Tax Haven Use, Pricing of Audit and Non-audit Services, Suspicious Matters Reporting Obligations and Whistle Blower Hotline Facility: Evidence from Australian Financial Corporations

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Abstract: This study examines whether tax haven use by Australian financial corporations is associated with pricing of audit and non-audit services. It also analyzes whether the existence of financial corporations' suspicious matters report (SMRs) and whistle blower hotline facilities moderate the association between tax haven use and pricing of audit and non-audit services. We find a positive association between tax haven use and pricing of audit and non-audit services. Our results are economically significant. For example, audit fees for financial corporations with tax haven use is around 23 per cent higher compared to corporations with no tax haven use, while non-audit fees for financial corporations with tax haven use is around 13 per cent higher compared to corporations with no tax haven use. We also find that the existence of SMRs and whistle blower hotline facilities both moderate the positive association between tax haven use and audit pricing. Overall, our results indicate that tax haven use has serious consequences for financial corporations' pricing of audit and non-audit services, whereas SMRs and whistle blower hotline facilities assist corporations to reduce the risks concerning tax haven use.

Keywords: Audit pricing; Non-audit pricing; Suspicious matter reports; Whistle blower hotline facility; Tax havens; Financial corporations

JEL Classifications: G21; H26; M42

1. Introduction

Tax haven[1] use by multinational corporations (MNCs) typically involves the concealment of the nature and origin of funds, which makes it difficult for tax authorities to determine the source and applicable tax liability relating to those funds (De Simone et al., 2019). Tax havens are characterized by secrecy in banking practices, a weak regulatory framework and a zero (or nominal) tax rate, so they represent ideal jurisdictions for MNCs to retain funds offshore, in addition to conducting earnings management, money laundering and tax evasion activities (Desai, 2005; Desai et al., 2006a, 2006b; Department of Treasury, 2015, 2016; De Simone et al., 2019). At the extreme, subsidiaries incorporated in tax haven jurisdictions by MNCs could be responsible for the treasury function of the corporate group as a whole.

[1] Tax havens are *loci* of secrecy and lack of information exchange (Dyreng and Lindsey, 2009). We use the OECD's list of 33 tax haven jurisdictions in this study as follows: Anguilla, Antigua and Barbuda, Bahamas, Bahrain, Bermuda, Belize, British Virgin Islands, Cayman Islands, Cook Islands, Cyprus, Dominica, Gibraltar, Grenada, Guernsey, Isle of Man, Jersey, Liberia, Malta, Marshall Islands, Mauritius, Montserrat, Nauru, Netherlands Antilles, New Caledonia, Panama, Samoa, San Marino, Seychelles, St. Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Turks and Caicos Islands and Vanuatu (OECD, 2006).

We are motivated to conduct this study for several reasons. First, Oxfam Australia estimates that Australian corporations have used tax havens to avoid around AUD $4.8 billion in corporate taxes in 2014, accounting for about 90 percent of corporate profits (Oxfam, 2014). We argue that tax haven use facilitates significant agency problems in MNCs (e.g., rent extraction and/or resource diversion by managers), as the benefits of doing so are likely to be greater than the costs (Dyreng and Lindsey, 2009). The use of tax havens provides managers with opportunities to engage in rent extraction or resource diversion (Dharmapala and Hines, 2009). Associated financial reporting obfuscation then makes it more difficult for audit firms to fully assess MNCs risks, leading to increased audit risk and increases in pricing of audit and non-audit services. Thus, it is important to determine whether Australian financial corporations' use of tax havens is associated with pricing of audit and non-audit services.

Second, Australian audit firms face increasing obligations in terms of financial corporations' exposure to reporting and compliance risk, particularly in light of the reporting requirements required by the Australian Securities and Investment Commission (ASIC). The extensive use of tax havens is a major source of financial reporting and compliance risk that can lead to a significant increase in audit risk (Donohoe and Knechel, 2014). Audit firms can mitigate risks relating to the use of tax havens as they can apply their expertise and knowledge to assess whether a corporation's control systems are responsive to risks of tax haven use and where misalignment is observed, and to make recommendations to managers about improvement in controls. These risks could have flow-on effects for pricing of audit and non-audit services (Donohoe and Knechel, 2014).

Third, this study considers the role of corporate governance mechanisms relating to the establishment of a corporate policy in respect of suspicious matter reporting, and also whether corporations have a whistle blower hotline facility to augment reporting concerning fraud or breaches in money laundering controls. Both of these corporate governance mechanisms could

assist corporations in identifying, monitoring and being able to adequately assess fraud and money laundering risks. Corporations with strength in these governance attributes are more likely to negate illicit activities that could manifest in or through tax haven jurisdictions, and also signal to audit firms the rigor in their compliance with significant effects on pricing of audit and non-audit services. It is thus important to determine whether the association between tax haven use for Australian financial corporations and pricing of audit and non-audit services is impacted by these specific governance mechanisms.

Overall, the purpose of this study is twofold. First, we examine whether tax haven use by Australian financial corporations is associated with pricing of audit and non-audit services. Second, we investigate whether the existence of financial corporations' suspicious matters report (SMRs)[2,3,4] (required for the reporting of corporate activities about money laundering risk or fraud) and whistle blower hotline facilities (a major tool designed to detect fraud) moderates the association between tax haven use and pricing of audit and non-audit services.

Using a sample of publicly listed Australian financial corporations over the 2008–2018 period (1,042 corporation-year observations), we find a positive association between tax haven use and pricing of audit and non-audit services. Our results are also economically significant. For instance, audit fees for financial corporations with tax haven use is around 24 per cent higher than financial corporations with no tax haven use, while non-audit fees for financial corporations with tax haven use is about 14 per cent higher than for financial corporations with no tax haven use. Finally, we also find that the existence of SMRs and whistle blower hotline

[2] A Suspicious Matter Report (SMR) is a report made by a financial corporation about suspicious activity that is or appears to be suspicious in nature. In this study, we use SMRs to refer to the Suspicious Matter Reports under Australian Transaction Reports and Analysis Centre (AUSTRAC). The main goal of SMRs is to help the Australian government identify individuals, groups and organizations involved in fraud, including terrorist financing, money laundering and other crimes. Available at: https://www.austrac.gov.au/business/how-comply-guidance-and-resources/reporting/suspicious-matter-reports-smr.

[3] Reports of transactions and suspicious behaviors from industry are essential in developing high-quality actionable financial intelligence to fight serious and organized crime, including drug trafficking, fraud, tax evasion and terrorism financing.

[4] Information regarding SARs are available at: https://asic.gov.au/regulatory-resources/markets/report-suspicious-activity/.

facilities both moderate the positive association between tax haven use and pricing of audit and non-audit services.

