Does Client Importance Matter to Book-Tax Differences?

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Abstract

This paper examines whether audit client importance affects book-tax differences, a measure that can potentially reflect discretion in audit client's action in financial and tax reporting choices. We use Taiwan data as client importance can be measured not only at the firm level but the individual partner level as well as the audit team level. The multiple regression analyses show that client importance is positively correlated with the magnitude of book-tax difference under each of our client importance measures, suggesting that auditors compromise reporting quality by allowing economically important clients to choose relatively more opportunistically reporting practices. As a result, book-tax differences are larger for these clients.

Keywords: audit client importance, audit quality, financial reporting quality, book-tax differences.

1. Introduction

This paper addresses the question whether economically important audit clients have larger book-tax differences. The economic theory of auditor independence suggests that auditors' incentives to compromise their independence are related to client importance (DeAngelo, 1981). According to the theory's prediction, the larger the client in an auditor's portfolio, the greater economic bonding between the two, thus the stronger should be the incentive that the auditor has to retain that client. Under the circumstances, auditors might compromise their independence and hence threatens the quality of audit and financial reporting.

Researchers have investigated the issue empirically but not yet arrived at a consistent conclusion (e.g. Reynolds and Francis, 2001; Craswell, Stokes, and Laughton 2002; Li, 2009; Chen at al., 2010; Sharma at al., 2011; Chi at al., 2012). A number of papers use non-audit fees as a measure of the economic bonding between auditor and client to test whether non-audit fees impair auditor independence and financial reporting quality, and the results are still mixed (e.g. Frankel et al., 2002;

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Ashbaugh et al., 2003; Chung and Kallapur, 2003; DeFond et al., 2002; Geiger and Rama, 2003; Firth, 2002; Basioudis et al., 2008). Since the extant research remains inconclusive, more is needed to untangle the relationship between client importance, audit quality, and financial reporting quality. We examine the question by using a measure that can potentially reflect management discretion in financial and tax reporting choices, book-tax differences (BTDs).

The book income is for financial reporting purpose under the Generally Accepted Accounting Principles (GAAP) to capture the economics of transactions in providing useful information to decision makers, such as equity investors and contracting parties. The taxable income is based on tax rules to determine the corporation's tax liabilities. Differences between a firm's book income and its taxable income arise from at least two sources. One source for book-tax differences comes either from differences inherent to the two income reporting systems or from sound tax planning. Another source of book-tax differences stems from firms' aggressive financial or tax reporting practices. Although effective managers are expected to take advantage of legal tax planning techniques when appropriate, unusually large differences or inconsistent patterns between book and taxable income potentially indicates that the company is engaging aggressive reporting activities, such as financial statement manipulation, tax avoidance, or illegal tax shelters (Mills, 1998; Phillips et al., 2003; Wilson, 2009; Hanlon and Heitzman, 2010; Blaylock et al., 2012; Noga and Schnader, 2013).

Building on extant literature, we propose that the stronger the economic bonding between auditor and client, the greater the incentive for the auditor to compromise independence and hence causing a lower quality of audit and financial reporting. Consequently, auditors might allow economically significant clients to choose relatively more aggressive financial reporting or tax practices or both, thereby resulting in larger book-tax differences for these clients. However, reputation concern might be a mitigating factor that constrains auditors from sacrificing their audit quality for economically important clients (Chi et al., 2012). Thus, even if the economic benefit of a specific client is large, the auditor maintains the quality of audit by restricting client's opportunistic financial or tax reporting choices, which might result in an insignificant gap between book and taxable income.

We use a sample from Taiwan including firm-year observations from 2006 to 2012 with available data to estimate book-tax differences, which is calculated by pre-tax book income minus taxable income. Pre-tax book income is acquired from consolidated financial statements. The taxable income is difficult to obtain and most existing studies determine this number by an estimate based on current income tax expense divided by the top statutory tax rate (e.g. Mills, 1998; Hanlon et al., 2002; Manzon and Plesko, 2002; Lev and Nissim, 2004). Motivated by challenges on potential measurement errors of book-tax difference estimation, this study applies a more specific method to compute book-tax differences in an attempt to overcome such problematic proxy measures. We follow Chen (2009) to manually compute taxable income by a suggested formula (outlined in section 3.1), which has been proved to be subject to fewer measurement errors. We collect tax-related items that are necessary to determine current income tax payable from parent-only financial statements which are audited by the Taiwan tax authority to determine individual company's taxable income. Then we approximate taxable

income by grossing up the firm's income tax payable which is then divided by the corresponding corporate tax rate. This method provides a less biased estimate of taxable income for two reasons. First, taxable income is decided for an individual company. Dual presentation of financial statements in Taiwan enables a collection of tax-related information for an individual firm through parent-only financial statements. An inference of taxable income from the parent-only financial statements should be more reasonable compared to an estimate based on consolidated financial statements. Second, Chen (2009)'s formula itself is more precise in providing specific taxable income for a company compared to the rough estimate employed by most prior studies (e.g. Mills, 1998; Hanlon etal., 2005; Manzon and Plesko, 2002; Lev and Nissim, 2004).

The Taiwanese setting is also distinct because two engagement audit partners are required to sign on the audit report. First signing partner is the one who is actually responsible for the audit while second signing partner merely reviews the audit completed by the first signing partner. Our client importance measure can, therefore, be determined not only at audit firm level but at individual partner level—the first and the second signing partner level. Client importance estimated at auditor level is a more appropriate measure, especially in smaller and more competitive markets (Francis, 2002). In addition, we combine the two engagement audit partners as a team to assess client importance at the audit team level. Since audit fee information is not available in Taiwan, we follow Reynolds and Francis (2002) and Chi et al. (2012) to proxy client importance based on sales revenues which have been shown to be highly correlated with audit fees (Craswell et al., 1995). We also use client's total assets as another surrogate of audit fees as the fees are often based on client's total assets (Chen et al., 2010).

The empirical analyses show that audit client importance is positively correlated with the magnitude of book-tax difference for each of our client importance measures. We interpret this result as evidence that auditors compromise the reporting quality by allowing economically important clients to choose relatively more opportunistically financial or tax reporting practices or both, thereby resulting in larger book-tax differences for these clients. Since prior studies document a significant relation between earnings quality and book-tax differences (e.g. Phillips et al., 2003; Mills and Newberry, 2001; Hanlon, 2005). The effect of client importance on repoeting quality as proxied by book-tax differences might be a result of its effect on earnings quality. In other words, client importance might be showing an indirect effect on book-tax differences as a result of poor earnings quality. We, therefore, follow a method applied by Lee and Chang (2007) in an attempt to capture this indirect effect. The empirical results show that client importance exhibits an indirect effect on book-tax differences as a result of poor earnings quality.

This study has implications for research in audit and tax. Extant evidence on the association between client importance and the quality of audit and financial reporting remains mixed. The studies employ discretionary accruals, the issuance of modified audit opinion, and financial statement restatements as the proxy for quality of audit or financial reporting quality (Li, 2009; Chen et al., 2010; Sharma et al., 2011; Chi et al., 2012). Our study extends the literature by investigating the association

between client importance and book-tax difference, a number that can potentially reflect discretion in audit client's action in not only financial but tax reporting choices. In addition, because of the unique audit requirements in Taiwan, we are able to adopt measures of client importance at individual partner level and audit team level. Our study also contributes to the growing tax avoidance literature by showing a role of audit quality in book-tax differences. Our results are based on a large and extensive sample of firms listing in Taiwan, which gives us greater confidence that they are generalizable to a large subset of publicly traded firms.

The remainder of the paper is organized as follows. Section 2 reviews the literature and develops the hypothesis. Section 3 describes the research design and data source. Section 4 presents the data description and empirical results. Section 5 provides concluding remarks and limitations of this study.

2. Related Literature and Hypothesis Development

2.1 Audit client importance and financial reporting quality

The economic theory of auditor independence suggests that auditors' incentives to compromise their independence are related to client importance, the ratio of quasi-rents specific to the client divided by all other quasi-rents (DeAngelo, 1981). According to the theory's prediction, the larger the client in an auditor's portfolio, the greater economic bonding between the two, thus the stronger should be the incentive that the auditor has to retain that client. Under the circumstances, auditors might compromise their independence and thereby threatens the integrity of financial reporting.

Researchers have investigated the issue empirically but not yet arrived at a consistent conclusion. One stream of research hypothesizes that non-audit services increase the economic bonding between auditors and clients and therefore impair auditor independence and lower the quality of audit and financial reporting. Another stream of studies focuses on economic bonding provided by total fees. Extant evidence from the U.S. is mixed, with the majority of papers show no significant association between client importance and the quality of audit and financial reporting. Frankel et al. (2002) document significant positive associations between non-audit fees and discretionary accruals, and conclude that higher non-audit fees impair auditor independence. However, Ashbaugh et al. (2003) and Chung and Kallapur (2003) fail to find any such evidence. In contrast, Reynolds and Francis (2001) find that client importance is negatively associated with absolute abnormal accruals, and positively associated with the issuance of going concern reports for Big N clients. Nevertheless, DeFond et al. (2002) and Geiger and Rama (2003) find no association between non-audit fees and the auditors' going concern opinion decision. Li (2009) find that the association between client importance and issuance of going concern reports varies over time. Specifically, she finds that client importance is not significantly associated with the issuance of going concern opinions in the pre-SOX period, but there is a positive association post-SOX. Using earnings restatement as a measure of financial reporting quality, Raghunandan et al. (2003) and Kinney et al. (2004) find no association between non-audit fees and restatements. However, Huang et al. (2007) find that economic bonding lowers the quality of financial reporting.

Evidence from other countries is also inconclusive. In the U.K., a number of studies find a negative effect of economic importance on financial reporting quality with some exceptions. Firth (2002) and Basioudis et al. (2008) found non-audit fees are associated with biased auditor reporting decisions, while Lennox (1999) fails to find such evidence. Ferguson et al. (2004) document a positive association between non-audit fees and earnings management. Studies in Australia also show mixed results. Wines (1994), Sharma (2001), and Sharma and Sidhu (2001) document that non-audit fees are negatively correlated with the issuance of a going concern modification. In contrast, Craswell et al. (2002) show that non-audit fees do not bias auditor's opinion decision. In New Zealand, Hay et al. (2006) find that non-audit fees do not affect auditors' going concern opinion decisions. But Sharma et al. (2011) document a positive association between client importance and earnings management and the association is more pronounced when the oversight by audit committee is weak. Chen et al. (2010) use data from China and find that the propensity to issue modified audit opinion is negatively correlated with client importance when regulatory institutions are relatively weak. However, as the institutions have been improved, the propensity to issue modified audit opinion became positively correlated with client importance. Chi et al. (2012) employ data from Taiwan where audit partners are required to sign on audit reports. They failed to find any evidence that Big N audit partners compromise their independence for economically important clients. But the positive relation between client importance and abnormal accruals existed in non-Big N auditors.

