dismissed).[18] A positive coefficient on *TAXAGG* is consistent with auditors resigning more frequently from their tax-aggressive clients.

3.2.2 Cross-sectional analyses

To test H2, we modify equation (3) to include the conditioning variable (*Conditional_VAR*) and the interaction between *TAXAGG* and *Conditional_VAR*:

$$Resign_{it+1} = \beta_0 + \beta_1 TAXAGG_{it} + \beta_2 Sales\_Growth_{it} + \beta_3 Abs\_DA_{it} + \beta_4 Inv\_Rec_{it} + \beta_5 GCM_{it} + \beta_6 Clean_{it} + \beta_7 Tenure_{it} + \beta_8 ROA_{it} + \beta_9 Loss_{it} + \beta_{10} Leverage_{it} + \beta_{11} Cash_{it} + \beta_{12} Disagree_{it} + \beta_{13} Rep\_Event_{it} + \beta_{14} BigN_{it} + \beta_{15} Ln\_MV_{it} + \beta_{16} Merger_{it} + \beta_{17} Mismatch_{it} + \beta_{18} Conditional\_VAR_{it} + \beta_{19} TAXAGG*Conditional\_VAR_{it} + Year\ Dummies + e_{it} \quad (4)$$

For H2a, we examine the moderating effect of outside monitoring on the relation between

[18] Firms that do not provide a reason for an auditor change are coded as 0 in our sample. It is possible that in some of these cases, the auditor resigns but the audit firm and client mutually agree not to state it as an auditor resignation because the audit firm might want to maintain good relations with the client for other non-audit related work, especially for larger clients. Hence, the number of firms with auditor resignations could be understated in our sample. However, this measurement error likely adds more noise to our tests and biases against finding significant results. We also note that *TAXAGG* is a choice variable for the *client* firm while *Resign* is a choice variable by the *audit* firm. Thus *TAXAGG* is not endogenous in the traditional sense. Further, given the extensive number of control variables in equation (3), we believe our results are unlikely to be driven by omitted variables correlated with *TAXAGG*.

tax aggressiveness and auditor resignation using two proxies. The first is analyst following (*Analyst*) because prior work suggests that analysts serve as external monitors to the firm and provide additional scrutiny over managers' actions (e.g. Jensen and Meckling 1976). Yu (2008) finds that firms followed by more analysts are associated with lower earnings management. Dyck et al. (2010) also document that analysts play a role in detecting corporate fraud. Therefore, we expect firms with greater analysts following to have more effective outside monitoring. The second is the percentage of shares held by institutional investors (*Institutions*). Previous studies (e.g., Grossman and Hart 1980; Shleifer and Vishny 1986; Huddart 1993) suggest that large shareholders have incentives to undertake monitoring or other costly control activities when the increased returns from such monitoring activities are sufficient to cover their associated costs. Chung et al. (2002) find evidence that the presence of large institutional shareholdings inhibit managers from managing accruals to achieve a desired level of earnings. Therefore, we expect firms with a greater percentage of shares held by institutions to have more effective outside monitoring. Based on H2a, we expect β_{19} to be negative in equation (4).

For H2b, we examine the moderating effect of agency costs on the relation between tax aggressiveness and auditor resignation. We use two proxies to measure agency costs. The first is free cash flow (FCF) in low growth firms suggested by Jensen (1986). When there is little FCF, managers have fewer economic resources to squander. Investment in additional projects has to be financed by external funds from the capital market, where managers will be subject to extra monitoring (Stulz 1999). The extra monitoring by the capital market could force managers to reduce their expropriations, since new investors will not buy new shares unless they are compensated for agency costs (Jensen and Meckling 1976). Thus, the potential damage from overinvestment to existing shareholders would be lower. In contrast, managers of firms with high

FCF can finance investments by internal funds and therefore avoid extra monitoring from the capital market. In this case, the potential damage from overinvestment to existing shareholders would be higher (Lang et al. 1991; Lamont 1997). Hence, when FCF is high, the marginal effect of tax aggressiveness on auditor resignation should be more pronounced. We define *Free_cashflow*, an indicator variable, which equals 1 if the firm is in the high FCF and low sales growth portfolios, 0 otherwise.[19] Based on H2b, we expect β_{19} to be positive in equation (4).

Our second proxy is measured based on the firms' managerial ownership (LaFond and Roychowdhury 2008). Agency problems arise when the interests of managers and shareholders are not aligned. It has long been recognized that managers' interests are less aligned with shareholders when there is greater separation of ownership and control (Jensen and Meckling 1976). We measure the potential misalignment of interests using the percentage of shares owned by key executives in the firms, and denote the variable as *Mgtown*. The higher the *Mgtown*, the greater the alignment of interests, and hence the lower the agency costs between managers and shareholders. Hence, we expect the relation between tax aggressiveness and auditor resignation to be weaker when managerial ownership is high, predicting the coefficient on β_{19} to be negative.

Finally for H2c, we examine the moderating effect of the economic importance of the client using two proxies. The first is client importance (*C_Impt*) measured by the client total fees relative to the total fees earned by the audit office (Chung and Kallapur 2003). The second is the proportion of client tax fee relative to the client total fee (*Taxfee*). We posit that the relation between tax aggressiveness and auditor resignation is weaker when the economic importance of the client is higher. Hence, based on H2c, we expect β_{19} to be negative in equation (4).

[19] We use cash flow from operations and investment opportunities to identify the firms with potentially severe agency problems. Firms that hold a lot of cash but do not have good investment opportunities are more likely to face potential agency problems from FCF. We measure FCF as cash flow from operations minus cash dividends and scaled by lagged total assets. We use sales growth to measure the investment opportunities of a firm. Thereafter, we sort FCF and sales growth annually for all firms in the population to obtain the 2x2 portfolios.

4. Results

4.1. Sample

We collect our data primarily from *Audit Analytics*, *Compustat*, *I/B/E/S*, and *Thomson Reuters* databases in computing the dependent variable, tax aggressiveness, other control variables, and the hypothesized intervening variables. The sample period for the current study spans 2000-2010. The sample period starts in 2000 because auditor resignation data from *Audit Analytics* are available from 2000. As in prior studies (e.g., Landsman et al. 2009), we exclude firms in the financial industries (i.e., SIC codes 6000 to 6999) and exclude auditor switches from former Andersen clients in 2001-2002. Our main sample consists of 4,513 auditor change observations. Of these observations, about 27 percent represent auditor resignations while the remaining are client-initiated dismissals. The smaller proportion of auditor resignations relative to dismissals is consistent with prior studies (e.g., Landsman et al. 2009; Kim and Park 2009).

The sample size varies for each test depending on data availability for the specific measure used in the test. For example, sample size is typically larger when tax aggressiveness is measured by the tax sheltering probability (*Rank_shelter*) compared to the discretionary permanent book-tax differences (*Rank_DTAX*), because of more stringent data requirements to compute the latter variable. Similarly, models using free cash flow (*Free_cashflow*) to proxy for agency costs as the intervening variables have relatively larger sample size compared to models using institutional ownership (*Institutions*) or management ownership (*Mgtown*) because of the more limited coverage in the *Thomson Reuters* compared to the *Compustat* database. We also truncate each continuous variable used for each model at the 1% and 99% level to mitigate the effect of outliers. The final sample size used in the regression analyses ranges from 2,539 to 4,513 firm-year observations.

4.2 Descriptive statistics and correlation analyses

Panel A of Table 2 reports descriptive statistics for the variables in our main regressions by the type of auditor changes: resignation versus dismissal. The mean and median values of the two tax aggressiveness proxies (*Rank_Shelter* and *Rank_DTAX*) for the sample of auditor resignations are higher than those for the sample of client-initiated auditor dismissals, and these differences are significant at the 1% level based on both t-tests and Wilcoxon z-tests, respectively. Hence, the univariate analyses provide some preliminary evidence that auditor resignations are associated with greater tax aggressiveness than client-initiated dismissals. Panel A also reveals that the auditor resignation firms report significantly higher absolute discretionary accruals (*Abs_DA*), longer audit tenure (*Tenure*), lower profitability (*ROA*), lower leverage (*Leverage*), less analyst following (*Analyst*), lower institutional ownership (*Institutions*), lower free cash flows (*Free_cashflow*), higher managerial ownership (*Mgtown*), and higher client total fees relative to total fees at the office level (*C_impt*) than the auditor dismissal firms. Further, the auditor resignation firms also have a higher likelihood of reporting a loss (*Loss*), a higher likelihood of a receiving a going concern opinion (*GCM*), a higher probability of a reportable event (*Rep_Event*), a lower likelihood to be audited by a Big N audit firm, and a lower likelihood to be engaged in a merger or acquisition (*Merger*) than the auditor dismissal firms. These results are largely consistent with prior studies (e.g., Krishnan and Krishnan 1997; Kim and Park 2009). We control for these variables in multivariate analyses.