This study makes the following contributions to the literature. First, to the best of our knowledge, this is the first study to examine the association between the use of tax havens by financial corporations and pricing of audit and non-audit services. Overall, our findings show that financial corporations that use tax havens incur significantly higher audit and non-audit fees. Further, our results are also economically significant. Although there is some evidence of the negative effects of corporations' tax haven use on the reliability of financial information in terms of the accuracy of reported revenues and the faithful representation of financial statements (e.g., Blaylock, 2016; Akamah et al., 2018), there is a lack of research that specifically examines the important role that tax haven play in influencing audit and no-audit pricing. While tax havens play a major role in reducing taxes paid by MNCs (Desai et al., 2006a, 2006b; Dyreng and Lindsey, 2009), they are also established for legitimate business purposes, such as the channeling of capital between group subsidiaries, fostering investment opportunities for corporate groups in geographical domains where it would otherwise be difficult to enter markets, and for arm's length financing and insurance business (GAO, 2008a, 2008b). Hence, tax haven use by firms may not necessarily give rise to increased audit risk in terms of impacting a client's business risk or the conduct of by that client of illicit arrangements designed to reduce tax payable.

Second, this study contributes to the literature on the determinants of audit risk by examining the audit fees implication of tax haven use. The multiple roles that tax havens play in assisting financing, investing, taxation and operational activities of financial corporations has important implications in terms of audit risk and hence on pricing of audit and non-audit services. Tax haven use increases the level of legal, financial and organizational complexity and risk in a corporation due to the reduced information transparency, generating uncertainty for

stakeholders including the audit firm which could increase the level of audit risk (Hay et al., 2006). An audit firm will likely charge a premium for this increased complexity given the increased audit risk that will likely translate into increased audit effort and higher pricing of audit and non-audit services (Donohoe and Knechel, 2014).

Third, this study is the first to investigate how corporate governance mechanisms relating to the existence of a SMR policy and a whistle blower hotline facility play in moderating the association between tax haven use and pricing of audit and non-audit services in financial corporations (Lee and Fargher, 2018). We provide new evidence showing that SMRs and a whistle blower hotline facility both moderate the positive association between tax haven use and pricing of audit and non-audit services. There are audit fee implications stemming from the identification and reporting of risks associated with firms' use of tax havens through SMRs and whistle blower hotline facilities.

Finally, the results of this study are likely to be of interest to policymakers and regulators of the financial services industry, in addition to tax authorities, such as the Australian Taxation Office (ATO) given the current level of scrutiny of that industry and its economic importance. In fact, there has been growing interest by regulators to review the effects of factors that may impact the reputation and litigation risk of audit firms and regulatory penalties that the audit firm could incur (Jones et al., 2018).

The remainder of the paper is organized as follows. Section 2 considers the background of the study and develops hypotheses. Section 3 describes the research design, while Section 4 reports the empirical results. Section 5 concludes the paper.

2. Background

2.1. Australian financial industry

Australia has a well-developed financial services sector and is ideally positioned as a financial centre in the Asia-Pacific region (Australian Trade and Investment Commission (ATIC), 2019).

According to ATIC (2019), the Australian financial market constitutes a major capital market and investment centre in the Asia-Pacific region with the global funds value of AUD $1.3 trillion in 2019.[5]

The findings of the Royal Commission into misconduct in the banking, superannuation and financial services industry were provided through reports released to the public in January 2019.[6] These reports found that the Australian financial services sector suffered from a lack of controls in term of money laundering, accuracy in the provision of financial advice, and terrorism financing. In fact, the reports noted that the financial services industry suffered from a culture of greed. Overall, these findings provide a strong motivation to examine the linkages between Australian financial corporations' use of tax havens, pricing of audit and non-audit services, the provision of SMRs and whistle blower hotline facilities.

2.2. Tax haven jurisdictions

The issue of corporations' use of tax haven jurisdictions is high on the political agenda of many countries. Tax havens can facilitate the transfer of funds between members of the corporate group, and may also involve earnings management, banking secrecy, money laundering, tax avoidance and tax evasion (Desai and Hines, 2006a, 2006b; Dharmapala and Hines, 2009; Dyreng and Lindsey, 2009). Further, the International Monetary Fund (IMF, 2019) reports that tax havens collectively cost governments between USD$500 billion and USD$600 billion a year in lost tax revenue through both legal and illegal activities (e.g., Crivelli et al., 2015; Cobham and Janský, 2018).[7] This report showed that of that lost revenue, low-income economies account for around USD $200 billion, which is a larger hit as a percentage of GDP

[5] See https://www.austrade.gov.au/International/Buy/Australian-industry-capabilities/financial-services.
[6] Available at: https://financialservices.royalcommission.gov.au/Pages/default.aspx.
[7] Available at: https://www.imf.org/external/pubs/ft/fandd/2019/09/tackling-global-tax-havens-shaxon.htm.

than advanced economies, and more than the USD $150 billion or so they receive each year in foreign development assistance (IMF, 2019).

In Australia, the flow of funds from (to) tax havens to (from) Australia is substantial. For instance, in the period between July 2007 and June 2013, a total of AUD $292 billion was transferred from Australia to tax secrecy jurisdictions, and AUD $367 billion was transferred into Australia from tax havens according to AUSTRAC reports (BI, 2014).[8] In addition, Oxfam (2016) claims that funds flowing from Australia through tax havens and then to developing countries were estimated at around USD $7.7 billion in 2014.

Eden (2009) shows that tax havens allow MNCs to shift profits out of high tax jurisdictions into low tax jurisdictions, most commonly through transfer pricing arrangements. Taylor et al. (2015) argue that aggressive transfer pricing activities by MNCs include the shifting of profits to tax haven incorporated subsidiaries which are subject to no or relatively low rates of corporate taxes. Finally, MNCs that use tax havens may participate in income-shifting activities which leads to other tax avoidance activities, tax evasion, money laundering and fraud (Eden, 2009; Slemrod and Wilson, 2009; Jones and Temouri, 2016).

2.3. Pricing of audit and non-audit services

Past studies shows that audit pricing is determined by three important components: (1) the audit effort to protect audit firm reputation; (2) the reduction of litigation risks; and (3) compensation based on expected audit costs (e.g., Simunic, 1980; Houston et al., 1999, 2005). Simunic (1980) and Houston et al. (1999, 2005) argue that audit fees are higher for larger clients or clients with greater levels of complexity due to increased audit effort. However, increased audit effort can improve corporations' financial reporting quality, and reduce litigation and reputation risks.

[8] Available at: https://www.businessinsider.com.au/offshore-cash-flows-from-australia-hit-a-five-year-low-with-the-tax-haven-business-in-decline-2014-6.

The American Institute of Certified Practising Accountants (AICPA, 2006) explains that the auditor's business risks constitute the risks that they are exposed to any loss or injury of his or her professional practice as a result of litigation, harmful publicity or other events arising in association with audited financial statements. Stanley (2011) argue that client business risk can affect audit pricing.[9] Therefore, audit pricing is contingent on the audit firm's risk of issuing an unqualified opinion on materially misstated financial statements and its own business risk (AICPA, 1983). Consistent with the audit pricing model developed by Simunic (1980), both factors can impact audit fees through audit investment and/or price premiums covering the audit firm's expected future reputation losses. Schelleman and Knechel (2010) argue that audit fees are an important indicator of the operating performance dimension of corporations' business risks.