2.2 Book-tax difference and its implications

Firms report book income and taxable income each year. The book income is for financial reporting purpose under the Generally Accepted Accounting Principles (GAAP) to capture the economics of transactions in providing useful information to decision makers, such as equity investors and contracting parties. The taxable income is determined by tax rules to decide the corporation's tax liabilities. The book-tax difference (BTD) is defined as the differences between book income and taxable income.

BTDs can be either temporary or permanent. The temporary differences arise because of different requirements for the timing of recognizing income and expense items. Therefore, temporary differences generate future taxable (future deductible) amounts which increase deferred tax liabilities (assets) and incur a deferred tax expense (benefit). As a result, temporary differences occur over several years, ending when the differences reverse. Permanent differences are items included in one measure of income but never included in the other. The permanent differences exist only for the tax year in which they occur, thereby having no effects on future income taxes.

While both permanent and temporary BTDs are often simply the result of mechanical differences in reporting systems for book and tax purposes, they can also reflect management judgment. Effective managers are expected to take advantage of legal tax planning techniques when appropriate, however, unusually large differences or inconsistent patterns between the book and taxable income can potentially indicate that there are firm-level risks arisen from aggressive reporting for book or tax

purpose (Noga and Schnader, 2013).

Extant research documented a growing gap between book and taxable income (e.g. Manzon and Plesko, 2002; Mills et al., 2002). The evidence suggests that companies are engaging in reporting practices which might cause a deterioration of reporting quality. For example, Hanlon (2005) finds that firms with large temporary BTDs have less persistent accruals and earnings. Phillips et al. (2003) show that firms report small positive earnings have a larger deferred tax expense, confirming that these firms are managing financial reporting income upward to meet the target but not reporting the additional income for tax purposes. Blaylock et al. (2012) find that firms with large positive temporary BTDs, which likely arise from earnings management, have less persistent earnings and accruals. Hanlon and Heitzman (2010) synthesize the extant literature and suggest that BTDs contain information about inferior accounting earnings quality.

Another stream of research uses book-tax difference as a general measure of tax aggressiveness or tax sheltering. For example, Mills (1998) finds that firms with large book-tax differences are more likely to be audited by the Internal Revenue Service (IRS) and have larger proposed audit adjustments. She interprets this result as a positive relation between book-tax differences and aggressive tax planning activities. Wilson (2009) reports that book-tax differences are larger for firms accused of engaging in tax shelters than for a matched sample of non-accused firms. Evidence from these studies suggests that book-tax differences reveal some information about tax avoidance or tax sheltering.

2.3 Hypothesis development

Much of the evidence in the extant literature suggests that more extreme BTDs are associated with earnings management and low earnings persistence (Manzon and Plesko, 2002; Phillips et al. 2003; Hanlon, 2005; Ayers et al., 2009). Researchers have also linked the earnings management activities and financial reporting quality to client importance (Reynolds and Francis, 2001; Li, 2009; Chen et al., 2010; Sharma et al. 2011; Chi et al., 2012). Building on the prior literature, we try to connect client importance with BTDs.

BTDs can reflect discretions in managers' actions in financial and tax reporting choices and therefore BTDs are likely to contain information of accruals manipulation in pre-tax and tax accounts. For financial reporting purpose, managers often desire to report high levels of earnings to investors and therefore are more likely to manage earnings upward (e.g. Healy, 1985; DeFond and Jiambalvo, 1994; Barth et al., 1999; Burgstahler and Dichev, 1997). For tax reporting purpose, managers usually desire to report low levels of income to the tax authority by utilizing tax planning or illegal tax sheltering activities. When a firm has a large book-tax difference, the book and taxable incomes are very different. This might be a result of the firm's manipulation of one or both of the income measures.

According to the theory of auditing, the client can impose real costs to the incumbent auditor by terminating the bilateral relationship, therefore, the incumbent auditor might sacrifice independence in order to retain the client and earn quasi-rents in future periods. Consequently, the stronger the economic bonding between the incumbent auditor and the client, the greater the incentive for the

auditor to compromise their independence and, therefore, deteriorate the quality of audit and financial reporting (DeAngelo, 1981). The related empirical evidence is documented by Frankel et al. (2002), and Huang et al. (2007). Based on the studies aforementioned, we conjecture that auditors might allow economically significant clients to choose relatively more aggressive financial reporting or tax practices or both, thereby resulting in larger book-tax differences for these clients[5]. However, a number of studies fail to find evidence of auditors compromising independence and reporting quality for economically important clients (Ashbaugh et al., 2003; Chung and Kallapur, 2003; Chi et al., 2012). Chi et al. (2012) explain that it is the reputation concern for big N auditors not compromising their audit quality for economically significant clients. Thus, even if the economic benefit of a specific client is large, the auditor maintains their audit quality by constraining client's opportunistic financial or tax reporting choices, which might result in an insignificant gap between book and taxable income. Based on the above discussion, the effect of client importance on book-tax differences is unclear. Stated in the null form, we propose the main hypothesis:

H1. Client importance is not associated with client's book-tax differences.

3. Data and Research Design

3.1 Measures of book-tax difference and client importance

Measuring Book-tax Difference

Our dependent variable of interest is the book-tax difference (BTD), which is calculated by pre-tax book income minus taxable income. Pre-tax book income is acquired from financial statements. The taxable income is usually unavailable and most existing studies determine this number by an estimate based on current income tax expense divided by the top statutory tax rate (e.g. Mills, 1998; Hanlon et al., 2005; Manzon and Plesko, 2002). Chen (2009) proposed an estimate of taxable income based on features of Taiwan's tax system. They proved that the method suffers less measurement error and provides a relatively unbiased estimate of taxable income when using financial statement data to infer taxable income. Thus, we employ Chen (2009)'s method to approximate taxable income for our sample firms. The method involves two steps.

Step 1: Calculate current income tax payable:

> Current income tax payable = current income tax expense (benefit) – (+) deferred tax expense (benefit) – (+) adjustment for prior income tax expense underestimate (overestimate) – separate taxation amount – a 10% of surtax on undistributed earnings – supplementary payment on minimum tax burden + actual investment tax credit in current year + amount of prior investment tax credit under the flow-through method used in current year (or amount of investment tax credit under the deferred method amortized in current year). If the current income tax payable

[5] Earnings might be managed through tax accounts (Dhaliwal et al., 2004; Hanlon and Heitzman, 2010). For example, Desai (2003) provides examples of firms engaging in tax shelters where the main objectives are to increase accounting earnings.

is lower than zero, then taxable income is zero, and the computation is terminated. Otherwise, the current income tax payable is carried forward to step 2.

Step 2: Revert current income tax payable to taxable income:

For firm-years prior to 2010:

If current income tax payable is less than NT$10,714, then taxable income = (current income tax payable ÷ 0.5) + 50,000; If current income tax payable is equal to or greater than NT$10,714 and less than or equal to NT$15,000, then taxable income = current income tax payable ÷ 0.15; If current income tax payable is greater than NT$15,000, then taxable income = (current income tax payable + 10,000) ÷ 0.25.

For firm-years in and after 2010[6]:

If current income tax payable is less than NT$30,909, then taxable income = (current income tax payable ÷ 0.5) + 120,000; If current income tax payable is greater than NT$30,909, then taxable income =current income tax payable ÷ 0.17.

To derive taxable income for our sample firms, we first identify tax-related items, such as non-taxable permanent differences/taxable temporary differences and deferred income tax assets/liabilities, from parent-only financial statements and its footnotes[7]. We put these items into the formula in Chen (2009) to determine current income tax payable. Then we approximate taxable income by grossing up the firm's income tax payable which is later divided by the corresponding corporate tax rate. This method provides a less bias estimate of taxable income for two reasons. First, taxable income is decided for each individual company. Dual presentation of financial statements in Taiwan enables a collection of tax-related information for an individual company through parent-only financial statements. An inference of taxable income from the parent-only financial statements should be more reasonable compared to an estimate from consolidated financial statements. In addition, the estimate can be verified by linking tax return data to parent-only financial statement data which is helpful in checking the computation process. Second, Chen (2009)'s formula itself is more precise in providing specific taxable income for a company compared to the rough estimate employed by many prior studies (e.g. Mills, 1998; Hanlon et al., 2005; Manzon and Plesko, 2002; Lev and Nissim, 2004).

Next, we obtain the book-tax difference (BTD) by using pre-tax book income minus the estimated taxable income. We use the natural logarithm of the absolute value of book-tax difference (ABSBTD) because both large positive (book income in excess of taxable income) and large negative (book

[6] The corporate income tax law §5 of Taiwan was amended and enacted in 2010. The amendments include the following statements. First, a corporation is exempted from income tax charge if its taxable income is less than NT$120,000. Second, if a corporation's annual income is greater than NT$120,000, a tax rate of 17% is applied to it total taxable income. But its income tax payable should not be greater than the half of the portion of taxable income in excess of NT$120,000. Thus, if taxable income is between NT$120,000 and NT$181,818, then current income tax payable = (taxable income – 120,000) × 0.5. If taxable income is greater than NT$181,818, then current income tax payable = taxable income× 0.17.

[7] In Taiwan, companies prepare not only the consolidated financial statement but also parent-only statements. Since business entities file income tax return individually, the Taiwan tax authority audits parent-only financial statements to determine individual company's taxable income. Therefore, it is appropriate to infer taxable income form parent-only financial statements.

income less than taxable income) book-tax differences provide indications about lower financial reporting quality (Hanlon, 2005). We also report results for the signed book-tax differences divided by beginning total assets (SBTD).

Measuring Client Importance

We use Taiwan data to test our hypothesis. This data is distinct because two audit partners are required to sign on the audit report. In this way, we can measure client importance not only at the audit firm level but also at the partner level. Client importance measured at individual auditor level is a more appropriate measure, especially in smaller and more competitive markets (Francis, 2002). In Taiwan, an audit report shows names of the two engagement audit partners[8]. First signing partner is the one who is actually in charge of the audit while the second signing partner usually reviews the audit completed by the first signing partner. Our client importance measure can, therefore, be separately determined at two partner level—the first and the second signing partner level. In addition, we measure client importance at the audit team level by combing the two engagement audit partners as a team. Since audit fee information is not available in Taiwan, we follow Reynolds and Francis (2002) and Chi et al. (2012) to measure client importance based on sales revenues which have been shown to be highly correlated with audit fees (Craswell et al., 1995). We also use client's total assets as another surrogate to measure client economic importance because audit fees are sometimes based on client's total assets (Chen et al., 2010).