Panel B of Table 2 reports the distribution of auditor changes by year. There are significant increases in auditor resignations and dismissals in 2002-2004. This increase could be due to auditors' capacity constraints and their adjustment of tolerance for client risk as SOX

increases both the workload and risk exposure of auditors.[20] Some clients could also have dismissed larger auditors in an attempt to reduce fees. Given these confounding factors surrounding auditor switches in the years subsequent to the enactment of SOX, we include year fixed-effects in our regressions. Additionally, we also repeat all analyses after excluding the years 2002-2004 from our sample and find that our inferences remain unchanged.

If an auditor resigns from a client because of the client's tax aggressiveness, we expect the replacement auditor to be of a "lower quality", that is, one that will more likely go along with the client's tax aggressiveness. To provide some descriptive statistics on this contention, we examine the differences in tax aggressiveness of the 1,128 auditor resignation firms classified based on whether the departing and the replacement auditor is a Big 5 or non-Big 5 auditor. Group 1 and Group 4 represent cases where the auditor switch is lateral (either from Big 5 to Big 5 or from non-Big 5 to non-Big 5), and Group 2 and Group 3 represent cases where the auditor switch is downward (from Big 5 to non-Big 5) and upward (from non-Big 5 to Big 5), respectively. Panel B of Table 2 reports the mean and median *Rank_Shelter* for the four groups. Consistent with our expectations, the mean and median *Rank_Shelter* for the downward switch firms are significantly higher than the lateral switch and upward switch firms, suggesting that replacement auditors of tax aggressiveness clients tend to be of relatively lower quality than the

[20] The PCAOB also introduced Auditing Standard (AS) 2 and AS 3 in 2004 to coincide with the implementation of SOX. The new auditing standards further increase the workload and risk exposure of auditors. Specifically, AS 2, *An Audit of Internal Control over Financial Reporting Performed in Conjunction with an Audit of Financial Statements*, requires auditors to issue an opinion on the effectiveness of their public company clients' internal control. AS 3, *Audit Documentation*, establishes general requirements for documentation the auditor should prepare and retain in connection with engagements conducted pursuant to the standards of the PCAOB. Such engagements include an audit of financial statements, an audit of internal control over financial reporting, and a review of interim financial information. Moreover, Ettredge et al. (2007) note an increase in auditor dismissals at the time of SOX 404 implementation and Ettredge et al. (2011) find that companies receiving adverse internal control opinions are more likely to subsequently dismiss their auditors. These factors could have also contributed to the increase in auditor changes during 2002-2004.

resigning auditors. Though not tabulated, we find similar results when the mean and median *Rank_DTAX* by departing and replacement auditor are examined.

Table 3 reports the Pearson's correlations among the variables used in the auditor resignation model. We do not find any unusual correlations that raise concerns about multicollinearity. Both the *Rank_Shelter* and *Rank_DTAX* are positively correlated with the *Resign* indicator variable, confirming our finding in Table 2, and provide some initial evidence that an auditor is more likely to resign from a tax aggressive client.

4.3 Logistic regression results for the effect of tax aggressiveness on auditor resignation

Panel A of Table 4 presents the results of the logistic regression analyses on the association between tax aggressiveness and auditor resignation decision for our sample of auditor change firms. The table shows that the likelihood of auditor resignation vis-à-vis dismissal is higher when the firm is more tax aggressive, after controlling for factors that are known to affect the auditor resignation decision. Specifically, the coefficients on *Rank_Shelter* and *Rank_DTAX* are positive and significant at the 1 percent level (Wald=21.90 and 24.68, respectively), consistent with H1. To assess the economic significance, we calculate the marginal effect of tax aggressiveness on the propensity of auditor resignation. The marginal effect indicates the change in the probability of auditor resignation when the tax aggressiveness measure increases from zero to one (holding other independent variables constant).[21] With one unit increase in *Rank_shelter* and *Rank_DTAX*, the probability of auditor resignation increases by 12.6% and 13.2% respectively. Hence, the evidence indicates that the relation between tax aggressiveness and auditor resignation is economically nontrivial.

[21] The marginal effect for one unit increase in tax aggressiveness measure is computed as p x (1-p) x b, where p is the base rate (25% for the model using *Rank_shelter* and 26.4% for the model using *Rank_DTAX*) and b is the estimated coefficient from the logistic regression (Liao 1994).

For the set of control variables, consistent with prior studies (e.g., Kim et al. 2009; Landsman et al. 2009), the likelihood of auditor resignation is significantly higher for clients having disagreements with their auditors (*Disagree*), going concern opinions (*GCM*), and the presence of a reportable event (*Rep_Event*). Absolute discretionary accruals (*Abs_DA*) and net loss *(Loss*) are both significantly positively while firm size (*Size*) and the use of a Big N auditor (*BigN*) are both significantly negatively associated with the likelihood of auditor resignation.[22]

To mitigate the concern that omitted correlated variables are driving our results, we also utilize a change regression specification. Specifically, we regress auditor resignation decision on the change in tax aggressiveness measures and the changes in other continuous control variables, and assume that the endogeneity resulting from the omitted correlated variables are stationary over time. The results are presented in Panel B of Table 4. Consistent with our earlier analyses, we find that an increase in tax aggressiveness (*ΔTAXAGG*) is significantly associated with an increase in the likelihood of auditor resignation (*Resign*).

In sum, the results in Table 4 suggest that tax aggressiveness can heighten the auditor's litigation and reputational risk and the conflicts with managers, thereby triggering auditor resignation. Specifically, we interpret this result as auditors being more likely to resign from tax aggressive clients because their perceived client risk in such firms is exceedingly high, as managers in those firms have incentives to conceal their opportunistic rent diversion and related accounting irregularities from the investigation of auditors. In the following section, we examine how the strength of external monitoring, the potentials for agency problems in the client firm,

[22] Although not tabulated, we attempt to control for internal control weakness (*ICW*) using the data in the post-SOX period. Specifically, *ICW* is set equal to 1 if management disclose a material internal control weakness under SOX Sections 302 or 404, or the auditor issues an adverse opinion on the firm's internal controls over financial reporting under Section 404, and 0 otherwise. We find that while the coefficient on *ICW* is positive and significant (Wald=12.54 and 12.99 respectively), *TAXAGG* remains positive and significant (Wald=21.14 and 27.82 respectively) in this analysis.

and the economic importance of the client moderate the relationship between tax aggressiveness and auditor resignation decision.

4.4 Regression results on the cross-sectional analyses on the effect of tax aggressiveness on auditor resignation

Table 5 presents the results on whether the likelihood that an auditor resigns from a tax aggressive client varies with the strength of external monitoring.[23] Panels A and B show the results when we proxy the strength of external monitoring by analyst following (*Analyst*) and institutional ownership (*Institutions*), respectively. As shown in Panel A, the likelihood that an auditor resigns from a tax aggressive client decreases when the analyst following is high. Specifically, the coefficients on the interaction terms *Rank_Shelter*Analyst* and *Rank_DTAX*Analyst* are negative and significant at the 1 percent level (Wald = 7.27 and 6.44, respectively). Panel B also reveals that when institutional ownership is high, the auditor is less likely to resign from a tax aggressive client. Specifically, the coefficients on the interaction terms *Rank_Shelter*Institutions* and *Rank_DTAX*Institutions* are negative and significant at the 1 percent level (Wald=10.79 and 8.41, respectively). Hence the results in Table 5 are consistent with H2a that to the extent that strong external monitoring mechanisms curb agency problems and managerial opportunism arising from tax aggressiveness activities, auditor's perceived litigation and reputation risks are alleviated.