2.4. Hypotheses development

2.4.1. Tax haven use and pricing of audit and non-audit services

Increased audit effort of corporations that use tax havens is likely given the increased financial obfuscation and secrecy in capital flows associated with their use. Tax havens have been associated with earnings management, fraud, money laundering, tax avoidance and evasion (e.g., Desai, 2005; Desai et al., 2006a, 2006b; Department of Treasury, 2015, 2016; De Simone et al., 2019), which add multiple layers of complexity to the corporation. A full assessment of corporations' transactions channelled through tax havens, if possible, is likely to increase the audit firm's audit effort and time, which increases the pricing of audit and non-audit services[10].

[9] Simunic and Stein (1996) argue that total audit costs include a resource cost and expected liability loss component. The resource cost increases with a rise in audit effort to reduce audit risks, and the expected liability loss component increases with a potential rise in the prior liability for loss of a lawsuit (i.e., increased business risks). Audit firms respond to a higher audit of business risks by increasing their investment in the audit and by charging higher audit fees (Mitra et al., 2019).

[10] Whisenant et al. (2003) show that the characteristics of external auditors, their clients and the nature of the auditor-client relationship simultaneously determine both audit and non-audit fees. They assert that audit fees and non-audit fees proxy for the overall level of service provided and the flow of information between the auditor and

We conjecture that audit firms should perceive the use of tax havens as attracting additional audit business and reputational risk, leading to an increase in pricing of audit and non-audit services. Prior studies concerning audit fees argue that such fees are composed of an audit effort component and an expected future loss component (e.g., Simunic, 1980; Gu and Hu, 2015).

Audit effort is associated with the level of expertise, number of auditors, and the time and resources exerted by the audit firm during the audit to complete it. Seetharman et al. (2002) suggest that expected future losses include costs arising from the audit firm's reputation and litigation costs, and regulatory penalties that the audit firm could incur after completing the audit process. Given the arguments about the market and financial reporting implications of tax haven use, it important to evaluate how audit firms respond to its presence (Dyreng and Lindsey, 2009). This is a significant issue as audit firms are responsible for verifying financial statements, and tax havens have been identified as attracting increased business risks and costs (Taylor et al., 2015, 2018). In fact, corporations that use tax havens are known *loci* of earnings management and material financial misstatements (Manry et al., 2007). These additional risks are likely to lead audit firms to adjust their effort and pricing (Schelleman and Knechel, 2010). Further, tax haven subsidiaries may facilitate the tax-efficient transfer of funds between group members that include more difficult to separate events or transactions into those that adhere to the underlying business purpose, and those motivated solely or largely to obtaining a significant tax benefit for the corporation (Desai et al., 2006a, 2006b).

Regulatory audit reforms regarding the accounting treatment for identifying and assessing the risks of material misreporting (including tax evasion) over the years have also impacted audit firm complexities and responsibilities. The Australian Federal Register of Legislation

its client. Hence, our reference to audit pricing captures both the service level and information exchange between the auditor and its client based on the findings of Whisenant et al. (2003).

promulgated an Auditing Standard – ASA 315 Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and Its Environment (Auditing and Assurance Standards Board, 2013), which requires audit firms to provide a basis for designing and implementing suitable responses to the assessed risks of material misstatements due to error or fraud.[11] We conjecture that audit related regulatory reforms increase the duties of audit firms to consider risks relating to tax haven use which, in turn, increase audit risk and the pricing of both audit and non-audit services.

Conversely, given that large Australian listed firms' are required by the ATO to report their uncertain tax positions from 2011[12], tax risks stemming from their use of tax havens could be sufficiently reported on such that tax haven use does not necessarily pose additional financial, tax and audit risk. Information relating to a firm's uncertain tax position that stem from tax haven use including significant judgments, financial impacts and associated internal controls are reported on by firms' in their annual reports. Reportable tax uncertainties that are filed with the ATO are also disclosed in a firm's annual report. Hence, the level of financial reporting obscurity associated with firms' tax haven use may not pose an audit risk. Hence, the pricing of audit and non-audit services may thus not be significantly affected by firms' tax haven use.

On balance, given the weight of the aforementioned arguments, we propose the following directional hypothesis:

H1: There is a positive association between tax haven use and pricing of audit and non-audit services.

2.4.2. The potential moderating effect of suspicious matter reporting requirements

[11] Available at: file:///C:/Users/mq20182373/Downloads/F2013C00970.pdf.
[12] The ATO requires large firms to record *Uncertain Tax Positions* along with their tax returns from the 2011 year.

We also examine whether audit firms' concerns of risks pertaining to tax haven use might be suppressed by mandatory reporting requirements of corporations, namely SMRs. A major issue that should be recognized in analyzing the association between tax haven and pricing of audit and non-audit services is the audit firm's assessment of the likelihood that the reported risks are later follow-up on by managers. According to the communication channel on suspicious matters, prior studies show that corporations introduced a code of ethics/conduct and provide a whistleblowing policy allowing employees to report suspicious matters (e.g., Turley and Zaman, 2007).

Consistent with Section 41 of the Australian *Anti-Money Laundering and Counter-Terrorism Financing Act 2006* (AML/CTF Act), a reporting entity must make a SMR to AUSTRAC if, at any time while dealing with a customer, the reporting entity forms a reasonable suspicion that the matter may be associated with an offence, tax evasion or the proceeds of crime (FATF and APG 2015).[13] In 2017–2018, AUSTRAC published and disseminated risk assessments to assist the financial sector in understanding and addressing the vulnerabilities of their industries and products. SMRs are an important mechanism to detect fraud and corruption. For instance, in the 2017–2018 financial year, AUSTRAC received 136,225,100 suspicious reports from the financial services industry. This equates to more than 370,800 reports per day, which represents an increase of around 21.6 percent from the prior year. The reports comprised 125,900 SMRs, 3,961,100 threshold transaction reports, and 132,091,900 international funds transfer instruction (IFTI) reports. In addition, AUSTRAC intelligence contributed to the outcomes achieved by the Serious Financial Crime Taskforce (SFCT). In 2017–2018, the SFCT raised AUD $207.4 million in tax liabilities, with AUD $79.6 million recouped by the ATO.[14] On the basis of these facts, we conjecture that pricing of audit

[13] Available at: https://www.legislation.gov.au/Details/C2019C00011 and https://www.fatf-gafi.org/media/fatf/documents/reports/mer4/5-Preventive-Measures-Mutual-Evaluation-Australia-2015.pdf.
[14] Available at: https://www.austrac.gov.au/sites/default/files/2019-05/AUSTRAC_annual_report_2017-18.pdf.

and non-audit services associated with tax haven use should be lower if the financial corporation has an SMRs disclosure policy.