In sum, our independent variable of interest, client importance, is proxied by client sales revenue and client total assets at the first and the second signing partner level, the audit team level, and the audit firm level. The combinations yield eight surrogates for client importance. The first set of client importance measures is proxied by client sales revenue. CPA1_R is client importance measured at the first signing partner level, which is computed by the natural logarithm of client sales revenue divided by the sum of the natural logarithm of client sales from all clients of the first signing partner. CPA2_R is client importance assessed at the second signing partner level, which is computed by the natural logarithm of client sales revenue divided by the sum of the natural logarithm of client sales from all clients of the second signing partner. TEAM_R is client importance calculated at the audit team level, which is computed by the natural logarithm of client sales divided by the sum of the natural logarithm of client sales from all clients of the two engagement partners. FIRM_R is client importance at the audit firm level, which is computed by the natural logarithm of client sales divided by the sum of the natural logarithm of client sales from all clients of the audit firm. The second set of client importance surrogates is based on client total assets, also resulting in four different measures determined at the first and the second signing partner level, the audit team level, and the audit firm level (CPA1_A,

[8] According to the Regulations Governing Approval of Certified Public Accountants to Audit and Attest to the Financial Reports of Public Companies, the financial report of a public company shall be jointly audited and attested to by two or more practicing certified public accountants (CPAs) of a joint CPA firm or incorporated CPA firm pursuant to Article 15 of the Certified Public Accountant Act.

CPA2_A, TEAM_A, FIRM_A).

3.2 Empirical Model

Modeling the association between client importance and book-tax differences—Direct effect

To test our hypothesis, we specify the following model to associate client importance and book-tax differences (BTDs).

$$BTD = \alpha_0 + \alpha_1 CI + \alpha_2 SIZE + \alpha_3 LEV + \alpha_4 ROA + \alpha_5 DEP + \alpha_6 BAD + \alpha_7 IFI + \alpha_8 GSA + \alpha_9 GSI + \alpha_{10} PON + \alpha_{11} IMR + \varepsilon \quad (1)$$

BTD represents the absolute value of book-tax differences (ABSBTD). We also consider the signed BTDs divided by beginning total assets (SBTD). CI is client importance measured at the first and the second signing partner level, the audit team level, and the firm level based on either client's sales revenue (CPA1_R, CPA2_R, TEAM_R, FIRM_R) or total assets (CPA1_A, CPA2_A, TEAM_A, FIRM_A), respectively.

Following prior research, we include several control variables (Chen, 2009 and Hanlon et al., 2012). Chen (2009) finds that the larger the firm the more resources for the firm to engage in tax planning activities. So we use SIZE, the natural logarithm of client's total assets, to control for firm size effects. LEV is the ratio of total debt to total assets. The impact of debt on BTD is twofold. The tax-exempt interest causes permanent differences. The funding pressure resulted from settlement might also induce the firm to reduce its taxable income in order to decrease tax burden. ROA is the ratio of net income before tax and interest to total assets. More profitable firms might have stronger incentive to reduce tax expenditure by using tax planning activities. We also include several variables to control for the effects of Taiwan institutions and tax regulations on BTDs. DEP is depreciation expense divided by beginning total assets. This variable is included because assets that are eligible to use accelerated depreciation methods might generate lower taxable income in the early stage but higher in the later years. The effect of depreciation expense on BTD is unclear, hence we do not predict DEP's sign. BAD is bad debt expense divided by beginning total assets. The recognition requirement of bad debt expense under the tax law is more stringent, which might result in higher taxable income and hence lower BTDs. So BAD is expected to be negatively correlated to BTD. IFI is investment income divided by beginning total assets. Investment revenue and loss is excluding from the computation of taxable income under the integrated income tax system in Taiwan, therefore, a large net investment income may further broaden the magnitude of BTDs. GSA is gain or loss on disposal of investments divided by beginning total assets. GSI is gain or loss on disposal of assets divided by beginning total assets. The effects of GSA and GSI's on BTD are similar to that of IFI[9]. PON is the number of years being public. IMR is Inverse Mills ratio derived from the first stage model of Heckman (1979)'s methodology.

[9] According to the income tax law, gains derived from the securities transactions are exempt from tax while losses are not accounted. Income from land transactions are also tax free, while losses are not accounted.

Controlling for sample self-selection bias

Our measure of taxable income is based on data on the parent-only financial statements. If the necessary data to estimate taxable income is unavailable, the company is certainly excluded from our sample. Thus, our empirical analyses might subject to self-selection problem due to the fact that the sample merely includes companies whose book-tax differences are able to be determined. To address this self-selection bias issue, we conduct the two-stage analysis in Heckman (1979) by using all public firms in Taiwan from 2006 to 2012. In the first stage, we model the likelihood of making a reasonable estimate of book-tax differences on the basis of several firm-level characteristics using equation (2). An Inverse Mills ratio derived from equation (2), i.e. the first stage model or the selection model, is then included in equation (1), i.e. the second-stage model or the outcome model, which associates client importance and book-tax differences. The first stage probit model is as follows.

$$BTD\_D = \beta_0 + \beta_1 SIZE + \beta_2 LEV + \beta_3 ROA + \beta_4 DEP + \beta_5 BAD + \beta_6 IFI + \beta_7 GSI + \beta_8 GSA + \beta_9 PON + \beta_{10} BIG + \nu \quad (2)$$

BTD_D equals to 1 if BTD can be estimated, and otherwise 0. The nine controls (SIZE, LEV, ROA, DEP, BAD, IFI, GSI, GSA, PON) are the same with those in equation (1). An additional variable (BIG) is included in equation (2). BIG equals 1 if the firm is audited by a big 4 auditor, otherwise 0. According to Liao et al. (2016), if firms are audited by big 4 auditors, the accessibility of tax related items in estimating book-tax differences is higher. Therefore, auditing by big 4 auditors is an additional exogenous variable in determining the availability of BTDs. But a big 4 auditor is not proved to have an influence on the magnitude of BTD by extant studies, thereby is not included in equation (1), i.e. the outcome model.

Controlling for the relation between book-tax differences and earnings quality—Indirect effect

We directly test the connection between client importance (CI) and the magnitude of client's book-tax differences (BTD) through equation (1). Yet, prior studies document a significant relation between book-tax differences and earnings quality (e.g. Phillips et al., 2003; Mills and Newberry, 2001; Hanlon, 2005). The effect of client importance, i.e. auditor independence, on audit quality as proxied by book-tax differences might be a result of its effect on earnings quality. In other words, client importance might be showing an indirect effect on book-tax differences as a result of poor earnings quality. We, therefore, follow a method applied by Lee and Chang (2007) in an attempt to capture this indirect effect. The models are as follows.

$$ABSDA = \gamma_0 + \gamma_1 CI + \gamma_2 SIZE + \gamma_3 LEV + \gamma_4 GROWTH + \gamma_5 OCF + \gamma_6 EXPE + \varepsilon \quad (3\text{-}1)$$

$$BTD = \delta_0 + \delta_1 CI + \delta_2 ABSDA + \delta_3 SIZE + \delta_4 LEV + \delta_5 ROA + \delta_6 DEP + \delta_7 BAD + \delta_8 IFI + \delta_9 GSA + \delta_{10} GSI + \delta_{11} PON + \varepsilon \quad (4\text{-}1)$$

Equation (3-1) captures the effect of client importance (CI) on absolute discretionary accruals (ABSDA), a proxy for earning quality. CI is client importance as proxied by client sales revenue and

total assets. ABSDA is the absolute value of discretionary accruals estimated by modified Jones model with a control of firm performance (Kothari et al., 2005). Two control variables, SIZE and LEV, have the same definitions as those in equation (1). Firm size (SIZE) can capture omitted variables in the process of estimating discretionary accruals (Becker et al., 1998 and Klein, 2002). Leverage (LEV) is used to control for the effect of debt on earnings manipulation (DeFond and Jiambalvo, 1994; Dechow et al., 1996). GROWTH is net sales growth rate. Growing companies usually have more volatile earnings and can possibly result in greater discretionary accruals (Klein, 2002; Ghosh and Moon, 2005). OCF is operating cash flows divided by beginning total assets and is expected be to negatively correlated to discretionary accruals (Dechow et al., 1995 and Becker et al. 1998). EXPE is prior total assets divided by the absolute value of current income before extraordinary items and is used to control for the effect of extreme performance on discretionary accruals (e.g. Bartov et al., 2001; Klein, 2002). Next, we include both CI and ABSDA in equation (4-1) in an attempt to model the aforementioned indirect effect.

By observing regression results of both equation (3-1) and (4-1), we can draw inferences about the indirect effect. If γ_1 is significantly positive, client importance (CI) increases the magnitude of earnings management (ABSDA). Under this situation, if δ_2 is also significantly positive, client importance (CI) lowers audit quality as proxied by BTDs through inferior earnings quality as proxied by the magnitude of discretionary accruals (ABSDA). This is consistent with our prediction that auditors might allow economically significant clients to choose relatively more aggressive financial reporting practices, thereby leading to larger discretionary accruals and further resulting in greater book-tax differences for these clients. In contrast, if γ_1 is insignificant, client importance (CI) does not influence the magnitude of earnings management (ABSDA). And if δ_2 is also insignificant, client importance (CI) does not affect book-tax differences (BTD) through lower earnings quality (ABSDA).

Since we also consider signed BTD, we rerun the indirect effect models with signed discretionary accruals (SDA) and signed book-tax differences divided by beginning total assets (SBTD) in equation (3-2) and (4-2).

$$SDA = \eta_0 + \eta_1 CI + \eta_2 SIZE + \eta_3 LEV + \eta_4 GROWTH + \eta_5 OCF + \eta_6 EXPE + \varepsilon \quad (3\text{-}2)$$

$$SBTD = \lambda_0 + \lambda_1 CI + \lambda_2 DA + \lambda_3 SIZE + \lambda_4 LEV + \lambda_5 ROA + \lambda_6 DEP + \lambda_7 BAD + \lambda_8 IFI + \lambda_9 GSA + \lambda_{10} GSI + \lambda_{11} PON + \varepsilon \quad (4\text{-}2)$$

3.3 Data Source

The sample includes firm-year observations of non-financial Taiwanese public companies from 2006 to 2012. Financial data is obtained from Taiwan Economic Journal database (TEJ). We collect tax-related items that are necessary to infer taxable income from parent-only financial statements and its footnotes. An observation is dropped if it cannot provide sufficient data to approximate its taxable income. Except for data used in taxable income computation, all financial data is acquired from consolidated financial statements. Observations with missing values in measuring client importance

and other variables in all our models are dropped. Sample selection is summarized in Table 1, which shows a final sample of 7,941 firm-years.