Next, we test how the association between tax aggressiveness and auditor resignation varies with the potentials for agency problems in client firms. Panels A and B of Table 6 present the results when we use free cash flows (*Free_Cashflow*) and managerial ownership (*Mgtown*),

[23] Ai and Norton (2003) provide an alternative computation for calculating the directional effect and statistical significance of interactions in nonlinear models. However, Greene (2010) concludes that an overall statistical inference cannot be obtained from the Ai and Norton (2003) measure. Furthermore, Kolasinski and Seigel (2010) ague that it is appropriate to draw inferences from the interaction term in nonlinear models. Therefore, we use the interaction coefficient to assess the directional effect of our results.

respectively, to capture the extent of agency problems. Panel A shows that the coefficients on *Rank_Shelter*Free_Cashflow* and *Rank_DTAX*Free_Cashflow* are positive and significant at the 5 percent level (Wald=6.06 and 5.62, respectively). In Panel B, the coefficients on *Rank_Shelter*Mgtown* and *Rank_DTAX*Mgtown* are negative and significant at the 10 percent level (Wald=3.99 and 3.46, respectively). These results are consistent with our prediction in H2b that greater agency problems in a tax aggressive firm, as indicated by higher free cash flows and lower managerial ownership, further increases the likelihood that an auditor resigns from the audit engagements with tax aggressive clients. This result provides further support that managerial opportunism and rent diversion associated with tax avoidance activities are important concerns in auditors' client retention decisions, augmenting the agency theory argument for the possible association between tax aggressiveness and auditor resignation.

Finally, Table 7 presents the results on how the economic importance of client fees moderates the relation between tax aggressiveness and auditor resignation. In Panel A, we report the results when we proxy fee dependence using the total fees received from the client relative to total fees earned at the auditor office level (*C_Impt*). We find that the coefficients on *Rank_Shelter*C_Impt* and *Rank_DTAX*C_Impt* are negative and significant at the 1 percent level (Wald=7.50 and 7.11, respectively).[24] In Panel B, we report the results when we use the proportion of client tax fees relative to client total fees to proxy for fee dependence (*Taxfee*). The coefficient on *Rank_Shelter*Taxfee* is negative and significant at the 1 percent level (Wald=11.77), and the coefficient on *Rank_DTAX*Taxfee* is negative but not significant at

[24] The positive and significant coefficient on *C_impt* appears counter-intuitive. However, when we remove the interaction terms *Rank_Shelter*C_Impt* and *Rank_DTAX*C_Impt*, the coefficient on *C_impt* becomes positive but statistically insignificant (Wald statistics = 0.35 and 0.44, respectively).

conventional levels (Wald=0.48).[25, 26] Overall, the results presented in Table 7 are consistent with H2c that the positive relation between tax aggressiveness and auditor resignation is weaker when the economic importance of the audit engagement is higher. Specifically, higher fee importance and tax service fees are likely to cause the auditor to become less skeptical towards the client's tax aggressiveness behavior, resulting in a lower likelihood that the auditor resigns from a tax aggressive client.

Overall, our empirical results suggest that aggressive tax behavior increases the audit and litigation risks of auditors and such risks cannot be substantially remediated in audit procedures with managers who have incentives to conceal their rent diversion from opaque tax transactions, hence causing the auditor to resign from the audit engagement. Further, auditors are more concerned about the complementarities between tax aggressiveness and the opportunistic behavior of managers when the external monitoring over the client firm is weaker and when the potential for agency conflicts in the client firm is higher. Hence, auditors are even more likely to resign from those clients. On the other hand, higher economic importance of audit and tax fees is likely to cause the auditor to be more willing to take on risks from tax aggressive behavior and less likely to resign from the client.

5. Additional analyses

In this section, we examine the robustness of our results by conducting a series of

[25] We also examine whether the auditor resignation decision is influenced by whether the auditor is an industry specialist or tax-specific industry specialist. When we interact the tax aggressiveness measures with indicator variables that indicate whether the auditor is an industry specialist (*IND_EXPERT*) or tax-specific industry specialist (*TAX_EXPERT*) measured at the office level based on 2-digit SIC industry code, we fail to find significant results. In addition, when we interact *Rank_Shelter*Taxfee* and *Rank_DTAX*Taxfee* with each of *IND_EXPERT* and *TAX_EXPERT*, all the three way interaction variables are also not significant. These results suggest that auditor industry and tax expertise have no incremental effect on auditor's decision to resign from tax aggressive clients.

[26] In untabulated analysis, we use the ratio of non-audit fees to total client fees (*NASFee*) and logged non-audit fees (*LnNASFee*) as alternative fee dependence measures and include their interactions with our tax aggressiveness measures in the model. Similar to the result in Panel B of Table 7, we find that *Rank_Shelter*NASFee* is negative and significant at the 5 percent level (Wald=4.52), while *Rank_DTAX*NASFee* is negative and insignificant (Wald=2.41). However, we find that both *Rank_Shelter*LnNASFee* and *Rank_DTAX*LnNASFee* are negative and significant at conventional levels (Wald=10.42 and 5.00, respectively).

sensitivity analyses and report the results in Table 8. Although all control variables are included in the empirical specifications, we report only the coefficients and significance levels for our measures of tax aggressiveness and variables of interest for brevity.

5.1 Alternative measures for tax aggressiveness

As argued earlier, we choose two measures that capture the more extreme forms of tax avoidance behavior because we want to explore the consequence of more aggressive and opaque management tax behavior on auditor resignation decisions. Lisowsky et al. (2012b) argue and provide evidence that the unrecognized tax benefit (*UTB*) disclosed by a firm pursuant to FIN 48 is a superior predictor of tax shelter activity. Hence, we use *UTB* as an alternative measure of tax aggressiveness.[27] Column 1 of Table 8, Panel A reports the result. Although the sample size is much smaller for this test, we still find that the coefficient on *UTB* is positive and significant at the 10 percent level, consistent with our earlier findings.

Next, we examine how the main results vary with measures that capture less extreme forms of tax aggressiveness. Lisowsky et al. (2012b) suggest that the probability of engaging in tax sheltering (*Shelter*), discretionary permanent book-tax difference (*DTAX*), permanent book-tax difference (*PBTD*), book-tax difference (*BTD*), and cash effective tax rates (*CETR*) capture the varying degree of tax aggressiveness, from most aggressive to least aggressive. We replicate the results in Table 4 using *PBTD*, *BTD*, and *CETR*, and present the results in the second to fourth columns of Panel A, Table 8. Both the coefficients on *PBTD* and *BTD* are positive and significant at the 10 percent level while that on *CETR* is not significant. These results suggest that the positive relation between tax aggressiveness and auditor resignation weaken for

[27] The advantage of using *UTB* as a proxy for tax aggressiveness is that it is not confounded by other accounting variables and thus is less prone to measurement errors, while the disadvantage is that the sample size for this test (n=312) is much smaller compared to those using *Shelter* and *DTAX* because the data on *UTB* are only available from 2007.

measures that capture less extreme form of tax aggressiveness; this supports the appropriateness of using *Shelter* and *DTAX* as the measures of tax aggressiveness for the purpose in this study.[28]

5.2 Controlling for financial reporting risk

Following prior literature, we control for absolute discretionary accruals (*Abs_DA*) in our resignation model to examine the direct effect of tax avoidance on auditor resignation beyond and above its indirect effect through accruals manipulation. To more carefully examine whether financial reporting risk that could be associated with our tax aggressiveness measures is likely to explain our findings, we repeat each of our tests by using three alternative proxies for financial reporting risk: predicted accounting restatement score (*Fscore*) based on Dechow et al. (2011), total accruals (*HACC*) as in Hanlon et al. (2012)[29], and accruals quality (*AQ*) developed by Francis et al. (2005).[30] The results, reported in Panels B, C, and D of Table 8, reveal that the coefficients on *Rank_Shelter* and *Rank_DTAX* continue to be significantly positive at conventional levels, indicating that our main result is robust to the inclusion of various proxies for financial reporting risk.[31]

Next, we examine whether the positive association between tax aggressiveness and auditor resignation is higher for clients that have higher financial reporting risk. For this purpose, we repeat our tests after adding the interaction variables between our tax avoidance proxies and financial reporting risk measures into the model. The results reported in the last two columns of

[28] We also find that the interaction between *PBTD*, *BTD*, and *CETR* and our conditioning variables are not significant in most cases. We do not examine the interaction between *UTB* and the conditioning variables because the data requirements on the conditioning variables further limit the sample size for the H2 tests.