Based on the above discussion, we develop the following hypothesis:

H2: The positive association between tax haven use and pricing of audit and non-audit services is moderated for financial corporations with an SMRs disclosure policy.

2.4.3. The potential moderating effect of a whistle blower hotline facility

Finally, we investigate the potential effect that the existence of a whistle blower hotline facility has on the association between tax haven use and audit pricing. Empirical evidence shows that a whistle blowing hotline facility is considered to be an important control mechanism in detecting fraud (e.g., Brennan and Kelly, 2007). The Association of Certified Fraud Examiners (ACFE, 2006) shows that 60 percent of violations are more likely to be detected by whistleblowing from employees. Further, the Professional Integrity Survey conducted by KPMG in 2005-2006 found that around 74 percent of employees observed some form of financial misconduct in the 12-month period prior to the survey (KPMG Forensic, 2007).[15] Overall, these findings provide strong evidence of the value-increasing role for a whistle blower hotline facility, suggesting that corporations with this facility have lower levels of audit risk and possibly reduced pricing of audit and non-audit services (Jubb, 2000; Brennan and Kelly, 2007; Zhang et al., 2013). We conjecture that the pricing of audit and non-audit services associated with tax haven use should be lower if the financial corporation has an internal whistle blower hotline facility.

Based on the above discussion, we develop the following hypothesis:

H3: The positive association between tax haven use and pricing of audit and non-audit services is moderated for financial corporations with a whistle blower hotline facility.

[15] Available at: http://www.ethicsmanagement.info/content/USIntegritySurveyWEB.pdf.

3. Research Design

3.1. Sample selection and data source

Our sample consists of financial corporations listed on the Australian stock exchange over the 2008–2018 period. Data relating to tax haven subsidiaries, pricing of audit and non-audit services, and corporate governance characteristics were hand-collected from financial corporations' annual reports, while accounting and financial data for the control variables were collected from the Morningstar database. Our initial sample comprised 2,321 corporation-year observations. However, corporation-year observations where we have foreign incorporated corporations (90), corporations with no foreign subsidiary disclosures (302) and the absence of financial data (905) were eliminated from the sample. Table 1 (Panel A) shows that our final sample size consists of 1,024 corporation-year observations. Finally, the sample distribution across the 2008–2018 years is provided in Table 1 (Panel B). We find that the number of corporation-year observations increases gradually from 5 percent corporation-year observations in the 2008 year to 11 percent corporation-year observations in the 2018 year.

[Insert Table 1 Here]

3.2 Dependent variables

We have two independent variables, audit fees (AUD_FEE) and non-audit fees (NON_AUD_FEE) paid by the financial corporation for audit services. Specifically, audit firms must provide sufficient assurance that corporations' financial statements are free from material misstatements and errors, and to ensure that all events that may adversely affect the corporation have been disclosed (Simunic, 1980; Houston et al., 1999, 2005; Gul and Goodwin, 2010; Gul et al., 2013). As audit firms provide many different services to corporations, audit fees vary depending on the types of audit services and the potential audit risk that the audit firms must consider. The more complex audit work required by audit firms, leads to higher

audit risk, and thus an increase in audit pricing. Following prior studies (e.g., Ittonen and Peni, 2012; Ettredge et el., 2014; Ittonen et al., 2019), we compute AUD_FEE and NON_AUD_FEE as the natural log of audit and non-audit fees, respectively.

3.3. Independent variables

Our main independent variable of interest is the use of tax haven subsidiaries (THAV) by financial corporations.[16] Consistent with prior research (e.g., Taylor et al., 2015), we employ several measures of THAV to improve the robustness of our empirical results. Our first measure, THAV_D, is constructed as a dummy variable, coded 1 if the corporation uses a tax haven subsidiary, and 0 otherwise. Our second measure, THAV_LN, is computed as the natural log of the total number of tax haven subsidiaries used. Our third measure, THAV_CNT_LN, is computed as the natural log of the number of different tax havens used by the corporation.

Our other independent variables are denoted by interaction terms, which are computed by multiplying the THAV measures (THAV_D, THAV_LN and THAV_CNT_LN) by SMRs or CMN. In particular, THAV_D*SMRs (or CMN), THAV_LN*SMRs (or CMN) and THAV_CNT_LN * SMRs (or CMN), where SMRs is a dummy variable, coded 1 if the corporation has a suspicious matter reports policy, and 0 otherwise, and CMN is a dummy variable, coded 1 if the corporation has an internal whistle blower hotline facility, and 0 otherwise.

3.4. Control variables

We include several control variables in our regression models to control for other effects on pricing of audit and non-audit services (e.g., Ettredge et al., 2014; Jones and Temouri, 2016;

[16] The OECD (2006) provides an official list of jurisdictions that they recognize as being tax havens. See footnote 1 in the paper.

Taylor et al., 2018; Ittonen et al., 2019; Mitra et al., 2019). Size (SIZE) is measured as the natural log of total assets. Loss (LOSS) is measured as a dummy variable, coded 1 if the corporation has net income less than zero, and 0 otherwise. Return on assets (ROA) is measured as net income scaled by total assets. Securities (SECURITIES) is measured as total securities scaled by total assets. Common Loan (COM_LOAN) is measured as the sum of commercial and agricultural loans scaled by gross loans. The capital ratio (CAP_RATIO) is measured as the total risk-adjusted capital ratio of the corporation. Intangible assets (INTANG) is measured as intangible assets scaled by total assets. Big 4 audit firm (BIG4) is measured as a dummy variable, coded 1 if the corporation is audited by a Big 4 audit firm, and 0 otherwise.

We also control for some corporate governance variables in our regression models that may be associated with changes in audit and non-audit fees. Board size (BD_SIZE) is measured as the natural log of the number of members on the board of directors. Board independent directors (BD_IND) is measured as the proportion of board members that are independent directors. CEO tenure (CEO_TENURE) is measured as the natural log of the number of years that the CEO has been chief executive of the corporation. Audit committee size (AUD_SIZE) is measured as a dummy variable, coded 1 if the total audit committee members is above the sample median, and 0 otherwise. Audit firm change (AUD_CHNG) is measured as a dummy variable, coded 1 if the corporation has changed the audit firm from t-1 to t-0, and 0 otherwise.

Finally, we control for changes in the operating environment of the corporation in our regression models. It is measured using a dummy variable for mergers and acquisitions (M&A), which is coded 1 if the corporation is engaged in a merger or acquisition, and 0 otherwise.