4. Results and Discussions

4.1. Descriptive Statistics and Correlation analyses

Table 2 reports descriptive statistics for all variables. The mean absolute value of book-tax differences (ABSBTD) is 0.0427 and the mean signed book-tax differences (SBTD) is 0.0331. On average, book income is higher than taxable income in our sample, consistent with the conjecture that managers often desire to report higher levels of financial income and lower levels of taxable income. The first set of client importance measures is based on client sales revenue at the first and the second signing partner level, the audit team level, and the audit firm level (CPA1_R, CPA2_R, TEAM_R, and FIRM_R) and their means (medians) are 0.1026 (0.0653), 0.1061 (0.0624), 0.0691 (0.0146), and 0.0207 (0.0022), respectively. The distributions show slightly skewed to the right. The second set of client importance measures is proxied by client total assets at the first and the second signing partner level, the audit team level, and the audit firm level (CPA1_A, CPA2_A, TEAM_A, and FIRM_A) and their means (medians) are 0.1011 (0.0641), 0.1046 (0.0614), 0.0606 (0.0110), and 0.0203 (0.0021), respectively. The distributions also show a positive skew. The two sets of client importance measures are similar in their values and distributions. On average, a client represents about 10% of an audit partner's client portfolio and 6% of an audit team's client portfolio. If we look at client importance at the firm level, the client represents only about 2% of an audit firm's client portfolio. The two discretionary accruals, ABSDA and SDA, are somewhat skewed to the right either.

Table 3 presents the correlation coefficients of variables. In general, BTDs are positively correlated with client importance as proxied by client sales revenue and client total assets at the first and the second signing partner level, the audit team level, and the audit firm level. The results indicate that economically important clients usually have larger book-tax differences, which is consistent with our prediction that client importance affects the magnitude of book-tax differences. Discretionary accruals (ABSDA, SDA) are positively correlated with BTDs, suggesting that the aforementioned indirect effects might exist. We attempt to capture this possible indirect effect through equation 3-1, 4-1, 3-2, and 4-2. The correlations between BTDs and control variables are generally as our expectations. Concerning the correlations between independent variables, in most cases, the correlation coefficients show low values. A collinearity diagnosis shows the variance inflation factor (VIF) values of all the independent variables are below 10, suggesting that no potential multicollinearity problems exist.

4.2 Regression Analyses

The association between client importance and book-tax differences-Direct effect

Table 4 Panel A presents multiple regression results of client importance (CI) on the absolute book-tax difference (ABSBTD). The coefficient of CI as measured by CPA1_R, CPA2_R, TEAM_R

and FIRM_R are 0.0105 (p-value = 0.0012), 0.0074 (p-value = 0.0127), 0.0119 (p-value < 0.00001), and 0.0116 (p-value = 0.0232), respectively. Each measure of client importance is significantly positively correlated with ABSBTD at 1% or 5% level, suggesting that economically important clients have larger book-tax differences. We further compare the coefficient on each of our client importance measure, CPA1_R, CPA2_R, TEAM_R, and FIRM_R. The significance of CPA1_R is higher than that of CPA2_R. CPA1_R is client importance measured at the first signing partner level, the auditor who is actually in charge of and takes responsibility for the audit. The second signing partner usually reviews the audit completed by the first signing partner. Economic bonding between a specific client and the first signing partner is relatively stronger and is likely to offer a powerful incentive for the partner to compromise their independence. Thus, client importance determined at the first signing partner level shows a stronger relation with the magnitude of book-tax difference. Additionally, the significance of TEAM_R is higher than that of FIRM_R. Economic benefit from a specific client is more important for the audit team than for the whole firm.

Results of control variables are generally as expected. SIZE is insignificant in all regressions. LEV has significantly positive estimated coefficient in all equations, which is consistent with our prediction that the existence of debt is likely to create book-tax differences. ROA also displays a positive relation with ABSBTD, implying that more profitable firms have larger book-tax differences. This is in line with our prediction that more profitable firms might have stronger incentive to reduce tax expenditure by using sound tax planning activities, thereby causing a greater magnitude of book-tax difference. DEP is negatively correlated to ABSBTD at 5% level in the four models. Our sample shows a negative relation between depreciation expense and book-tax difference. BAD is significantly positive correlated with ABSBTD in all equations, inconsistent with our prediction. IFI is significantly positive at 1% level in each of the regressions. This result indicates that the higher the net investment income, the lower the taxable income, which further broadens the magnitude of BTD. This outcome is rational under the tax system of Taiwan since investment revenue and loss is excluding from the computation of taxable income. The coefficients of GSA and GSI's are all significantly positive at 1% level. As our expectation, the effects of GSA and GSI on book-tax differences are close to that of IFI. PON is positively correlated with ABSBTD. This result implies the longer the firm is publicly traded, the larger the book-tax differences. IMR is Inverse Mills ratio and is significantly positively correlated to ABSBTD at 1% level in each model. The significance of IMR suggests that residuals in the selection model and the outcome model are correlated and the effect of self-selection bias on book-tax difference is properly controlled.

Table 4 Panel B reports the regression results when client importance measure is based on client's total assets. The coefficient of CPA1_A, CPA2_A, TEAM_A and FIRM_A is 0.0016 (p-value = 0.0003), 0.0083 (p-value = 0.00567), 0.0168 (p-value < 0.00001), and 0.0129 (p-value = 0.0122), respectively. The results are similar to the those in table 4 when client importance is proxied by client's sales revenue. Compared to client importance assessed at the second signing partner level (CPA2_A), the client importance determined at the first signing partner level (CPA1_A) remains to exhibit a

stronger relation with the magnitude of the book-tax difference (ABSBTD). Client importance measured at audit team level (TEAM_R) still displays greater significance with ABSBTD than the entire audit firm (FIRM_R).

Overall, the results of multiple regression analyses presented in table 4 are almost identical. Client importance is positively correlated with the magnitude of book-tax difference for each of our client importance measures. We interpret this result as evidence that auditors compromise the financial reporting quality by allowing economically important clients to choose relatively more aggressive financial or tax reporting practices or both, thereby resulting in larger book-tax differences for these clients. We also conduct analyses using the signed book-tax differences and the results are reported in Table 5 Panel A and B. The results are similar to those in Table 4.

The association between client importance and book-tax differences-Indirect effect

Table 6 shows the indirect effects of client importance on book-tax differences, i.e. the regression outcomes of equation (3-1), i.e. stage one, and equation (4-1), i.e. the stage two. In Table 6 Panel A, we present the results of equation (3-1) which models the relation between client importance (CI) and discretionary accruals (ABSDA), a proxy for earning quality. Client importance (CI) in this table is proxied by client sales revenue. The coefficient of CPA1_R, CPA2_R, TEAM_R and FIRM_R are 0.0309 (p-value = 0.00001), 0.0205 (p-value = 0.00159), 0.0496 (p-value < 0.00001), and 0.0572 (p-value < 0.00001), respectively. Every client importance surrogate is significantly positively correlated with ABSDA at 1% level, suggesting that economically important clients usually have larger discretionary accruals.

The other variables in equation (3-1) are generally as our prediction. SIZE is negatively correlated with ABSDA, suggesting that larger firms have smaller discretionary accruals. Leverage (LEV) is used to control for the effect of debt on earnings manipulation. The coefficient of LEV is positive, consistent with prior studies that firms might manipulate earnings in avoiding a violation of debt covenant (DeFond and Jiambalvo, 1994; Dechow et al., 1996). GROWTH is significantly positive correlated to ABSDA. It is perhaps that growing firms usually have more volatile earnings, thereby resulting in larger discretionary accruals. OCF is as expected to be significantly negative correlated to discretionary accruals. EXPE is used to control for the effect of extreme performance on discretionary accruals. The extreme performance usually widens the dimension of discretionary accruals. Our results are coherent with prior studies, that is, firm performance affects the magnitude of discretionary accruals.

Table 6 Panel B reports the outcome of equation (4-1). By observing the results of both equation (3-1) and (4-1), we can make an inference about the indirect effect. As Table 6 Panel A shows, the coefficient of CI in equation (3-1) is significantly positive at 1% level, implying a positive relation between client importance (CI) and lower earnings quality (ABSDA). In panel B, the coefficient of CI as measured by CPA1_R, CPA2_R, TEAM_R and FIRM_R is 0.0080 (p-value = 0.0121), 0.0060 (p-value = 0.0419), 0.0087 (p-value = 0.0025), and 0.0073 (p-value = 0.0740), respectively. In addition, ABSDA is also significantly positively correlated to ABSBTD. Both CI and ABSDA are of positive significance to ABSBTD. This is consistent with our prediction that auditors might allow economically

significant clients to choose relatively more aggressive financial reporting practices, thereby leading to larger discretionary accruals and further resulting in greater book-tax differences for these clients. Table 7 presents results of equation (3-1) and (4-1) when client importance is based on client total assets. The results are similar to those in table 6. We also carry out the analyses by using the signed book-tax differences (SBTD) and signed discretionary accruals (SDA) as displayed in Table 8 and Table 9. The results remain similar to those in Table 6 and Table 7.

5. Conclusions

According to DeAngelo (1981), strong economic bonding between auditor and client impairs auditor independence and therefore might be harmful to the quality of audit and financial reporting. We examine this question by using a measure that can potentially reflect discretion in audit client's action in choosing financial and tax reporting practices, book-tax differences. We conjecture that auditors are more likely to allow economically important clients for choosing relatively more aggressive financial reporting or tax practices or both, thereby leading to larger book-tax differences for these clients. We use Taiwan data of which has two distinct features. First, the setting can provide a more accurate estimate of book-tax difference. Second, we can measure client importance not only at the firm level but the individual partner level as well as the audit team level.

The multiple regression analyses show that client importance is positively correlated with the magnitude of book-tax differences under each of our client importance measures. We interpret this result as evidence that auditors compromise reporting quality by allowing economically important clients to choose relatively more opportunistically financial or tax reporting practices or both, thereby resulting in larger book-tax differences for these clients. We also find that client importance exhibits an indirect effect on book-tax differences as a result of poor earnings quality.