[29] Following Hanlon et al. (2012), *HACC* is defined as an indicator variable that equals 1 for observations in the top decile of total accruals scaled by beginning total assets, and 0 otherwise.

[30] Specifically, we estimate pooled industry-year cross-sectional regressions with total current accruals as the dependent variable, and employ cash flow in the previous, current, and subsequent years and changes in revenue and PPE as independent variables. Following Dechow and Dichev (2002, see footnote 6) and Srinidhi and Gul (2007), we use the absolute value of the residuals from these regressions as our (inverse) measure of accruals quality (*AQ*). The sample size for this sensitivity check is smaller due to additional data requirements.

[31] Our unreported results also indicate that the interaction between tax avoidance and the other conditioning variables continues to be significant as in main tables after including these alternative metrics for financial reporting risk in the regression model.

Panels B, C, and D show that the interaction variables are all statistically insignificant, indicating that the relation between tax avoidance and auditor resignation is not statistically different between firms with a high level of financial reporting risk and firms with a low level of financial reporting risk. These results suggest that financial reporting risk that can be associated with tax aggressiveness does not appear to be the dominating force that causes auditor resignations.

Finally, we split our sample into two sub-samples using the median of each of predicted accounting restatement score, total accruals, and accruals quality, and repeat the test in Table 4 (while removing *Abs_DA*) for each subsample. Untabulated results reveal that our proxies for tax aggressiveness continue to be positively and significantly associated with the likelihood of auditor resignation in each subsample, suggesting that our main results in Table 4 are not driven by a subset of client firms with extreme financial reporting risk.

5.3 Non-auditor change sample as control firms

As discussed earlier, the control firms used in the resignation tests are those that dismissed auditors because firms that switch auditors are different in many perspectives from the population of firms that do not switch auditors. To test the sensitivity of our results, we repeat our auditor resignation test in Table 4 by using a larger set of control firms that do not change auditors. We exclude the variables *Disagree* and *Rep_Events* from the model for this sensitivity check because these variables are relevant only to auditor-switching clients. The results, presented in Panel E of Table 8, are consistent with the main results. Specifically, we continue to find positive and significant coefficients on *Rank_Shelter* and *Rank_DTAX* at the 1 percent level.[32]

5.4 Pre- and post-SOX periods analyses

[32] We repeat all our cross-sectional analyses tests using this alternative control sample. Most coefficients on the variables of interest, i.e., the interactions between tax aggressiveness and the conditioning variables, are significant at 10% level or lower and in the same direction as reported in the main tables.

Landsman et al. (2009) find that the collapse of Andersen as well as the internal reporting requirements brought about by Section 404 of SOX cause changes in the Big N auditor sensitivity to client misalignment and client risk in the post-SOX period. SOX also prohibited certain types of auditor-provided nonaudit services including some tax services. Furthermore, Maydew and Shackelford (2007) conjecture that the tax provision is an increased source of conflict between auditor and client after the passage of SOX and regulatory actions by SEC and PCAOB. Graham et al. (2013) via survey of over 500 tax directors provide evidence that splitting the audit and tax service providers increased tension between the client firm and their auditor. Thus, as a sensitivity check, we examine how the relation between tax aggressiveness and auditor's resignation decision differs between the pre- and post-SOX period and report the results in Panel F of Table 8. Both measures of tax aggressiveness are associated with auditor resignation in the post-SOX period but not in the pre-SOX period in each period subsample analysis. In addition, the interactions between the indicator of the post-SOX period (*SOX*) and the tax aggressiveness measures in the pooled regression are positive and significant while the coefficients on tax aggressiveness measures, which capture the relation in the pre-SOX period, are insignificant. These results indicate that the positive association between tax aggressiveness and auditor resignation prevails only for the post-SOX period in which the legal liability for auditors and the scrutiny of regulators over audit quality are heightened.

5.5 Controlling for abnormal audit fees

Donohoe and Knechel (2013) find that an audit fee premium attributable to tax aggressiveness is incremental to premiums relating to an auditor's general concerns about earnings management via the tax accounts. To examine whether the effect of tax aggressiveness on auditor resignation remains in the existence of an audit fee premium, we further control for

abnormal audit fees (*Abn_fees)* in our regressions.[33] Panel G of Table 8 presents the results after including *Abn_fees* in Equation (3). The coefficients on *Rank_Shelter* and *Rank_DTAX* continue to be significantly positive at conventional levels. This result suggests that charging higher audit fees does not totally eliminate the audit risks associated with a tax aggressive client, hence leading to auditor resignation. Next, when we interact abnormal audit fees with our tax aggressiveness proxies, we find that the coefficients on the interaction terms *Rank_Shelter*Abn_fees* and *Rank_Shelter*Abn_fees* are both significantly negative at the conventional levels. This latter result suggests that while increased client audit fees does not totally eliminate the audit risks associated with a tax aggressive client, they help alleviate the auditor's concerns over a tax aggressive client and reduce the likelihood of a resignation decision.

5.6 Results with sub-sample of Big N clients only

Our sample includes the clients of both Big N and non-Big N auditors because of the small number of Big N auditor resignations (396). Although our models include a control for the indicator of Big N auditors, the choice of Big N auditors and their higher exposure to litigation and reputation risk may potentially confound our results. Thus, we repeat our analysis after restricting the sample to client firms audited by Big N auditors. The results, reported in Panel H of Table 8, show that the coefficients on *Rank_Shelter* and *Rank_DTAX* remain positive and significant at the 10 percent level. Next, because some audit firms have been very aggressive in selling tax shelters or tax avoidance services, we check whether there are audit firm specific effects. Specifically, we include an indicator variable for each Big N auditor, as well as its interaction with our tax aggressiveness measures into our regression model (one Big N auditor at a time) and repeat the test. Untabulated results show that all the indicator and interaction variables are statistically insignificant. These results indicate that resignations among the Big N

[33] The measurement of abnormal audit fees is detailed in Table 8.

auditors are not less likely by certain Big N audit firms that are known as aggressive tax advice seller.

6. Conclusion

This study examines whether client tax aggressiveness affects an auditor's decision to resign from audit engagements. We posit that tax aggressiveness can heighten the litigation and reputation risks facing the auditors. Moreover, managers' incentives to hide their opportunistic behavior related to tax aggressiveness can create potential conflicts with auditors, and tax aggressiveness behavior calls into question the integrity and risk profile of management. Despite the risk associated with tax aggressiveness, auditors will not resign if they are able to offset the risk through exerting more efforts and charging higher fees or if the client tax advocacy role prevails over the auditor's desire to limit exposure to litigation risk.

Using a large number of firms that switch auditors over 2000-2010, we examine this *ex ante* unclear relation and find a positive association between our proxies for tax aggressiveness and auditor resignation. We also find that the positive association is stronger when external monitoring of the client firm is less effective and when there is greater potential for agency problems in the client firm. These findings suggest that tax aggressiveness heightens the concerns of auditors over litigation and reputational risks and potential conflicts with managers, hence triggering auditor resignation, when auditing clients with weaker external monitoring or with greater potentials for agency conflicts. Finally, we find that and the association is weaker when the economic importance of audit and tax fees received from the client is higher, suggesting that the fee importance and non-audit tax service lowers auditors' incentives to resign.

Our study extends the existing literature by examining how a firm's tax aggressiveness affects the external auditor's behavior and suggests that corporate tax avoidance is an important

risk factor that influences the auditor's resignation decision. Given the pervasiveness of tax aggressiveness among U.S. firms, the negative effect of aggressive tax behavior on the auditor-client relationship should be noted for the healthy development of the audit assurance industry. Moreover, to the extent that the auditor resignation is viewed negatively in the market, this study implies that the shareholders of tax aggressive firms must bear additional "non-tax costs" (Hanlon and Heitzman 2010, 146) that have not been previously documented.

Our study is subject to a few caveats. First, although we control for several alternative metrics of financial reporting risk in our resignation model and find that our main results are not sensitive to these alternative metrics, we cannot conclusively rule out the possibility that tax aggressiveness could still be proxying for financial reporting risks. Second, to the extent that an auditor resigns but the audit firm and client mutually agree not to state it as an auditor resignation in the client firm's 8-K filing, the number of firms with auditor resignations could be understated in our sample. Finally, because we use a lag variable for tax aggressiveness, our study will not pick up cases where the auditor resigns before the firm plans on or does enter into tax sheltering activities.

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Table 1
Variables Definition.