3.5. Regression models

To examine the association between tax haven use and pricing of audit and non-audit services (H1), we use firm fixed effects (FFE) panel regression analysis to control for correlated omitted variables (Wooldridge, 2009). The FFE panel regression model is estimated as follows:

$$\text{AUDIT\_P}_{i,t} = \gamma_{0+}\gamma_1\text{THAV\_D}_{i,t}/\ \text{THAV\_LN}_{i,t}\ /\ \text{THAV\_CNT\_LN}_{i,t} + \gamma_n\text{CONTROLS} + \text{Year Dummies} + \mu_{i,t} + e_{i,t} \quad (1)$$

where, *i* = corporations; *t* = the financial years 2008–2018.[17]

To examine whether the positive association between tax haven use and pricing of audit and non-audit services is moderated for financial corporations with SMRs disclosure policy (H2), we estimate the following FFE panel regression model:

$$\text{AUDIT\_P}_{i,t} = \gamma_0 + \gamma_1\text{THAV\_D}_{i,t}/\ \text{THAV\_LN}_{i,t}\ /\ \text{THAV\_CNT\_LN}_{i,t} + \gamma_2\ \text{SMRs}_{i,t} + \gamma_3\text{THAV\_D}_{i,t} * \text{SMRs}/\ \text{THAV\_LN}_{i,t} * \text{SMRs}\ /\ \text{THAV\_CNT\_LN}_{i,t} * \text{SMRs} + \gamma_n\text{CONTROLS} + \text{Year Dummies}\ + \mu_{i,t} + e_{i,t} \quad (2)$$

where SMRs = is dummy variable, coded 1 if the corporation has a suspicious matter reports policy, and 0 otherwise; and THAV_D * SMRs, THAV_LN * SMRs and THAV_CNT_LN * SMRs = interaction terms computed by multiplying THAV_D, THAV_LN and THAV_CNT_LN by SMRs.

To examine whether the positive association between tax haven use and pricing of audit and non-audit services is moderated for financial corporations with a whistle blower hotline facility (H3), we estimate the following FFE panel regression model:

$$\text{AUDIT\_P}_{i,t} = \gamma_0 + \gamma_1\text{THAV\_D}_{i,t}/\ \text{THAV\_LN}_{i,t}\ /\ \text{THAV\_CNT\_LN}_{i,t} + \gamma_2\ \text{CMN}_{i,t} + \gamma_3\text{THAV\_D}_{i,t} * \text{CMN}/\ \text{THAV\_LN}_{i,t} * \text{CMN}\ /\ \text{THAV\_CNT\_LN}_{i,t} * \text{CMN} + \gamma_n\text{CONTROLS} + \text{Year Dummies} + \mu_{i,t} + e_{i,t} \quad (3)$$

where, CMN = dummy variable, coded 1 if the corporation has an internal whistle blower hotline facility, and 0 otherwise; and THAV_D*CMN, THAV_LN*CMN and

[17] Variable definitions are provided in the Appendix.

THAV_CNT_LN *CMN = interaction terms computed by multiplying THAV_D, THAV_LN and THAV_CNT_LN by CMN.

4. Empirical Results

4.1. Descriptive statistics

Table 2 (Panel A) presents the descriptive statistics for the dependent variable (AUD_FEE and NON_AUD_FEE), independent variables (THAV_D, THAV_LN, THAV_CNT_LN, SMRs and CMN) and control variables (SIZE, LOSS, ROA, SECURITIES, COMM_LOAN, CAP_RATIO, INTANG, BIG4, BD_SIZE, BD_IND, CEO_TENURE, AUD_SIZE and AUD_CHNG). The mean (median) value of AUD_FEE and NON_AUD_FEE are 11.80 (11.57) and 6.10 (8.53) respectively, so the financial corporations in our sample spend, on average, around AUD $1 million on audit fees. In addition, the mean (median) values of THAV_D, THAV_LN and THAV_CNT_LN are 0.13 (0.00), 0.11 (0.00) and 0.08 (0.00) respectively, so around 13 percent of the sample financial corporations have at least one subsidiary corporation in an OECD (2006) listed tax haven jurisdiction. This result is comparable to Taylor et al. (2018) where 9 percent of U.S. MNCs were found to use at least one tax haven subsidiary corporation in an OECD (2006) listed tax haven jurisdiction. Further, the mean (median) values of SMRs and CMN are 0.25 (0.00) and 0.16 (0.00), respectively. These findings show that around 25 percent of our sample financial corporations have an SMR policy, whereas about 16 percent of financial corporations have an internal whistle blower hotline facility. Finally, the mean and median values of the control variables (SIZE, LOSS, ROA, SECURITIES, COMM_LOAN, CAP_RATIO, INTANG, BIG4, BD_SIZE, BD_IND, CEO_TENURE, AUD_SIZE and AUD_CHNG) are generally consistent with those of prior studies (e.g., Ettredge et al., 2014; Jones and Temouri, 2016; Taylor et al., 2018; Ittonen et al., 2019; Mitra et al., 2019).

4.2. Correlation results

Table 2 (Panel B) reports the Pearson correlation results. We find positive and significant correlations between the tax haven variables (THAV_D, THAV_LN and THAV_CNT_LN) and pricing of audit and non-audit services (AUD_FEE and NON_AUD_FEE) (p<0.01). Table 2 (Panel B) also shows positive and significant correlations between SMRs/CMN and pricing of audit and non-audit services (AUD_FEE and NON_AUD_FEE) (p<0.01). In addition, Table 2 (Panel B) shows significant positive/negative correlations between SIZE, LOSS, ROA, SECURITIES, COM_LOAN, CAP_RATIO, INTANG, BIG4, BD_SIZE, BD_IND, CEO_TENURE, AUD_SIZE and AUD_CHNG, and pricing of audit and non-audit services (AUD_FEE and NON_AUD_FEE) (p<0.10 or lower). Finally, Table 2 (Panel B) shows that only moderate levels of collinearity exist between the explanatory variables (e.g., the highest being r=0.63 for SIZE and BD_IND (p<0.01) which is adequate (Hair et al., 2006).

[Insert Table 2 Here]

4.3. Regression results

4.3.1. Tax haven use and pricing of audit and non-audit services – H1

Table 3 presents the FFE panel regression results for the association between tax haven use (THAV_D, THAV_LN and THAV_CNT_LN) and pricing of audit and non-audit services (AUD_FEE, Columns 1, 2 and 3 and NON_AUD_FEE, Columns 4, 5 and 6). We note that coefficient with *t*-statistics are reported in parentheses, while YEAR dummies are not reported for the sake of brevity.

We find the coefficients between the tax haven proxies and the audit and non-audit pricing variables are positive and significant. Table 3 (Columns 1, 2 and 3) show that the coefficients for THAV_D, THAV_LN and THAV_CNT_LN (0.226, 0.376 and 0.430) are positive and significantly associated with AUD_FEE (p<0.05 or lower). This result is consistent with our

conjecture that tax haven use provides an additional layer of audit risk for the audit firm and so increases the amount of audit fees paid. Our results are economically significant. For example, the estimated coefficient for Model 1 suggests that audit fees for financial corporations with tax haven use is around 23 per cent higher than for financial corporations with no tax haven use. Finally, for the control variables, we find positive/negative and significant associations between several of the control variables (SIZE, ROA, COM_LOAN, INTANG, BIG4, BD_SIZE, CEO_TENURE, and AUD_CHNG) and AUD_FEE (p<0.10 or lower).