We acknowledge several caveats in our analyses. First, although we use a method that is proved to be more accurate in estimating taxable income for Taiwanese firms, measurement errors could still exist. Second, the book-tax difference is calculated by pre-tax book income less taxable income, that is, a gross book-tax difference. We are unable to divide the gross book-tax difference into permanent and temporary differences. Since our topic is focused on client importance effects on managers' discretion in financial and tax reporting choices, the temporary book-tax difference is more appropriate in our setting. Third, because audit fees are not disclosed publicly in Taiwan, we rely on client sales and client assets as surrogates of audit fees. It is possible to introduce noise into our client importance measures and potentially reduce the contribution of our study.

Table 1: Sample selection

Firm-years of all public firms	11,656
Firm-years from financial and insurance companies	(358)
Observations without sufficient data to calculate current income tax payable in step 1	(3,031)
Missing financial data in measuring control variables	(326)
Total firm-year of observations	7,941

Table 2: Descriptive statistics

	Average	Median	Std	Min	Max
Book-tax difference measures (BTD)					
ABSBTD	0.0427	0.0277	0.0484	0.00000248	0.3995
SBTD	0.0331	0.0217	0.0554	-0.3457	0.3995
Client importance measures (CI)					
CPA1_R	0.1026	0.0653	0.1310	0.0198	1.0000
CPA2_R	0.1061	0.0624	0.1424	0.0197	1.0000
TEAM_R	0.0691	0.0146	0.1542	0.00000797	1.0000
FIRM_R	0.0207	0.0022	0.0855	0.0007	1.0000
CPA1_A	0.1011	0.0641	0.1300	0.0196	1.0000
CPA2_A	0.1046	0.0614	0.1417	0.0195	1.0000
TEAM_A	0.0606	0.0110	0.1455	0.00001000	1.0000
FIRM_A	0.0203	0.0021	0.0847	0.0010	1.0000
Discretionary Accruals					
ABSDA	0.0720	0.0523	0.0734	0.0000304	0.7625
SDA	0.0120	0.0110	0.1021	-0.7625	0.7008
Control Variables					
SIZE	15.0213	14.8418	1.3414	11.4639	21.2631
LEV	0.3463	0.3377	0.1565	0.0051	0.9548
ROA	0.0807	0.0669	0.0627	-0.0893	0.4889
DEP	0.0228	0.0136	0.0271	0.0000	0.1991
BAD	0.0009	0.0000	0.0037	-0.0055	0.1186
IFI	0.0181	0.0045	0.0444	-0.1603	0.5670
GSA	0.0013	0.0000	0.0135	-0.2035	0.6885
GSI	0.0021	0.0000	0.0124	-0.0541	0.4405
PON	10.0986	9.0000	8.3861	1.0000	51.0000
IMR	0.0621	0.0453	0.0650	0.0000	0.6282
GROWTH	0.0800	0.0531	0.2647	-0.9914	0.9995
OCF	0.0876	0.0774	0.1083	-0.7675	0.8724
EXPE	0.0467	0.0298	0.0582	0.00000640	0.8961
N= 7,941					

ABSBTD is the natural logarithm of the absolute value of the book-tax differences. SBTD is the value of book-tax differences divided by beginning total assets. CPA1_R, CPA2_R, TEAM_R, FIRM_R is client importance is measured by the natural logarithm of client sales divided by the sum of the natural logarithm of client sales from all clients of the first and the second signing partner, the team, and the firm, respectively. CPA1_A, CPA2_A, TEAM_A, FIRM_R is client importance is measured by the natural logarithm of client total assets divided by the sum of the natural logarithm of client total assets from all clients of the first and the second signing partner, the team, and the firm, respectively. ABSDA is the absolute value of discretionary accruals estimated by modified Jones model with a control of performance (Kothari et al., 2005). SDA is signed discretionary accruals. SIZE is the natural logarithm of client's total assets. LEV is the ratio of total debt to total assets. ROA is the ratio of net income before tax and interest to total assets. DEP is depreciation expense divided by beginning total assets. BAD is bad debt expense divided by beginning total assets. IFI is investment income divided by beginning total assets. GSA is gain or loss on disposal of investments divided by beginning total assets. GSI is gain or loss on disposal of assets divided by beginning total assets. PON is the number of years going public. IMR is Inverse Mills ratio derived from the first stage model of Heckman (1979)'s methodology. GROWTH is net sales growth rate. OCF is operating cash flows divided by beginning total assets. EXPE is prior total assets divided by the absolute value of current income before extraordinary items.

Table 3: Correlation analysis

	ABSBTD	SBTD	CPA1_R	CPA2_R	TEAM_R	FIRM_R	CPA1_A	CPA2_A	TEAM_A	FIRM_A	ABSDA	SDA	SIZE	LEV	ROA	DEP	BAD	IFI	GSA	GSI	PON	IMR	GROWTH	OCF	EXPE
ABSBTD	1.00	0.83***	0.04***	0.02	0.07***	0.02*	0.04***	0.02*	0.07***	0.02**	0.22***	0.10***	0.09***	-0.01	0.61***	-0.05***	0.00	0.47***	0.08***	0.10***	0.03***	0.00	0.01	0.17***	0.30***
SBTD		1.00	0.05***	0.02**	0.08***	0.02*	0.05***	0.02**	0.08***	0.02**	0.15***	0.17***	0.04***	-0.03***	0.64***	-0.04***	0.03***	0.41***	0.08***	0.11***	-0.02***	0.05***	0.09***	0.21***	0.37***
CPA1_R			1.00	0.62***	0.06***	0.69***	1.00***	0.62***	0.61***	0.69***	0.08***	0.10***	0.08***	0.06***	0.02*	-0.11***	-0.03**	0.19***	0.05***	0.10***	0.09***	-0.03***	-0.25***	-0.62***	0.02*
CPA2_R				1.00	0.59***	0.67***	0.61***	1.00***	0.60***	0.67***	0.05***	0.08***	-0.09***	0.09***	0.18***	-0.04***	0.05***	0.05***	0.03***	0.08***	-0.11***	0.15***	0.39***	-0.08***	0.35***
TEAM_R					1.00	0.60***	0.60***	0.58***	0.93***	0.59***	0.08***	0.13***	0.01	0.04***	0.00	-0.04***	0.00	0.00	0.03***	0.01	0.06****	0.10***	0.01	-0.11***	0.08***
FIRM_R						1.00	0.69***	0.67***	0.61***	1.00***	0.08***	0.08***	0.01	0.04***	0.00	-0.03***	0.00	0.00	0.03***	0.01	0.06***	0.10***	0.01	-0.11***	0.08***
CPA1_A							1.00	0.61***	0.62***	0.69***	0.08***	0.10***	0.02	0.04***	-0.01	-0.02***	0.00	-0.02	0.01***	0.01	0.06***	0.09***	0.00	-0.10***	0.03***
CPA2_A								1.00	0.60***	0.67***	0.05***	0.08***	0.02	0.04***	-0.02	-0.02*	0.00	-0.02	0.01	0.02	0.06***	0.09***	0.00	-0.10***	0.03**
TEAM_A									1.00	0.62***	0.09***	0.15***	-0.03***	0.03***	-0.01	-0.02**	0.01	0.00	0.03***	0.01	0.02*	0.12***	0.01	-0.11***	0.07***
FIRM_A										1.00	0.08**	0.08***	-0.03***	0.03***	-0.01	-0.02**	0.01	0.00	0.03***	0.01	0.02*	0.11***	0.01	-0.11***	0.07***
ABSDA											1.00	-0.06***	0.35***	0.13***	0.02*	-0.03**	-0.01	0.06***	0.03**	0.01	0.17***	-0.03***	0.00	-0.13***	0.04***
SDA												1.00	0.33***	0.12***	0.00	-0.01	-0.02	0.05***	0.04***	0.03**	0.20***	-0.03***	0.00	-0.15***	0.04***
SIZE													1.00	0.11***	-0.02	0.05***	-0.08***	0.18***	0.01	0.01	0.45***	-0.46***	-0.03**	-0.04***	-0.12***
LEV														1.00	-0.09***	-0.03**	0.06***	-0.05***	0.11***	-0.03***	0.02*	0.18***	0.02	-0.16***	0.03***
ROA															1.00	0.03***	0.02*	0.31***	0.03***	0.06***	-0.15***	0.08***	0.06***	0.46***	0.37***
DEP																1.00	-0.02*	-0.14***	-0.02**	-0.02*	-0.11***	0.04***	0.04***	0.26***	0.07***
BAD																	1.00	-0.01	-0.01	0.01	-0.08***	0.15***	0.01	0.01	0.07***
IFI																		1.00	0.00	-0.01	0.08***	-0.07***	0.00	-0.04***	0.07***
GSA																			1.00	0.00	0.07***	-0.03***	0.06***	-0.04***	0.03***
GSI																				1.00	0.05***	-0.02**	0.03**	-0.05***	0.10***
PON																					1.00	-0.39***	-0.02**	-0.13***	-0.09***
IMR																						1.00	0.04***	0.02	0.19***
GROWTH																							1.00	-0.10***	0.28***
OCF																								1.00	0.11***
EXPE																									1.00

ABSBTD is the natural logarithm of the absolute value of the book-tax differences. SBTD is the value of book-tax differences divided by beginning total assets. CPA1_R, CPA2_R, TEAM_R, FIRM_R is client importance is measured by the natural logarithm of client sales divided by the sum of the natural logarithm of client sales from all clients of the first and the second signing partner, the team, and the firm, respectively. CPA1_A, CPA2_A, TEAM_A, FIRM_R is client importance is measured by the natural logarithm of client total assets divided by the sum of the natural logarithm of client total assets from all clients of the first and the second signing partner, the team, and the firm, respectively. ABSDA is the absolute value of discretionary accruals estimated by modified Jones model with a control of performance (Kothari et al., 2005). SDA is signed discretionary accruals. SIZE is the natural logarithm of client's total assets. LEV is the ratio of total debt to total assets. ROA is the ratio of net income before tax and interest to total assets. DEP is depreciation expense divided by beginning total assets. BAD is bad debt expense divided by beginning total assets. IFI is investment income divided by beginning total assets. GSA is gain or loss on disposal of investments divided by beginning total assets. GSI is gain or loss on disposal of assets divided by beginning total assets. PON is the number of years going public. IMR is Inverse Mills ratio derived from the first stage model of Heckman (1979)'s methodology. GROWTH is net sales growth rate. OCF is operating cash flows divided by beginning total assets. EXPE is prior total assets divided by the absolute value of current income before extraordinary items.