Resign	=	1 if the auditor resigns, and 0 otherwise (dismissed);
Tax aggressiveness		
Rank_Shelter	=	Decile rank of tax aggressiveness based on Wilson (2009); scaled from 0 to 1, with higher values indicating higher tax aggressiveness;
Rank_DTAX	=	Decile rank of tax aggressiveness based on Frank et al. (2009), scaled from 0 to 1, with higher values indicating higher tax aggressiveness;
Intervening variables		
Analyst	=	Number of analyst covering the firm, number set to zero if the firm is not listed in I/B/E/S;
Institutions	=	Institutional ownership;
Free_cashflow	=	1 if the free cash flow (measured by operating cash flow minus capital expenditure minus dividend payment, scaled by beginning assets) is above the population median, and sales growth (measured by the percentage change in sales, scaled by total assets) over the previous year is below the population median.
Mgtown	=	Ownership held by executives;
C_impt	=	client total fees relative to total fees at the office level;
Taxfee	=	client tax fees relative to client total fees;
Control variables		
Sales_growth	=	growth in sales;
Abs_DA	=	absolute values of performance-adjusted discretionary accruals (measured by the modified-Jones model);
Inv_rec	=	sum of inventories and receivables, divided by beginning total assets;
GCM	=	1 if the firm receives a going concern modified opinion, and 0 otherwise;
Clean	=	1 if the auditor issues clean, unqualified report, and 0 otherwise;
Tenure	=	auditor tenure in years;
ROA	=	income before extraordinary items deflated by total assets;
Loss	=	1 if firm is reporting a loss and 0 otherwise;
Leverage	=	total debts to assets ratio;
Cash	=	cash deflated by total assets;
Disagree	=	1 if the 8-K filing discloses an accounting disagreement with the incumbent auditor, and 0 otherwise;
Rep_event	=	1 if the 8-K filing discloses a reportable event, and 0 otherwise;
BigN	=	1 if the firm is audited by a Big N audit firm, and 0 otherwise;
Ln_MV	=	Log of market capitalization;
Merger	=	1 if the firm is engaged in a merger or acquisition, and 0 otherwise;
Mismatch	=	1 if the company is mismatched with the incumbent auditor, following the methodology in Shu (2000), and 0 otherwise.

Table 2
Descriptive statistics.

Panel A: Descriptive statistics for the variables used in the auditor resignation model

	Resign=1 (n=1,128)		**Resign=0 (n=3,385)**		**Difference**	
	Mean	Median	Mean	Median	t- value	z-value
Rank_Shelter	0.53	0.56	0.50	0.56	3.05***	3.98***
Rank_DTAX	0.54	0.56	0.48	0.44	3.87***	3.05***
Sale_growth	0.54	0.03	0.85	0.04	-1.56	-0.20
Abs_DA	1.18	0.21	1.08	0.17	1.23	2.82***
Inv_Rec	0.27	0.22	0.27	0.23	-0.11	-0.53
GCM	0.32	0.00	0.26	0.00	3.87***	3.98***
Clean	0.53	1.00	0.53	1.00	-0.11	-0.11
Tenure	4.11	2.00	4.02	1.00	0.51	3.50***
ROA	-0.20	-0.09	-0.23	-0.04	-0.69	-2.43**
Loss	0.65	1.00	0.58	1.00	3.75***	3.75***
Leverage	0.21	0.02	0.23	0.04	-0.88	-2.44**
Cash	0.29	0.10	0.32	0.09	-1.18	1.10
Disagree	0.04	0.00	0.02	0.00	2.74***	2.74***
Rep_Event	0.18	0.00	0.14	0.00	2.67***	2.67***
BigN	0.35	0.00	0.37	0.00	-13.22***	-11.69***
Ln_MV	3.30	3.34	3.93	3.80	-7.55***	-7.02***
Merger	0.14	0.00	0.19	0.00	-4.06***	-3.81***
Mismatch	0.18	0.00	0.16	0.00	1.25	1.25
Analyst	1.16	0.00	1.95	0.00	-7.08***	-6.23***
Institutions	0.24	0.10	0.31	0.17	-5.08***	-5.02***
Free_cashflow	0.14	0.00	0.16	0.00	-2.01**	-1.94*
Mgtown	0.23	0.11	0.20	0.09	2.37**	3.08***
C_impt	0.15	0.08	0.13	0.06	2.73***	4.62***
Taxfee	0.05	0.00	0.05	0.00	1.18	1.32

Panel B: Distribution of auditor change by year

Year	Dismissal	Resignation	Total
2000	58	15	73
2001	355	50	405
2002	317	67	384
2003	385	137	522
2004	448	199	647
2005	421	174	595
2006	362	129	491
2007	319	118	437
2008	262	56	318
2009	258	83	341
2010	200	100	300
Total	3,385	1,128	4,513

Panel C: Tax aggressiveness by departing and replacement auditor in the resignation sample

		Replacement Auditor		
		Big5	Non-Big5	Difference (t and z- statistic)
Departing Auditor	Big5	Group 1 n=97 Mean=0.47 Median=0.44	Group 2 n=299 Mean=0.58 Median=0.61	Group 1 vs. 2 t=3.81*** z=3.42***
	Non-Big5	Group 3 n=46 Mean=0.55 Median=0.53	Group 4 n=686 Mean=0.56 Median=0.55	Group 3 vs. 4 t=0.38 z=1.24
Difference (t and z- statistic)		Group 1 vs. 3 t=1.90* z=1.72*	Group 2 vs. 4 t=2.22** z=1.98**	

Panel A provides the descriptive is based on the larger sample when tax aggressiveness is measured by *Rank_Shelter*, with 4,513 firms where auditors are changed for the period 2000-2010. We exclude former Andersen clients to avoid a potential confounding effect on our results. We also removed firms in the financial industry (SIC 6000-6999). Of these auditor changes, 1,128 cases represent auditor resignation sample while the remaining changes are initiated by clients. This panel provides the descriptive statistics of the variables used in the model by auditor switch type, along with mean t-tests and median Wilcoxon z-tests of differences across the two groups. Detailed definitions of the variables are provided in Table 1. Panel B provides the number of auditor resignations and dismissals by year. Panel C provides the mean and median *Rank_Shelter* for the 1,128 firms with auditor resignation. Group 1 and 4 are cases where the auditor switch is lateral; group 2 where the auditor switch is downward; and group 3 where the auditor switch is upward. The panel also provides the differences in mean and median between groups based on parametric t and non-parametric Wilcoxon signed-rank test. '*', '**', and '***' denote significance at 10%, 5%, and 1% levels (two-tailed), respectively.

Table 3
Pearson's Correlations for the variables used in the auditor resignation model.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
(1) *Resign*	1.00																		
(2) *Rank_Shelter*	**0.05**	1.00																	
(3) *Rank_DTAX*	**0.07**	**0.34**	1.00																
(4) *Sale_growth*	-0.02	0.01	-0.01	1.00															
(5) *Abs_DA*	0.02	**0.20**	**-0.04**	**0.07**	1.00														
(6) *Inv_Rec*	0.00	**0.18**	**0.10**	0.00	**-0.07**	1.00													
(7) *GCM*	**0.06**	**-0.26**	**-0.13**	0.02	**0.37**	**-0.07**	1.00												
(8) *Clean*	0.00	**0.18**	**0.05**	0.00	**-0.20**	**0.08**	**-0.58**	1.00											
(9) *Tenure*	0.01	-0.03	0.01	0.00	0.02	0.00	**0.06**	**-0.12**	1.00										
(10) *ROA*	0.01	**0.33**	**0.35**	-0.02	**-0.19**	0.10	**-0.29**	**0.15**	0.03	1.00									
(11) *Loss*	**0.06**	**-0.43**	**-0.26**	0.03	**0.21**	-0.14	**0.41**	**-0.20**	**-0.08**	**-0.39**	1.00								
(12) *Leverage*	-0.01	**-0.15**	**-0.08**	-0.02	**0.11**	-0.02	**0.15**	**-0.11**	**0.05**	**-0.10**	**0.10**	1.00							
(13) *Cash*	-0.02	-0.01	**-0.10**	**0.12**	**0.27**	**-0.17**	0.03	0.02	-0.01	**-0.04**	**0.06**	**-0.05**	1.00						
(14) *Disagree*	**0.04**	0.03	0.00	0.01	-0.03	0.03	-0.02	0.00	-0.02	0.01	-0.01	-0.02	-0.02	1.00					
(15) *Rep_Event*	**0.04**	-0.01	-0.02	-0.02	**-0.07**	0.01	**-0.08**	-0.01	**-0.08**	0.02	0.02	0.00	-0.03	*0.30*	1.00				
(16) *BigN*	**-0.17**	0.00	0.03	**-0.04**	**-0.21**	**-0.07**	**-0.31**	**0.04**	**0.08**	**0.13**	**-0.25**	**-0.04**	**-0.08**	0.01	0.03	1.00			
(17) *Ln_MV*	**-0.11**	**0.04**	**0.04**	-0.02	**-0.26**	**-0.13**	**-0.50**	**0.13**	**0.04**	**0.20**	**-0.43**	**-0.08**	-0.02	0.02	**0.08**	**0.56**	1.00		
(18) *Merger*	**-0.06**	0.00	0.02	**0.12**	**0.06**	**-0.04**	**-0.06**	-0.03	-0.01	0.01	-0.02	-0.01	**0.06**	-0.03	-0.03	**0.12**	**0.15**	1.00	
(19) Mismatch	0.02	0.03	-0.02	-0.03	-0.12	0.00	**-0.15**	**0.09**	**-0.14**	**0.05**	**-0.04**	**-0.05**	**-0.04**	0.03	**0.10**	**0.05**	**0.10**	-0.03	1.00