Table 3 (Columns 4, 5 and 6) shows that the THAV_D, THAV_LN and THAV_CNT_LN coefficients (0.133, 0.144 and 0.023) are positive and significantly associated with NON_AUD_FEE (p<0.05). When assessing the economic significance of Model 4, we find that the estimated coefficient suggests that non-audit fees for financial corporations with tax haven use is around 13 per cent higher than for financial corporations with no tax haven use. Thus, the association between tax haven use and non-audit fees is economically meaningful. For the control variables, we report positive/negative and significant associations between some of the control variables (ROA, SECURITIES, CAP_RATIO, INTANG, CEO_TENURE and AUD_SIZE) and NON_AUD_FEE (p<0.10 or lower).

Overall, the regression results reported in Table 3 consistently show a positive association between tax haven use and pricing of audit and non-audit services, consequently H1 is supported.

[Insert Table 3 Here]

4.3.2. The moderating effect of SMRs – H2

Next, we empirically test whether the positive association between tax haven use (THAV_D, THAV_LN and THAV_CNT_LN) and pricing of audit and non-audit services (AUD_FEE, Columns 1, 2 and 3, and the NON_AUD_FEE, Columns 4, 5 and 6) is moderated for financial

corporations with an SMRs disclosure policy (H2). Table 4 presents the FFE panel regression results for each interaction term (THAV_D*SMRs, THAV_LN*SMRs and THAV_CNT_LN*SMRs).

We find that the coefficient of the interaction terms between SMRs and several of the tax haven use variables (THAV_D*SMRs and THAV_LN*SMRs) are negative and significantly associated with auditing pricing (AUD_FEE and NON_AUD_FEE) (p<0.05 or lower). Thus, the positive association between tax haven use and pricing of audit and non-audit services is moderated for financial corporations with an SMRs disclosure policy, so H2 is supported by our results. Finally, we find positive/negative and significant associations between several of the control variables (SIZE, ROA, COM_LOAN, INTANG, BIG4, BD_SIZE, CEO_TENURE, AUD_SIZE and AUD_CHNG) and pricing of audit and non-audit services (AUD_FEE and NON_AUD_FEE) (p<0.10 or lower).

[Insert Table 4 Here]

4.3.3. The moderating effect of whistle blower hotline facility – H3

Finally, we empirically test whether the positive association between tax haven use (THAV_D, THAV_LN and THAV_CNT_LN) and pricing of audit and non-audit services (AUD_FEE, Columns 1, 2 and 3, and NON_AUD_FEE, Columns 4, 5 and 6) is moderated for financial corporations that have a whistle blower hotline facility. Table 4 reports the FFE panel regression results for each interaction term (THAV_D*CMN, THAV_LN*CMN and THAV_CNT_LN*CMN), together with the other explanatory variables.

We find that the coefficient of the interaction terms between CMN and several of the tax haven use variables (THAV_D*CMN, THAV_LN*CMN and THAV_CNT_LN * CMN) are significant and negatively associated with audit fees (p<0.05 or lower). Hence, the positive association between tax haven use and audit fees is moderated for financial corporations with a whistle blower hotline facility, so H3 is supported. Finally, we find positive/negative and

significant associations between some of the control variables (SIZE, ROA, COM_LOAN, INTANG, BIG4, BD_SIZE, CEO_TENURE, AUD_SIZE and AUD_CHNG) and pricing of audit and non-audit services (AUD_FEE and NON_AUD_FEE) (p<0.10 or lower).

[Insert Table 5 Here]

4.4. Endogeneity test – generalized method of moments (GMM) estimator

It is possible that our main regression results in Tables 3 could be subject to endogeneity and omitted variable bias (Schultz et al., 2010; Wooldridge, 2010). In Table 3 we use fixed effect model estimators to reduce both endogeneity and omitted variable bias. However, the fixed effects estimation usually ignores the endogeneity that due to unobserved of heterogeneities, that occur between the unobserved firms' characteristics and some other variables such as corporate governance and audit variables (Agha 2013). For instance, pricing of audit and non-audit services is usually higher for banks compared to other financial firms due to central banks regulations. To control for this endogeneity, we use GMM model suggested by Arellano and Bond (1991) which enable us to test nature of audit and non-audit pricing for the financial firms. Those firms probably adopt the tax havens strategies over time as auditors may charge very high and significant price of audit and non-audit services for the financial firms due to high business risk.

The system GMM estimator assesses the underlying equations in levels where the first difference of each variable is used as an instrumental variable (IV). For the GMM estimator results to be consistent, it is necessary to have no second order or higher autocorrelations in the error term (Arellano and Bover, 1995; Blundell and Bond, 1998). We also apply the Sargan test to evaluate the validity of the IVs used under the null that the instruments are exogenous and hence valid (Sargan, 1958).

Table 6 reports the GMM estimator regression results between tax haven use (THAV_D, THAV_LN and THAV_CNT_LN) and pricing of audit and non-audit services (AUD_FEE,

Columns 1, 2 and 3 and NON_AUD_FEE, Columns 4, 5 and 6). We find the coefficients between the tax haven proxies and the audit and non-audit pricing variables are positive and significant. Table 6 (Columns 1, 2 and 3) show that the coefficients for THAV_D, THAV_LN and THAV_CNT_LN (0.283, 0.103 and 0.597) are positive and significantly associated with AUD_FEE (p<0.05 or lower). In addition, Table 6 (Columns 4, 5 and 6) show that the THAV_D, THAV_LN and THAV_CNT_LN coefficients (0.107, 0.078 and 0.092) are positive and significantly associated with NON_AUD_FEE (p<0.05 or lower).

The diagnostic statistics for the GMM estimator are also reported in Table 6. The M1 statistic suggests the existence of first order autocorrelations in the error term with the first lag of the depended variable used in the analysis (p<0.10 or lower). However, the M1 statistic confirms the absence of second order autocorrelation in the error term (p>0.10), which is acceptable (Arellano and Bover, 1995; Blundell and Bond, 1998). Finally, the p-value of the Sargan test is not significant (p>0.10), confirming the exogeneity and validity of the IVs employed in our analysis.

Overall, the regression results shown in Table 6 consistently show a positive association between tax haven use and pricing of audit and non-audit services, so H1 is further supported. We conclude that our main regression results are robust to endogeneity concerns in the form of reverse causality.

[Insert Table 6 Here]

5. Conclusion

This study examines whether tax haven use by Australian financial corporations is associated with pricing of audit and non-audit services. It also analyzes whether the existence of financial corporations' SMRs and whistle blower hotline facilities moderate the association between tax haven use and pricing of audit and non-audit services. We find a positive association between tax haven use and pricing of audit and non-audit services. Our results are

also economically significant. For instance, audit fees for financial corporations with tax haven use is about 23 per cent higher than financial corporations with no tax haven use, whereas non-audit fees for financial corporations with tax haven use is around 13 per cent higher than for financial corporations with no tax haven use. Finally, we also observe that the existence of SMRs and whistle blower hotline facilities both moderate the positive association between tax haven use and pricing of audit and non-audit services.