Table 4: The association between client importance (CI) and the absolute book-tax differences (ABSBTD)

Panel A Client importance (CI) is measured by client sales revenue

	Dependent variable = ABSBTD							
	Client importance measures (CI)							
	CPA1_R		CPA2_R		TEAM_R		FIRM_R	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Intercept	-0.0052	0.3712	-0.0050	0.3802	0.0030	0.6134	0.4758	0.3749
CI	0.0105***	0.0012	0.0074**	0.0127	0.0119***	<0.0001	0.0116**	0.0232
SIZE	0.4758	0.9934	0.0000	0.9966	-0.0005	0.2095	0.0000	0.9227
LEV	0.0050**	0.0142	0.0050**	0.0140	0.0046**	0.0250	0.0050**	0.0135
ROA	0.4381***	<0.0001	0.4383***	<0.0001	0.4374***	<0.0001	0.4385***	<0.0001
DEP	-0.0334**	0.0339	-0.0342**	0.0297	-0.0320**	0.0419	-0.0345**	0.0283
BAD	0.2696**	0.0157	0.2666**	0.0169	0.2642**	0.01783	0.2659**	0.0171
IFI	0.2605***	<0.0001	0.2606***	<0.0001	0.2606***	<0.0001	0.2599***	<0.0001
GSA	0.1409***	<0.0001	0.1422***	<0.0001	0.1409***	<0.0001	0.1412***	<0.0001
GSI	0.3125***	<0.0001	0.3125***	<0.0001	0.3121***	<0.0001	0.3126***	<0.0001
PON	0.0003***	<0.0001	0.0003***	<0.0001	0.0003***	<0.0001	0.0003***	<0.0001
IMR	0.0246***	0.0011	0.0255***	0.0007	0.0233***	0.0020	0.0258***	0.0006
Adjusted-R^2	0.4775		0.4772		0.4779		0.4771	

* p < 0.10, ** p < 0.05, *** p < 0.01. n=7,941

ABSBTD is the natural logarithm of the absolute value of the book-tax differences. CPA1_R, CPA2_R, TEAM_R, FIRM_R is client importance is measured by the natural logarithm of client sales revenue divided by the sum of the natural logarithm of client sales from all clients of the first and the second signing partner, the team, and the firm, respectively. SIZE is the natural logarithm of client's total assets. LEV is the ratio of total debt to total assets. ROA is the ratio of net income before tax and interest to total assets. DEP is depreciation expense divided by beginning total assets. BAD is bad debt expense divided by beginning total assets. IFI is investment income divided by beginning total assets. GSA is gain or loss on disposal of investments divided by beginning total assets. GSI is gain or loss on disposal of assets divided by beginning total assets. PON is the number of years going public. IMR is Inverse Mills ratio derived from the first stage model of Heckman (1979)'s methodology.

Table 4: The association between client importance (CI) and the absolute book-tax differences (ABSBTD) (cont.)

Panel B Client importance (CI) is measured by client total assets

	Dependent variable = ABSBTD							
	Client importance measures (CI)							
	CPA1_A		CPA2_A		TEAM_A		FIRM_A	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Intercept	-0.0051	0.3692	-0.0050	0.37993	0.0046	0.4396	-0.0051	0.3745
CI	0.0116***	0.0003	0.0083***	0.00567	0.0168***	<0.00001	0.0129**	0.0122
SIZE	-6.2733	0.9872	-1.7486	0.99646	-0.0006	0.1303	3.8299	0.9224
LEV	0.0050**	0.0139	0.0050**	0.01374	0.0045**	0.0264	0.0050**	0.0134
ROA	0.4381***	<0.00001	0.4384***	<0.00001	0.4376***	<0.00001	0.4385***	<0.00001
DEP	-0.0334**	0.0337	-0.0342**	0.02947	-0.0335**	0.0331	-0.0344**	0.0286
BAD	0.2706**	0.0153	0.2672**	0.01664	0.2687**	0.0159	0.2664**	0.0169
IFI	0.2605***	<0.00001	0.2607***	<0.00001	0.2608***	<0.00001	0.2599***	<0.00001
GSA	0.1406***	<0.00001	0.1421***	<0.00001	0.1394***	<0.00001	0.1410***	<0.00001
GSI	0.3122***	<0.00001	0.3122***	<0.00001	0.3090***	<0.00001	0.3125***	<0.00001
PON	0.0003***	<0.00001	0.0003***	<0.00001	0.0003***	<0.00001	0.0003***	<0.00001
IMR	0.0243***	0.00133	0.0253***	0.00081	0.0219***	0.0037	0.0256	0.0006
Adjusted-R^2	0.4776		0.4773		0.4788		0.4772	

* p < 0.10, ** p < 0.05, *** p < 0.01. n=7,941

ABSBTD is the natural logarithm of the absolute value of the book-tax differences. CPA1_A, CPA2_A, TEAM_A, FIRM_R is client importance is measured by the natural logarithm of client total assets divided by the sum of the natural logarithm of client total assets from all clients of the first and the second signing partner, the team, and the firm, respectively. SIZE is the natural logarithm of client's total assets. LEV is the ratio of total debt to total assets. ROA is the ratio of net income before tax and interest to total assets. DEP is depreciation expense divided by beginning total assets. BAD is bad debt expense divided by beginning total assets. IFI is investment income divided by beginning total assets. GSA is gain or loss on disposal of investments divided by beginning total assets. GSI is gain or loss on disposal of assets divided by beginning total assets. PON is the number of years going public. IMR is Inverse Mills ratio derived from the first stage model of Heckman (1979)'s methodology.

Table 5: The association between client importance (CI) and signed book-tax differences (SBTD)

Panel A Client importance (CI) is measured by client sales revenue

	Dependent variable = SBTD							
	Client importance measures (CI)							
	CPA1_R		CPA2_R		TEAM_R		FIRM_R	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Intercept	-0.0299***	<0.0001	-0.0298***	<0.0001	-0.0218***	0.0016	-0.0298***	<0.0001
CI	0.0161***	0.0000	0.0108***	0.0014	0.0117***	0.0004	0.0147***	0.1844
SIZE	0.0005***	0.2368	0.0005	0.2275	0.0000	0.9291	0.0005	0.9227
LEV	0.0110***	<0.0001	0.0110***	<0.0001	0.0106***	<0.0001	0.0111***	<0.0001
ROA	0.4527***	<0.0001	0.4531***	<0.0001	0.4522***	<0.0001	0.4534***	<0.0001
DEP	-0.0145	0.4140	-0.0159	0.3717	-0.0142	0.4252	-0.0164	0.3551
BAD	-0.0556	0.6591	-0.0604	0.6324	-0.0641	0.6112	-0.0618	0.6246
IFI	0.3847***	<0.0001	0.3849***	<0.0001	0.3846***	<0.0001	0.3838***	<0.0001
GSA	0.1439***	<0.0001	0.1460***	<0.0001	0.1450***	<0.0001	0.1448***	<0.0001
GSI	0.1439***	<0.0001	0.3419***	<0.0001	0.3420***	<0.0001	0.3422***	<0.0001
PON	0.0005***	<0.0001	0.0005***	<0.0001	0.0005***	<0.0001	0.0005***	<0.0001
IMR	0.0005	0.4769	0.0077	0.3624	0.0067	0.4295	0.0086	0.31389
Adjusted-R^2	0.4766		0.4759		0.4761		0.4757	

* p < 0.10, ** p < 0.05, *** p < 0.01. n=7,941

SBTD is the value of book-tax differences divided by beginning total assets. CPA1_R, CPA2_R, TEAM_R, FIRM_R is client importance is measured by the natural logarithm of client sales revenue divided by the sum of the natural logarithm of client sales from all clients of the first and the second signing partner, the team, and the firm, respectively. SIZE is the natural logarithm of client's total assets. LEV is the ratio of total debt to total assets. ROA is the ratio of net income before tax and interest to total assets. DEP is depreciation expense divided by beginning total assets. BAD is bad debt expense divided by beginning total assets. IFI is investment income divided by beginning total assets. GSA is gain or loss on disposal of investments divided by beginning total assets. GSI is gain or loss on disposal of assets divided by beginning total assets. PON is the number of years going public. IMR is Inverse Mills ratio derived from the first stage model of Heckman (1979)'s methodology.

Table 5: The association between client importance (CI) and signed book-tax differences (SBTD) (cont.)

Panel B Client importance (CI) is measured by client total assets

	Dependent variable = SBTD							
	Client importance measures (CI)							
	CPA1_A		CPA2_A		TEAM_A		FIRM_A	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Intercept	-0.0299***	<0.0001	-0.0298***	<0.0001	-0.0195***	0.0043	-0.0298	<0.0001
CI	0.0173***	<0.0001	0.0118***	0.0005	0.0178***	<0.0001	0.0160***	0.0060
SIZE	0.0005	0.2388	0.0005	0.2305	-0.0001	0.8199	0.0005	0.1842
LEV	0.0110***	<0.0001	0.0111***	<0.0001	0.0105***	<0.0001	0.0111***	<0.0001
ROA	0.4528***	<0.0001	0.4532***	<0.0001	0.4524***	<0.0001	0.4534***	<0.0001
DEP	-0.0146	0.4097	-0.0160	0.3686	-0.0155	0.3831	-0.0164	0.3572
BAD	-0.0543	0.6665	-0.0596	0.6368	-0.0594	0.6376	-0.0612	0.6276
IFI	0.3847***	<0.0001	0.3849***	<0.0001	0.3848***	<0.0001	0.3838***	<0.0001
GSA	0.1435***	<0.0001	0.1458***	<0.0001	0.1432***	<0.0001	0.1446***	<0.0001
GSI	0.3414***	<0.0001	0.3416***	<0.0001	0.3386***	<0.0001	0.3421***	<0.0001
PON	0.0005***	<0.0001	0.0005***	<0.0001	0.0005***	<0.0001	0.0005***	<0.0001
IMR	0.0058	0.4976	0.0075***	0.3779	0.0049***	0.5652	0.0084	0.3246
Adjusted-R^2	0.4767		0.4761		0.4770		0.4758	

* p < 0.10, ** p < 0.05, *** p < 0.01. n=7,941

SBTD is the value of book-tax differences divided by beginning total assets. CPA1_A, CPA2_A, TEAM_A, FIRM_R is client importance is measured by the natural logarithm of client total assets divided by the sum of the natural logarithm of client total assets from all clients of the first and the second signing partner, the team, and the firm, respectively. SIZE is the natural logarithm of client's total assets. LEV is the ratio of total debt to total assets. ROA is the ratio of net income before tax and interest to total assets. DEP is depreciation expense divided by beginning total assets. BAD is bad debt expense divided by beginning total assets. IFI is investment income divided by beginning total assets. GSA is gain or loss on disposal of investments divided by beginning total assets. GSI is gain or loss on disposal of assets divided by beginning total assets. PON is the number of years going public. IMR is Inverse Mills ratio derived from the first stage model of Heckman (1979)'s methodology.