This panel provides the Pearson's correlation between variables used in the auditor resignation model for the auditor change sample. The variables are as defined in Table 1. The correlations are bold if significant at 1% levels (two-tailed).

Table 4
Tax aggressiveness and auditor resignation.

Panel A: Level regression

		TAXAGG=Rank_Shelter		*TAXAGG=Rank_ DTAX*	
	Sign	Coef	Wald	Coef	Wald
Intercept	*?*	-1.343	47.09	-1.222	31.76***
TAXAGG	***+***	**0.671**	**22.59*****	**0.678**	**24.90*****
Sales_growth	+	-0.007	1.40	-0.010	1.50
Abs_DA	+	0.055	9.15***	0.007	0.08
Inv_Rec	+	-0.262	2.60	-0.402	4.33**
GCM	+	0.244	3.83*	0.353	5.80**
Clean	-	0.069	0.54	0.070	0.43
Tenure	-	0.010	2.03	0.007	0.66
ROA	-	0.068	2.18	0.008	0.00
Loss	+	0.309	10.39***	0.292	6.62***
Leverage	+	-0.031	0.42	-0.038	0.27
Cash	-	-0.062	1.68	-0.155	3.52*
Disagree	+	0.445	3.93**	0.649	6.29***
Rep_Event	+	0.187	3.12*	0.195	2.58
BigN	-	-0.727	47.20***	-0.799	45.06***
Ln_MV	-	-0.056	6.21**	-0.060	5.01**
Merger	*?*	-0.141	1.90	-0.068	0.31
Mismatch	+	0.144	2.15	0.102	0.86
Year Dummies		Yes		Yes	
n		4,513		3,367	
Wald-statistic		245.80***		235.56***	
Pseudo R^2 (%)		9.54		12.44	

Panel B: Change regression

		TAXAGG=Rank_Shelter		*TAXAGG=Rank_ DTAX*	
	Sign	Coef	Wald	Coef	Wald
Intercept	*?*	-2.466	648.30***	-2.316	293.40***
ΔTAXAGG	***+***	**0.028**	**3.52***	**0.056**	**10.48*****
ΔSales_growth	+	0.000	0.00	0.000	0.37
ΔAbs_DA	+	0.004	4.38**	0.005	1.22
ΔInv_Rec	+	0.079	0.05	0.202	0.18
ΔROA	-	-0.061	16.66***	0.000	0.00
ΔLeverage	+	0.020	0.91	0.114	0.90
ΔCash	-	-0.053	3.03*	-0.033	0.11
ΔLn_MV	-	-0.194	17.05***	-0.246	15.14***
Year Dummies		Yes		Yes	
n		4,137		3,024	
Wald-statistic		706.40***		173.18***	
Pseudo R^2 (%)		12.52		4.35	

This table reports the logistic regression results on the relation between tax aggressiveness and auditor resignation. Panel A shows the results for the level regression. Panel B shows the results for the change regression. *ΔTAXAGG* as the difference in *TAXAGG* between year *t-1* and *t*, which is then rank transformed into decile. The continuous variables are first-differenced. In both panels, Column 1 shows the results using *Rank_Shelter* to proxy tax aggressiveness; Column 2 shows the results using *Rank_DTAX* to proxy tax aggressiveness. Coefficients on the year dummies are not tabulated for brevity. The detailed definition of the variables is provided in Table 1. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 5
The effect of external monitoring on the relation between tax aggressiveness and auditor resignation.

Panel A: Analyst following

		TAXAGG=Rank_Shelter		*TAXAGG=Rank_ DTAX*	
	Sign	Coef.	Wald	Coef.	Wald
Intercept	?	-1.411	50.80***	-1.318	35.67***
TAXAGG	**+**	**0.791**	**28.39*****	**0.814**	**31.35*****
Sales_growth	+	-0.007	1.42	-0.010	1.47
Abs_DA	+	0.060	10.62***	0.009	0.13
Inv_Rec	+	-0.263	2.61	-0.417	4.62**
GCM	+	0.276	4.83**	0.359	5.98**
Clean	-	0.076	0.64	0.069	0.41
Tenure	-	0.009	1.67	0.008	0.93
ROA	-	0.057	1.85	-0.017	0.01
Loss	+	0.299	9.83***	0.281	6.13***
Leverage	+	-0.035	0.51	-0.032	0.19
Cash	-	-0.058	1.51	-0.163	3.89*
Disagree	+	0.448	3.96*	0.658	6.48***
Rep_Event	+	0.196	3.43*	0.189	2.44
BigN	-	-0.727	44.56***	-0.786	41.86***
Ln_MV	-	-0.053	4.57**	-0.047	2.52
Merger	?	-0.141	1.89	-0.057	0.21
Mismatch	+	0.148	2.24	0.095	0.74
Analyst	?	0.057	4.86**	0.057	3.74**
TAXAGG*Analyst	**-**	**-0.120**	**7.27*****	**-0.136**	**6.44*****
Year Dummies		Yes		Yes	
n		4,513		3,367	
Wald-statistic		279.32***		268.03***	
Pseudo R^2 (%)		9.75		12.77	

Panel B: Institutional ownership

		TAXAGG=Rank_Shelter		*TAXAGG=Rank_DTAX*	
	Sign	Coef.	Wald	Coef.	Wald
Intercept	?	-1.449	32.28***	-1.544	30.17***
TAXAGG	**+**	**0.835**	**14.36*** **	**0.999**	**23.01*** **
Sales_growth	+	-0.020	5.46**	-0.014	1.69
Abs_DA	+	0.036	1.58	0.035	0.98
Inv_Rec	+	-0.342	2.52	-0.344	1.99
GCM	+	0.592	14.16***	0.607	10.87***
Clean	-	0.019	0.03	0.020	0.03
Tenure	-	0.006	0.54	0.009	1.01
ROA	-	0.081	0.44	0.015	0.00
Loss	+	0.243	4.55**	0.279	4.64**
Leverage	+	-0.043	0.20	0.021	0.03
Cash	-	-0.117	2.83*	-0.124	1.82
Disagree	+	0.480	3.51*	0.739	7.03***
Rep_Event	+	0.294	6.37***	0.334	6.38***
BigN	-	-0.790	42.33	-0.845	39.95***
Ln_MV	-	-0.041	1.82	-0.027	0.57
Merger	?	-0.190	2.31	-0.123	0.75
Mismatch	+	0.128	1.45	0.108	0.84
Institutions	?	0.854	8.66***	0.818	4.33**
TAXAGG*Institutions	**-**	**-1.611**	**10.79*** **	**-1.818**	**8.41*** **
Year Dummies		Yes		Yes	
n		3,300		2,627	
Wald-statistic		247.12***		239.51***	
Pseudo R^2 (%)		11.62		14.33	

This table reports the logistic regression results for the effect of external monitoring on the relation between tax aggressiveness and auditor resignation. The detailed definition of the variables is provided in Table 1. Column 1 shows the results using *Rank_Shelter* to proxy tax aggressiveness; Column 2 shows the results using *Rank_DTAX* to proxy tax aggressiveness. In Panel A, we report the results when outside monitoring is proxied by analyst coverage. In Panel B, we report the results when outside monitoring is proxied by ownership held by institutions. Coefficients on the year dummies are not tabulated for brevity. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 6
The effect of agency costs on the relation between tax aggressiveness and auditor resignation.