This study makes several contributions to the literature. First, to the best of our knowledge, this is the first study to explore the potential association between the use of tax havens by financial institutions and pricing of audit and non-audit services. Overall, our findings show that financial corporations that use tax havens incur significantly higher audit and non-audit fees. In addition, our findings are economically significant. Second, this study contributes to the literature on the determinants of audit risk by examining the audit fees implication of tax haven use. Third, this study also investigates for the first time how corporate governance mechanisms regarding the existence of a SMR policy and whistle blower hotline facility play in moderating the association between tax haven use and pricing of audit and non-audit services in financial corporations. We offer new evidence showing that SMRs and whistle blower hotline facilities both moderate the positive association between tax haven use and pricing of audit and non-audit services. Finally, the findings of this study should be of interest to policymakers and regulators of the financial services industry, as well as tax authorities (e.g., the ATO) based on the current level of scrutiny of that industry and its economic weight.

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Appendix

Variable Definitions

Variable	Description
Dependent variable	
AUD_FEE	Natural log of total audit fees
NON_AUD_FEE	Natural log of non-audit fees
Independent variables	
THAV_D	Dummy variable, coded 1 if the corporation uses tax haven subsidiaries, and 0 otherwise
THAV_LN	Natural log of the total number of tax haven subsidiaries
THAV_CNT_LN	Natural log of the total number of tax haven subsidiaries incorporated based on different country tax haven jurisdictions
SMRs	SMRs where SMRs is a dummy variable, coded 1 if the corporation has a suspicious matter reporting policy, and 0 otherwise
CMN	CMN is a dummy variable, coded 1 if the corporation has an internal whistle blower hotline facility, and 0 otherwise
Control variables	
SIZE	Natural log of total assets
LOSS	Dummy variable, coded 1 if the corporation has net income less than zero, and 0 otherwise
ROA	Net income scaled by total assets
SECURITIES	One less (total securities scaled by total assets)
COM_LOAN	Sum of commercial and agricultural loans scaled by gross loans
CAP_RATIO	Total risk-adjusted capital ratio
INTANG	Intangible assets scaled by total assets
BIG4	Dummy variable, coded 1 if the corporation is audited by a big audit firm, and 0 otherwise
BD_SIZE	Natural log of the number of members on the board of directors
BD_IND	Proportion of board members that are independent directors
CEO_TENURE	Natural log of the number of years that the CEO has been chief executive officer of the corporation
AUD_SIZE	Dummy variable, coded 1 if total audit committee members is above the sample median, and 0 otherwise
AUD_CHNG	Dummy variable, coded 1 if the corporation has changed its audit firm from t-1 to t-0, and 0 otherwise
M&A	Dummy variable coded 1 if the corporation is engaged in a merger or acquisition, and 0 otherwise

Table 1
Sample Selection and Distribution

Panel A: Sample Selection

Total sample of corporation-years over the 2008–2018 period	2,321
Less: exclusions	
Foreign incorporated corporations	(90)
Sub-total	2,231
Less:	
Missing corporation international subsidiary disclosures	(302)
Missing financial data	(905)
Total	1,024

Panel B: Sample Distribution by year

Year	Frequency	Percent
2008	66	6.45
2009	83	8.11
2010	85	8.30
2011	85	8.30
2012	86	8.40
2013	89	8.69
2014	92	8.98
2015	105	10.25
2016	108	10.55
2017	117	11.43
2018	108	10.55
Total	1,024	100.00

Table 2
Summary Statistics

Panel A: Descriptive statistics

Variables	N	Mean	S.D.	0.25	Median	0.75
AUD_FEE	1,024	11.80	1.60	10.72	11.57	12.44
NON_AUD_FEE	1,024	6.10	5.54	0.00	8.53	10.94
THAV_D	1,024	0.13	0.33	0.00	0.00	0.00
THAV_LN	1,024	0.11	0.33	0.00	0.00	0.00
THAV_CNT_LN	1,024	0.08	0.28	0.00	0.00	0.00
SARs	1,024	0.25	0.43	0.00	0.00	0.00
CMN	1,024	0.16	0.37	0.00	0.00	0.00
SIZE	1,024	18.60	2.64	17.02	18.61	19.92
LOSS	1,024	0.26	0.44	0.00	0.00	1.00
ROA	1,024	-0.01	0.30	-0.01	0.04	0.08
SECURITIES	1,024	0.74	0.40	0.46	1.00	1.00
COM_LOAN	1,024	0.04	0.14	0.00	0.00	0.00
CAP_RATIO	1,024	11.49	36.57	0.00	0.71	3.81
INTANG	1,024	3.18	8.36	0.00	0.00	1.30
BIG4	1,024	0.57	0.50	0.00	1.00	1.00
BD_SIZE	1,024	1.55	0.37	1.39	1.61	1.79
BD_IND	1,024	0.47	0.50	0.00	0.00	1.00
CEO_TENURE	1,024	1.16	0.93	0.00	1.10	1.95
AUD_SIZE	1,024	0.74	0.44	0.00	1.00	1.00
AUD_CHNG	1,024	0.08	0.27	0.00	0.00	0.00
M&A	1,024	0.12	0.32	0.00	0.00	0.00

Panel B: Pairwise correlations

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. AUD_FEE	1.000										
2. NON_AUD_FEE	0.52***	1.000									
3. THAV_D	0.38***	0.18***	1.000								
4. THAV_LN	0.29***	0.20***	0.85***	1.000							
5. THAV_CNT_LN	0.34***	0.21***	0.64***	0.58***	1.000						
6. SARs	0.53***	0.43***	0.18***	0.24***	0.16***	1.000					
7. CMN	0.33***	0.21***	-0.040	-0.05*	0.040	0.47***	1.000				
8. SIZE	0.63***	0.34***	0.010	0.11***	0.19***	0.41***	0.28***	1.000			
9. LOSS	-0.25***	-0.19***	0.020	0.000	-0.05*	-0.17***	-0.16***	-0.40***	1.000		
10. ROA	0.12***	0.11***	0.030	0.040	0.05*	0.09***	0.10***	0.40***	-0.52***	1.000	
11. SECURITIES	0.10***	0.15***	0.030	0.07**	-0.010	0.13***	0.010	0.22***	-0.12***	0.05*	1.000
12. COM_LOAN	0.20***	0.10***	0.10***	0.06*	-0.07**	0.22***	-0.06*	0.12***	-0.06*	0.030	0.13***
13. CAP_RATIO	0.54***	0.32***	0.22***	0.14***	0.16***	0.36***	0.13***	0.49***	-0.17***	0.06**	0.15***
14. INTANG	0.16***	0.13***	0.17***	0.17***	0.11***	0.09***	0.13***	-0.08***	0.020	0.020	-0.05*
15. BIG4	0.26***	0.24***	0.10***	0.14***	0.08**	0.26***	0.23***	0.23***	-0.11***	0.06**	0.06*
16. BD_SIZE	0.49***	0.40***	0.18***	0.16***	0.23***	0.35***	0.25***	0.42***	-0.16***	0.13***	0.11***
17. BD_IND	0.41***	0.31***	0.10***	0.050	0.21***	0.24***	0.23***	0.34***	-0.22***	0.13***	0.050
18. CEO_TENURE	0.14***	0.040	-0.030	-0.010	0.07**	0.000	0.08***	0.21***	-0.14***	0.11***	0.07**
19. AUD_SIZE	0.23***	0.15***	0.040	0.06*	0.13***	0.19***	0.10***	0.17***	-0.12***	0.06**	0.11***
20. AUD_CHNG	-0.11***	-0.09***	0.000	0.030	-0.010	-0.030	-0.010	-0.10***	0.09***	-0.010	-0.10***
21. M&A	0.040	-0.010	0.06**	0.030	0.06*	0.000	0.030	0.06*	0.050	0.020	0.030