Table 6: The association between client importance (CI) and the absolute book-tax differences (ABSBTD) – indirect effect

Client importance (CI) is measured by client sales revenue

Panel A Stage one: The association between client importance (CI) and discretionary accruals (ABSDA)

	Dependent variable = ABSDA							
	Client importance measures (CI)							
	CPA1_R		**CPA2_R**		**TEAM_R**		**FIRM_R**	
	Coefficient	**p-value**	**Coefficient**	**p-value**	**Coefficient**	**p-value**	**Coefficient**	**p-value**
Intercept	0.1068***	<0.00001	0.1077***	<0.00001	0.1373***	<0.00001	0.1066***	<0.00001
CI	0.0309***	0.00001	0.0205***	0.00159	0.0496***	<0.00001	0.0572***	<0.00001
SIZE	-0.0039***	<0.00001	-0.0039***	<0.00001	-0.0059***	<0.00001	-0.0037***	<0.00001
LEV	0.0321***	<0.00001	0.0322***	<0.00001	0.0300***	<0.00001	0.0322***	<0.00001
GROWTH	0.0102***	<0.00001	0.0102***	<0.00001	0.0103***	<0.00001	0.0102***	<0.00001
OCF	-0.0491***	<0.00001	-0.0508***	<0.00001	-0.0459***	<0.00001	-0.0486***	<0.00001
EXPE	0.2950***	<0.00001	0.2985***	<0.00001	0.2908***	<0.00001	0.2954***	<0.00001
Adjusted-R^2	0.2351		0.2341		0.2390		0.2357	

* p < 0.10, ** p < 0.05, *** p < 0.01. n=7,941

ABSDA is the absolute value of discretionary accruals estimated by modified Jones model with a control of performance (Kothari et al., 2005). CPA1_R, CPA2_R, TEAM_R, FIRM_R is client importance is measured by the natural logarithm of client sales revenue divided by the sum of the natural logarithm of client sales from all clients of the first and the second signing partner, the team, and the firm, respectively. SIZE is the natural logarithm of client's total assets. LEV is the ratio of total debt to total assets. GROWTH is net sales growth rate. OCF is operating cash flows divided by beginning total assets. EXPE is prior total assets divided by the absolute value of current income before extraordinary items.

Table 6: The association between client importance (CI) and the absolute book-tax differences (ABSBTD) – indirect effect (cont.)

Client importance (CI) is measured by client sales revenue

Panel B Stage two: the effect of client importance (CI) and discretionary accruals (ABSDA) on book-tax differences (ABSBTD)

	Dependent variable = ABSBTD							
	Client importance measures (CI)							
	CPA1_R		CPA2_R		TEAM_R		FIRM_R	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Intercept	-0.0090	0.1144	-0.00901	0.1165	-0.0029	0.6290	-0.0090	0.11509
CI	0.0080**	0.0121	0.0060**	0.0419	0.0087***	0.0025	0.0073*	0.07400
ABSDA	0.0547***	<0.00001	0.0551***	<0.00001	0.0542***	<0.00001	0.0550***	<0.00001
SIZE	0.0001	0.7579	0.0001	0.7524	-0.0002	0.5266	0.0001	0.69508
LEV	0.0027	0.1742	0.0027	0.1752	0.0024	0.2242	0.0027	0.17149
ROA	0.4255***	<0.00001	0.4256***	<0.00001	0.4251***	<0.00001	0.4257***	<0.00001
DEP	-0.0252	0.1060	-0.0258*	0.0987	-0.0244	0.1186	-0.0261*	0.09389
BAD	0.2398**	0.0302	0.2375**	0.0318	0.2360**	0.0328	0.2366**	0.03253
IFI	0.2584***	<0.00001	0.2585***	<0.00001	0.2585***	<0.00001	0.2580***	<0.00001
GSA	0.1350***	<0.00001	0.1360***	<0.00001	0.1352***	<0.00001	0.1354***	<0.00001
GSI	0.2794***	<0.00001	0.2791***	<0.00001	0.2795***	<0.00001	0.2794***	<0.00001
PON	0.0003***	<0.00001	0.0003***	<0.00001	0.0003***	<0.00001	0.0003***	<0.00001
IMR	0.0183**	0.0147	0.0189**	0.0117	0.01763**	0.0192	0.0195***	0.00917
Adjusted-R^2	0.4864		0.4863		0.4866		0.4861	

* p < 0.10, ** p < 0.05, *** p < 0.01. n=7,941

ABSBTD is the natural logarithm of the absolute value of the book-tax differences. CPA1_R, CPA2_R, TEAM_R, FIRM_R is client importance is measured by the natural logarithm of client sales revenue divided by the sum of the natural logarithm of client sales from all clients of the first and the second signing partner, the team, and the firm, respectively. ABSDA is the absolute value of discretionary accruals estimated by modified Jones model with a control of performance (Kothari et al., 2005). SIZE is the natural logarithm of client's total assets. LEV is the ratio of total debt to total assets. ROA is the ratio of net income before tax and interest to total assets. DEP is depreciation expense divided by beginning total assets. BAD is bad debt expense divided by beginning total assets. IFI is investment income divided by beginning total assets. GSA is gain or loss on disposal of investments divided by beginning total assets. GSI is gain or loss on disposal of assets divided by beginning total assets. PON is the number of years going public. IMR is Inverse Mills ratio derived from the first stage model of Heckman (1979)'s methodology.

Table 7: The association between client importance (CI) and the absolute book-tax differences (ABSBTD) – indirect effect

Client importance (CI) is measured by client total assets

Panel A Stage one: The association between client importance (CI) and discretionary accruals (ABSBTD)

	Dependent variable = ABSDA							
	Client importance measures (CI)							
	CPA1_A		CPA2_A		TEAM_A		FIRM_A	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Intercept	0.1069***	<0.00001	0.1078***	<0.00001	0.1362***	<0.00001	0.1065***	<0.00001
CI	0.0312***	0.00001	0.0194***	0.00300	0.0547***	<0.00001	0.0592***	<0.00001
SIZE	-0.0039***	<0.00001	-0.0039***	<0.00001	-0.0058***	<0.00001	-0.0037***	<0.00001
LEV	0.0322***	<0.00001	0.0322***	<0.00001	0.0305***	<0.00001	0.0322***	<0.00001
GROWTH	0.0102***	<0.00001	0.0102***	<0.00001	0.0103***	<0.00001	0.0102***	<0.00001
OCF	-0.0490***	<0.00001	-0.0509***	<0.00001	-0.0441***	<0.00001	-0.0484***	<0.00001
EXPE	0.2949***	<0.00001	0.2985***	<0.00001	0.2898***	<0.00001	0.2950***	<0.00001
Adjusted-R^2	0.2351		0.2340		0.2397		0.2358	

* p < 0.10, ** p < 0.05, *** p < 0.01. n=7,941

ABSDA is the absolute value of discretionary accruals estimated by modified Jones model with a control of performance (Kothari et al., 2005). CPA1_A, CPA2_A, TEAM_A, FIRM_R is client importance is measured by the natural logarithm of client total assets divided by the sum of the natural logarithm of client total assets from all clients of the first and the second signing partner, the team, and the firm, respectively. SIZE is the natural logarithm of client's total assets. LEV is the ratio of total debt to total assets. GROWTH is net sales growth rate. OCF is operating cash flows divided by beginning total assets. EXPE is prior total assets divided by the absolute value of current income before extraordinary items.

Table 7: The association between client importance (CI) and the absolute book-tax differences (ABSBTD) – indirect effect (cont.)
Client importance (CI) is measured by client total assets

Panel B Stage two: the effect of client importance (CI), discretionary accruals (ABSDA) on book-tax differences (ABSBTD)

	Dependent variable = ABSBTD							
	Client importance measures (CI)							
	CPA1_A		CPA2_A		TEAM_A		FIRM_A	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Intercept	-0.0090	0.11412	-0.0090	0.11654	-0.0012	0.8297	-0.0090	0.11519
CI	0.0091***	0.00478	0.0069**	0.02024	0.0131***	0.0000	0.0085*	0.09745
ABSDA	0.0546***	<0.00001	0.0550***	<0.00001	0.0533***	<0.00001	0.0549***	<0.00001
SIZE	0.0001	0.76445	0.0001	0.75985	-0.0003	0.3707	0.0001	0.69535
LEV	0.0027	0.17150	0.0027	0.17324	0.0024	0.2281	0.0027	0.17072
ROA	0.4255***	<0.00001	0.4256***	<0.00001	0.4254***	<0.00001	0.4258***	<0.00001
DEP	-0.0252	0.10583	-0.0258*	0.09836	-0.0255	0.1018	-0.0261*	0.09451
BAD	0.2408**	0.02953	0.2381**	0.03140	0.2399**	0.0299	0.2370**	0.03221
IFI	0.2584***	<0.00001	0.2586***	<0.00001	0.2587***	<0.00001	0.2580***	<0.00001
GSA	0.1348***	<0.00001	0.1358***	<0.00001	0.1340***	<0.00001	0.1353***	<0.00001
GSI	0.2792***	<0.00001	0.2789***	<0.00001	0.2775***	<0.00001	0.2794***	<0.00001
PON	0.0003***	<0.00001	0.0003***	<0.00001	0.0003***	<0.00001	0.0003***	<0.00001
IMR	0.0180**	0.01628	0.0187**	0.01284	0.0164**	0.0289	0.0194***	0.00979
Adjusted-R^2	0.4865		0.4864		0.4872		0.4862	

* p < 0.10, ** p < 0.05, *** p < 0.01. n=7,941

ABSBTD is the natural logarithm of the absolute value of the book-tax differences. CPA1_A, CPA2_A, TEAM_A, FIRM_R is client importance is measured by the natural logarithm of client total assets divided by the sum of the natural logarithm of client total assets from all clients of the first and the second signing partner, the team, and the firm, respectively. ABSDA is the absolute value of discretionary accruals estimated by modified Jones model with a control of performance (Kothari et al., 2005). SIZE is the natural logarithm of client's total assets. LEV is the ratio of total debt to total assets. ROA is the ratio of net income before tax and interest to total assets. DEP is depreciation expense divided by beginning total assets. BAD is bad debt expense divided by beginning total assets. IFI is investment income divided by beginning total assets. GSA is gain or loss on disposal of investments divided by beginning total assets. GSI is gain or loss on disposal of assets divided by beginning total assets. PON is the number of years going public. IMR is Inverse Mills ratio derived from the first stage model of Heckman (1979)'s methodology.