Panel A: Agency costs of free cash flow

		TAXAGG=Rank_Shelter		*TAXAGG=Rank_DTAX*	
	Sign	Coef	Wald	Coef	Wald
Intercept	?	-1.223	36.40***	-1.141	27.28***
TAXAGG	**+**	**0.508**	**10.41*** **	**0.534**	**13.78*** **
Sales_growth	+	-0.008	1.59	-0.010	1.61
Abs_DA	+	0.049	6.90***	0.006	0.06
Inv_Rec	+	-0.291	3.01*	-0.416	4.46**
GCM	+	0.258	4.29**	0.374	6.49***
Clean	-	0.072	0.58	0.075	0.48
Tenure	-	0.010	2.09	0.007	0.84
ROA	-	0.069	2.25	0.005	0.00
Loss	+	0.282	8.47***	0.280	6.02***
Leverage	+	-0.031	0.42	-0.037	0.28
Cash	-	-0.059	1.53	-0.149	3.10*
Disagree	+	0.459	4.21**	0.671	6.79***
Rep_Event	+	0.183	3.00*	0.196	2.61
BigN	-	-0.734	47.98***	-0.806	45.43***
Ln_MV	-	-0.056	6.02***	-0.060	4.93**
Merger	?	-0.138	1.79	-0.080	0.42
Mismatch	+	0.139	2.01	0.099	0.80
Free_Cashflow	?	-0.446	6.06***	-0.599	5.62**
TAXAGG* Free_Cashflow	**+**	**0.632**	**5.27*** **	**1.073**	**8.22*** **
Year Dummies		Yes		Yes	
n		4,513		3,367	
Wald-statistic		276.19***		267.28***	
Pseudo R^2 (%)		9.75		12.78	

Panel B: Managerial ownership

		TAXAGG=Rank_Shelter		*TAXAGG=Rank_DTAX*	
	Sign	Coef	Wald	Coef	Wald
Intercept	?	-1.327	27.67***	-1.174	18.19***
TAXAGG	**+**	**0.398**	**5.02****	**0.495**	**9.05*****
Sales_growth	+	-0.014	1.35	-0.035	4.41**
Abs_DA	+	0.056	5.09**	0.006	0.03
Inv_Rec	+	-0.387	3.62*	-0.552	5.49**
GCM	+	0.424	7.17***	0.450	6.02***
Clean	-	0.005	0.00	0.012	0.01
Tenure	-	0.005	0.44	0.006	0.40
ROA	-	0.064	0.83	0.056	0.08
Loss	+	0.256	5.02**	0.279	4.52**
Leverage	+	0.017	0.07	0.021	0.04
Cash	-	-0.115	3.12*	-0.223	4.27**
Disagree	+	0.443	2.77*	0.597	3.83**
Rep_Event	+	0.284	5.36**	0.310	5.00**
BigN	-	-0.842	44.01***	-0.864	37.27
Ln_MV	-	-0.027	0.79	-0.053	2.15
Merger	?	-0.165	1.80	-0.107	0.54
Mismatch	+	0.185	2.70*	0.171	1.86
Mgtown	?	0.349	4.28**	0.250	1.57
TAXAGG* Mgtown	**-**	**-0.034**	**3.99****	**-0.021**	**3.46***
Year Dummies		Yes		Yes	
n		3,283		2,539	
Wald-statistic		235.72***		221.91***	
Pseudo R^2 (%)		11.46		13.90	

This table reports the logistic regression results for the effect of shareholder-manager agency costs on the relation between tax aggressiveness and auditor resignation. Agency costs are proxied by *Free_cashflow* and *Mgtown*. The detailed definition of the variables is provided in Table 1. Column 1 shows the results using *Rank_Shelter* to proxy tax aggressiveness; Column 2 shows the results using *Rank_DTAX* to proxy tax aggressiveness. In Panel A, we report the results when agency cost is proxied by *Free_cashflow*. In Panel B, we report the results when results when agency cost is proxied by *Mgtown*. Coefficients on the year dummies are not tabulated for brevity. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 7
The effect of fee importance on the relation between tax aggressiveness and auditor resignation.

Panel A: Client total fee importance

		TAXAGG=Rank_Shelter		*TAXAGG=Rank_DTAX*	
	Sign	Coef	Wald	Coef	Wald
Intercept	?	-1.517	41.92***	-1.494	35.71***
TAXAGG	**+**	**0.737**	**13.64*** **	**1.016**	**31.10*** **
Sales_growth	+	-0.015	3.68*	-0.011	1.38
Abs_DA	+	0.028	1.79	0.005	0.03
Inv_Rec	+	-0.292	2.49	-0.420	3.99**
GCM	+	0.388	6.61***	0.336	3.95**
Clean	-	0.110	0.98	-0.004	0.00
Tenure	-	0.008	1.11	0.009	1.06
ROA	-	0.194	2.37	0.026	0.02
Loss	+	0.246	4.79**	0.249	4.10**
Leverage	+	-0.090	3.15*	-0.013	0.03
Cash	-	-0.108	3.56*	-0.146	3.05*
Disagree	+	0.418	2.65*	0.647	5.08**
Rep_Event	+	0.232	3.91**	0.197	2.34
BigN	-	-0.883	46.68***	-0.984	47.27***
Ln_MV	-	-0.026	0.96	-0.026	0.73
Merger	?	-0.120	1.02	-0.157	1.30
Mismatch	+	0.055	0.24	0.024	0.04
C_impt	?	1.141	7.43***	0.775	7.08***
TAXAGG* C_impt	**-**	**-1.993**	**7.50*** **	**-1.324**	**7.11*** **
Year Dummies		Yes		Yes	
n		3,566		2,860	
Wald-statistic		239.54***		243.78***	
Pseudo R^2 (%)		11.81		14.72	

Panel B: Client tax fee importance

		TAXAGG=Rank_Shelter		*TAXAGG=Rank_DTAX*	
	Sign	Coef	Wald	Coef	Wald
Intercept	?	-1.222	25.94***	-1.340	26.76***
TAXAGG	**+**	**0.442**	**4.76****	**0.744**	**18.69*****
Sales_growth	+	-0.011	2.92*	-0.009	1.13
Abs_DA	+	0.002	0.01	0.018	0.44
Inv_Rec	+	-0.155	0.68	-0.264	1.41
GCM	+	0.187	1.72	0.251	2.28
Clean	-	0.034	0.10	0.027	0.05
Tenure	-	0.009	1.55	0.004	0.22
ROA	-	0.068	0.29	-0.126	0.45
Loss	+	0.159	2.07	0.181	2.08
Leverage	+	-0.042	0.26	0.149	1.67
Cash	-	-0.045	0.30	-0.163	1.98
Disagree	+	0.466	3.32*	0.759	6.43***
Rep_Event	+	0.209	3.21*	0.213	2.57
BigN	-	-0.854	48.37***	-0.887	40.46***
Ln_MV	-	-0.045	2.57*	-0.054	2.56
Merger	?	-0.088	0.59	-0.098	0.52
Mismatch	+	0.135	1.52	0.064	0.27
Taxfee	?	2.989	11.04***	1.249	1.45
TAXAGG* Taxfee	**-**	**-5.264**	**11.77*****	**-1.151**	**0.48**
Year Dummies		Yes		Yes	
n		3,595		2,860	
Wald-statistic		231.81***		224.58***	
Pseudo R^2 (%)		10.63		14.04	

This table reports the logistic regression results for the effect of fee dependence on the relation between tax aggressiveness and auditor resignation. In Panel A, fee dependence is proxied by client total fee relative to total fee at the office level. In Panel B, fee dependence is proxied by client tax fees relative to total fee. In Panels A and B, Column 1 shows the results using *Rank_Shelter* to proxy tax aggressiveness; Column 2 shows the results using *Rank_DTAX* to proxy tax aggressiveness. The detailed definition of the variables is provided in Table 1. Coefficients on the year dummies are not tabulated for brevity. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 8
Sensitivity Tests.