Table 8: The association between client importance (CI) and signed book-tax differences (SBTD) – indirect effect

Client importance (CI) is measured by client sales revenue

Panel A Stage one: The association between client importance (CI) and signed discretionary accruals (SDA)

	Dependent variable = SDA							
	Client importance measures (CI)							
	CPA1_R		CPA2_R		TEAM_R		FIRM_R	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Intercept	-0.0433***	<0.0001	-0.0431***	<0.0001	-0.0279**	0.0128	-0.0338***	0.0106
CI	0.0135*	0.0511	0.0106***	0.0983	0.0157**	0.0143	0.0295***	0.0328
SIZE	0.0079***	<0.0001	0.0079***	<0.0001	0.0062***	<0.0001	0.0072***	<0.0001
LEV	-0.0653***	<0.0001	-0.0653***	<0.0001	-0.0341***	<0.0001	-0.0390***	<0.0001
GROWTH	-0.0160***	<0.0001	-0.0160***	<0.0001	-0.0160***	<0.0001	-0.0041***	<0.0001
OCF	-0.6388***	<0.0001	-0.6392***	<0.0001	-0.6483***	<0.0001	-0.7109***	<0.0001
EXPE	0.2935***	<0.0001	0.2947***	<0.0001	0.3026***	<0.0001	0.2850***	<0.0001
Adjusted-R^2	0.5088		0.5087		0.5231		0.4706	

* p < 0.10, ** p < 0.05, *** p < 0.01. n=7,941

SDA is the value of discretionary accruals estimated by modified Jones model with a control of performance (Kothari et al., 2005). CPA1_R, CPA2_R, TEAM_R, FIRM_R is client importance is measured by the natural logarithm of client sales revenue divided by the sum of the natural logarithm of client sales from all clients of the first and the second signing partner, the team, and the firm, respectively. SIZE is the natural logarithm of client's total assets. LEV is the ratio of total debt to total assets. GROWTH is net sales growth rate. OCF is operating cash flows divided by beginning total assets. EXPE is prior total assets divided by the absolute value of current income before extraordinary items.

Table 8: The association between client importance (CI) and the absolute book-tax differences (SBTD) – indirect effect (cont.)

Client importance (CI) is measured by client sales revenue

Panel B Stage two: the effect of client importance (CI), discretionary accruals (SDA) on book-tax differences (SBTD)

	Dependent variable = SBTD							
	Client importance measures (CI)							
	CPA1_R		CPA2_R		TEAM_R		FIRM_R	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Intercept	-0.0280***	<0.0001	-0.0278***	<0.0001	-0.0223**	0.0011	-0.0279***	<0.0001
CI	0.0126**	0.0005	0.0081**	0.0161	0.0081**	0.0135	0.0103*	0.0732
SDA	0.0429***	<0.0001	0.0435***	<0.0001	0.0432***	<0.0001	0.0437***	<0.0001
SIZE	0.0004	0.3221	0.0004	0.3125	0.0001	0.8229	0.0004	0.2712
LEV	0.0096***	<0.0001	0.0096***	<0.0001	0.0093***	<0.0001	0.0096***	<0.0001
ROA	0.4550***	<0.0001	0.4554***	<0.0001	0.4547***	<0.0001	0.4556***	<0.0001
DEP	-0.0013	0.9395	-0.0022	0.8976	-0.0012	0.9432	-0.0026	0.8801
BAD	-0.0219	0.8613	-0.0052	0.8402	-0.0283	0.8209	-0.0262**	0.8340
IFI	0.3644***	<0.0001	0.3643***	<0.00001	0.3642***	<0.0001	0.3634***	<0.0001
GSA	0.1334***	<0.0001	0.1349***	<0.00001	0.1343***	<0.0001	0.1340***	<0.0001
GSI	0.2990***	<0.0001	0.2986***	<0.00001	0.2990***	<0.0001	0.2987***	<0.0001
PON	0.0004***	<0.0001	0.0005***	<0.00001	0.0005***	<0.0001	0.0005***	<0.0001
IMR	0.0061	0.4728	0.0075	0.3749	0.0070	0.4100	0.0082***	0.3297
Adjusted-R^2	0.4837		0.4833		0.4833		0.4831	

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. n=7,941

SBTD is the value of book-tax differences divided by beginning total assets. CPA1_R, CPA2_R, TEAM_R, FIRM_R is client importance is measured by the natural logarithm of client sales revenue divided by the sum of the natural logarithm of client sales from all clients of the first and the second signing partner, the team, and the firm, respectively. SDA is the value of discretionary accruals estimated by modified Jones model with a control of performance (Kothari et al., 2005). SIZE is the natural logarithm of client's total assets. LEV is the ratio of total debt to total assets. ROA is the ratio of net income before tax and interest to total assets. DEP is depreciation expense divided by beginning total assets. BAD is bad debt expense divided by beginning total assets. IFI is investment income divided by beginning total assets. GSA is gain or loss on disposal of investments divided by beginning total assets. GSI is gain or loss on disposal of assets divided by beginning total assets. PON is the number of years going public. IMR is Inverse Mills ratio derived from the first stage model of Heckman (1979)'s methodology.

Table 9: The association between client importance (CI) and signed book-tax differences (SBTD) – indirect effect

Client importance (CI) is measured by client total assets

Panel A Stage one: The association between client importance (CI) and signed discretionary accruals (SDA)

	Dependent variable = SDA							
	Client importance measures (CI)							
	CPA1_A		CPA2_A		TEAM_A		FIRM_A	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Intercept	-0.0433***	<0.0001	-0.0430***	<0.0001	-0.0276**	0.0132	-0.0338***	0.0106
CI	0.0138**	0.0487	0.0103*	0.0952	0.0187**	0.0054	0.0298***	0.0322
SIZE	0.0079***	<0.0001	0.0079***	<0.0001	0.0062***	<0.0001	0.0072***	<0.0001
LEV	-0.0652***	<0.0001	-0.0653***	<0.0001	-0.0340***	<0.0001	-0.0390***	<0.0001
GROWTH	-0.0160***	<0.0001	-0.0160***	<0.0001	-0.0160***	<0.0001	-0.0041***	<0.0001
OCF	-0.6387***	<0.0001	-0.6392***	<0.0001	-0.6475***	<0.0001	-0.7109***	<0.0001
EXPE	0.2935***	<0.0001	0.2947***	<0.0001	0.3020***	<0.0001	0.2851***	<0.0001
Adjusted-R^2	0.5088		0.5087		0.5232		0.4706	

* p < 0.10, ** p < 0.05, *** p < 0.01. n=7,941

SDA is the value of discretionary accruals estimated by modified Jones model with a control of performance (Kothari et al., 2005). CPA1_A, CPA2_A, TEAM_A, FIRM_R is client importance is measured by the natural logarithm of client total assets divided by the sum of the natural logarithm of client total assets from all clients of the first and the second signing partner, the team, and the firm, respectively. SIZE is the natural logarithm of client's total assets. LEV is the ratio of total debt to total assets. GROWTH is net sales growth rate. OCF is operating cash flows divided by beginning total assets. EXPE is prior total assets divided by the absolute value of current income before extraordinary items.

Table 9: The association between client importance (CI) and the absolute book-tax differences (SBTD) – indirect effect (cont.)

Client importance (CI) is measured by client TOTAL ASSETS

Panel B Stage two: the effect of client importance (CI), discretionary accruals (SDA) on book-tax differences (SBTD)

	Dependent variable = SBTD							
	Client importance measures (CI)							
	CPA1_A		CPA2_A		TEAM_A		FIRM_A	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Intercept	-0.0280***	<0.0001	-0.0278***	<0.0001	-0.0200***	0.0031	-0.0279***	<0.0001
CI	0.0137***	0.0001	0.0090***	0.0075	0.0013**	<0.0001	0.0115**	0.0485
SDA	0.0428***	<0.0001	0.0434***	<0.0001	0.0423***	<0.0001	0.0436***	<0.0001
SIZE	0.0004	0.3244	0.0004	0.3163	0.0000	0.9274	0.0004	0.2709
LEV	0.0096***	<0.0001	0.0096***	<0.0001	0.0092	<0.0001	0.0096	<0.0001
ROA	0.4551***	<0.0001	0.4554***	<0.0001	0.4547***	<0.0001	0.4556***	<0.0001
DEP	-0.0014	0.9339	-0.0023	0.8940	-0.0023	0.8948	-0.0026	0.8820
BAD	-0.0209	0.8675	-0.0246	0.8440	-0.0254	0.8391	-0.0259**	0.8362
IFI	0.3645***	<0.0001	0.3644***	<0.0001	0.3648***	<0.0001	0.3634***	<0.0001
GSA	0.1331***	<0.0001	0.1347***	<0.0001	0.1331***	<0.0001	0.1339***	<0.0001
GSI	0.2998***	<0.0001	0.2984***	<0.0001	0.2972***	<0.0001	0.2986***	<0.0001
PON	0.0004***	<0.0001	0.0004***	<0.0001	0.0004***	<0.0001	0.0005***	<0.0001
IMR	0.0058	0.4923	0.0072	0.3912	0.0053	0.5308	0.0081***	0.3398
Adjusted-R^2	0.4838		0.4834		0.4839		0.4831	

* p < 0.10, ** p < 0.05, *** p < 0.01. n=7,941

SBTD is the value of book-tax differences divided by beginning total assets. CPA1_A, CPA2_A, TEAM_A, FIRM_R is client importance is measured by the natural logarithm of client total assets divided by the sum of the natural logarithm of client total assets from all clients of the first and the second signing partner, the team, and the firm, respectively. SDA is the value of discretionary accruals estimated by modified Jones model with a control of performance (Kothari et al., 2005). SIZE is the natural logarithm of client's total assets. LEV is the ratio of total debt to total assets. ROA is the ratio of net income before tax and interest to total assets. DEP is depreciation expense divided by beginning total assets. BAD is bad debt expense divided by beginning total assets. IFI is investment income divided by beginning total assets. GSA is gain or loss on disposal of investments divided by beginning total assets. GSI is gain or loss on disposal of assets divided by beginning total assets. PON is the number of years going public. IMR is Inverse Mills ratio derived from the first stage model of Heckman (1979)'s methodology.

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