Panel A: Alternative measures of tax aggressiveness

	TAXAGG = UTB	*TAXAGG = PBTD*	*TAXAGG = BTD*	*TAXAGG = CETR*
TAXAGG	10.878	0.224	0.065	0.049
	(2.90)*	(2.83)*	(3.89)*	(0.21)
Controls	YES	YES	YES	YES
n	312	4,467	4,467	4,196
Pseudo R-square (%)	22.82	10.01	10.07	9.37

Panel B: F-score as an alternative proxy for financial reporting risk

	TAXAGG =Rank_Shelter	*TAXAGG =Rank_DTAX*	*TAXAGG =Rank_Shelter*	*TAXAGG =Rank_DTAX*
TAXAGG	0.557	0.703	0.507	0.716
	(13.05)***	(23.26)***	(8.64)***	(18.22)***
Fscore	0.001	0.001	0.001	0.001
	(1.20)	(1.53)	(1.30)	(0.32)
*TAXAGG*Fscore*			0.001	-0.000
			(0.43)	(0.03)
Controls	YES	YES	YES	YES
n	3,938	2,993	3,938	2,993
Pseudo R-square (%)	9.57	12.55	9.58	12.55

Panel C: Total accruals as an alternative proxy for financial reporting risk

	TAXAGG =Rank_Shelter	*TAXAGG =Rank_DTAX*	*TAXAGG =Rank_Shelter*	*TAXAGG =Rank_DTAX*
TAXAGG	0.444	0.670	0.456	0.672
	(11.80)***	(24.71)***	(11.77)***	(22.98)***
HACC	0.206	0.285	0.315	0.302
	(2.77)*	(3.38)*	(0.76)	(0.83)
*TAXAGG*HACC*			-0.146	-0.027
			(0.11)	(0.00)
Controls	YES	YES	YES	YES
n	4,513	3,367	4,513	3,367
Pseudo R-square (%)	9.28	12.43	9.28	12.43

Panel D: Accrual quality as an alternative proxy for financial reporting risk

	TAXAGG =Rank_Shelter	*TAXAGG =Rank_DTAX*	*TAXAGG =Rank_Shelter*	*TAXAGG =Rank_DTAX*
TAXAGG	0.396	0.435	0.356	0.381
	(4.43)**	(6.57)**	(3.45)*	(3.08)*
AQ	0.503	0.146	0.864	0.446
	(0.84)	(0.05)	(1.15)	(0.19)
*TAXAGG*AQ*			0.947	0.646
			(0.40)	(0.16)
Controls	YES	YES	YES	YES
n	3,053	2,491	3,053	2,491
Pseudo R-square (%)	12.09	13.02	12.11	13.02

Panel E: Alternative control firms

	TAXAGG =Rank_Shelter	*TAXAGG =Rank_DTAX*
TAXAGG	0.360	0.412
	(6.49)***	(13.80)***
Controls	YES	YES
n	20,385	18,043
Pseudo R-square (%)	22.73	21.81

Panel F: Pre-SOX vs. Post-SOX period

	Pre-SOX		Post-SOX		Pooled Period	
	TAXAGG =Rank_Shelter	*TAXAGG =Rank_DTAX*	*TAXAGG =Rank_Shelter*	*TAXAGG =Rank_DTAX*	*TAXAGG =Rank_Shelter*	*TAXAGG =Rank_DTAX*
TAXAGG	0.909	0.192	0.652	0.698	-0.259	-0.100
	(1.94)	(0.12)	(20.63)***	(24.76)***	(0.35)	(0.05)
*TAXAGG*SOX*					0.977	0.817
					(4.83)**	(2.91)*
Controls	YES	YES	YES	YES	YES	YES
n	478	344	4,035	3,023	4,513	3,367
Pseudo R-square (%)	20.01	25.84	3.93	5.96	5.56	7.62

Panel G: Controlling for abnormal audit fees

	TAXAGG =Rank_Shelter	*TAXAGG =Rank_DTAX*	*TAXAGG =Rank_Shelter*	*TAXAGG =Rank_DTAX*
TAXAGG	0.420	0.702	0.830	0.719
	(5.42)***	(21.30)***	(9.34)***	(22.31)***
Abn_fees	0.002	0.012	0.047	0.201
	(0.02)	(0.51)	(3.10)*	(4.06)**
TAXAGG Abn_fees*			-0.087	-0.317
			(4.19)**	(3.92)**
Controls	YES	YES	YES	YES
n	3,662	2,787	3,662	2,787
Pseudo R-square (%)	10.22	13.86	10.37	14.03

Panel H: Sub-sample of Big N clients only

	TAXAGG =Rank_Shelter	*TAXAGG =Rank_DTAX*
TAXAGG	0.555	0.377
	(3.73)**	(2.73)*
Controls	YES	YES
n	1,662	1,232
Pseudo R-square (%)	18.32	20.22

The table reports the robustness of the results. Although all control variables are included in the empirical specifications, for expositional convenience, the table reports only the coefficient estimates and significance levels for measures of tax aggressiveness and variables of interest. Panel A reports four alternative measures for tax aggressiveness - unrecognized tax benefits (*UTB*), permanent book-tax differences (*PBTD*), total book-tax differences (*BTD*), and cash effective tax rate (*CETR*). *UTB* is the ending balance of the unrecognized tax benefit accrual, scaled by lagged total assets. *PBTD* refers to total book-tax differences (*BTD*) less temporary book-tax-differences. *BTD* is the total book-tax differences, computed as [pretax income – (current federal tax expense + current foreign tax expense)/ statutory tax rate]. *CETR* is the five-year sum of cash taxes paid dividend by five-year sum of pretax income less special item. Panels B to D report results after controlling for alternative metrics of financial statement risk. In Panel B, financial statement risk is proxied by the *Fscore* which is the predicted accounting misstatement score based

on Dechow et al. (2011). In Panel C, financial statement risk is proxied by the total accruals (*HACC*), which is a dummy variable that equals 1 for observations in the top decile of total accruals scaled by beginning assets, and 0 for other observations. In Panel D, financial statement risk is proxied by the accruals quality (*AQ*) developed by Francis et al. (2005). *AQ* is the absolute value of the residuals from the pooled industry-year cross-sectional regressions with total current accruals as the dependent variable, and cash flow in the previous, current, and subsequent years and changes in revenue and PPE as independent variables. Panel E uses the non-auditor change sample as the control firms. The control firms are matched by 4-digit SIC industry and year as the resignation firms. Panel F reports the results for the pre- and post-SOX period separately and the interaction between SOX and tax aggressiveness measures. Panel G reports the results after controlling for abnormal audit fees, *Abn_fees*, which is the annual decile-rank of the residuals from the following regression model based on prior studies (e.g., Simunic 1980; Whisenant et al. 2003; Ashbaugh et al. 2003; Hanlon et al. 2012): $LAUDIT = \gamma_0 + \gamma_1 Ln\_MV + \gamma_2 Quick + \gamma_3 Loss + \gamma_4 ROA + \gamma_5 Leverage + \gamma_6 Inv\_Rec + \gamma_7 BM + \gamma_8 NSEG + \gamma_9 FOPS + \gamma_{10} Merger + \gamma_{11} Finance + \gamma_{12} Pension + \gamma_{13} SPITEM + \gamma_{14} BigN + \gamma_{15} GCM + \gamma_{16} Busy + Year\ Dummies$, where *Ln_MV* is the log of market capitalization, *Quick* is the current assets minus inventories, divided by current liabilities, *Loss* is an indicator variable signifying if the firm is reporting a loss, *ROA* is income before extraordinary items deflated by total assets, *Leverage* is total debts to assets ratio, *Inv_Rec* is the sum of inventories and receivables, divided by beginning total assets, *BM* is book-to-market ratio, *NSEG* is the number of business segments, *FOPS* is an indicator variable signifying whether the firm has a foreign operation, *Merger* is an indicator variable signifying if the firm is engaged in a merger or acquisition, *Finance* is an indicator variable signifying if long term debt or number of shares increased by at least 10%, *Pension* is an indicator variable signifying if the pension assets or periodic pension cost is greater than $1 million, *SPITEM* is the magnitude of special items, *BigN* is an indicator variable signifying if the firm is audited by a Big N audit firm, and *Busy* is an indicator variable signifying if fiscal year end is December. Panel H reports the results when the sample only consists of client firms audited by Big N auditors. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.