	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.
12. COM_LOAN	1.000									
13. CAP_RATIO	0.16***	1.000								
14. INTANG	-0.06*	0.030	1.000							
15. BIG4	0.06*	0.07**	0.040	1.000						
16. BD_SIZE	0.07**	0.10***	0.040	0.09***	1.000					
17. BD_IND	0.020	0.12***	0.030	0.10***	0.63***	1.000				
18. CEO_TENURE	0.010	0.06**	0.010	-0.040	0.08**	0.14***	1.000			
19. AUD_SIZE	0.10***	0.14***	0.13***	0.13***	0.32***	0.32***	0.05*	1.000		
20. AUD_CHNG	-0.040	-0.020	0.000	-0.15***	-0.06*	-0.07**	-0.030	-0.11***	1.000	
21. M&A	-0.030	0.000	0.07**	-0.08**	-0.040	0.010	0.050	0.030	0.010	1.000

N = 1,024 corporation-year observations.
Variables are defined in the Appendix.
***, **, and * denotes statistical significance at the 1%, 5%, and 10% levels (two-tailed tests), respectively

Table 3:
Fixed Effects Regression Results – Tax Haven Use and Pricing of Audit and Non-audit Services (H1)

Variables	AUD_FEE			NON_AUD_FEE		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	9.290***	9.274***	9.277***	-0.232	-0.233	-0.218
	(16.34)	(16.28)	(16.26)	(-0.49)	(-0.49)	(-0.46)
THAV_D	**0.226****			**0.133****		
	(2.09)			**(2.03)**		
THAV_LN		**0.376*****			**0.144***	
		(2.83)			**(1.78)**	
THAV_CNT_LN			**0.430****			**0.023**
			(2.57)			**(0.31)**
SIZE	0.097***	0.097***	0.098***	0.036	0.036	0.036
	(3.22)	(3.23)	(3.25)	(1.37)	(1.38)	(1.38)
LOSS	-0.142*	-0.141*	-0.144*	0.092*	0.092*	0.091*
	(-1.67)	(-1.65)	(-1.69)	(1.92)	(1.92)	(1.90)
ROA	-0.107	-0.108	-0.114	-0.141***	-0.141***	-0.142***
	(-1.46)	(-1.47)	(-1.54)	(-2.79)	(-2.80)	(-2.79)
SECURITIES	-0.021	-0.022	-0.022	-0.147**	-0.149**	-0.150**
	(-0.23)	(-0.24)	(-0.24)	(-2.13)	(-2.16)	(-2.17)
COM_LOAN	-0.351*	-0.353*	-0.344*	-0.289	-0.290	-0.290
	(-1.76)	(-1.77)	(-1.73)	(-1.55)	(-1.56)	(-1.55)
CAP_RATIO	0.003	0.003	0.003	0.001	0.001	0.001
	(1.23)	(1.23)	(1.18)	(0.85)	(0.86)	(0.86)
INTANG	0.013***	0.013***	0.013***	0.004*	0.005**	0.005**
	(4.14)	(4.38)	(4.49)	(1.87)	(1.98)	(1.96)
BIG4	0.416***	0.416***	0.407***	0.055	0.056	0.056
	(5.15)	(5.15)	(5.10)	(0.82)	(0.82)	(0.82)
BD_SIZE	0.164**	0.166**	0.162**	0.064	0.065	0.065
	(2.07)	(2.10)	(2.05)	(0.91)	(0.93)	(0.92)
BD_IND	-0.013	-0.018	-0.012	-0.029	-0.031	-0.029
	(-0.21)	(-0.30)	(-0.19)	(-0.63)	(-0.67)	(-0.63)
CEO_TENURE	0.050**	0.050**	0.045*	-0.044**	-0.044**	-0.044**
	(2.08)	(2.04)	(1.84)	(-2.03)	(-2.03)	(-2.02)
AUD_SIZE	0.084*	0.085*	0.076	0.096**	0.095**	0.093**
	(1.67)	(1.70)	(1.52)	(2.10)	(2.09)	(2.04)
AUD_CHNG	-0.133**	-0.136**	-0.134**	-0.024	-0.025	-0.025
	(-2.51)	(-2.56)	(-2.56)	(-0.52)	(-0.55)	(-0.53)
M&A	-0.019	-0.020	-0.017	0.009	0.009	0.010
	(-0.35)	(-0.36)	(-0.30)	(0.25)	(0.26)	(0.30)
YEAR FE	Yes	Yes	Yes	Yes	Yes	Yes
FIRM FE	Yes	Yes	Yes	Yes	Yes	Yes
N	1,024	1,024	1,024	1,024	1,024	1,024
Adj. R-sq	0.919	0.919	0.920	0.656	0.656	0.655

Variables are defined in the Appendix.
***, **, and * denotes statistical significance at the 1%, 5%, and 10% levels (two-tailed tests), respectively.

Table 4
FFE Regression Results – The Moderating Effect of SMRs Policy (H2)

Variables	AUD_FEE			NON_AUD_FEE		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	9.281***	9.268***	9.285***	-0.250	-0.247	-0.210
	(16.28)	(16.22)	(16.21)	(-0.53)	(-0.53)	(-0.45)
THAV_D	0.509***			0.481**		
	(3.28)			(2.25)		
THAV_LN		0.761***			0.696**	
		(3.43)			(2.25)	
THAV_CNT_LN			0.617***			0.164
			(3.51)			(0.95)
SAR	-0.102	-0.106	-0.149	0.194*	0.194*	0.176*
	(-1.00)	(-1.05)	(-1.52)	(1.90)	(1.90)	(1.69)
THAV_D*SAR	**-0.418*** **			**-0.535** **		
	(-2.65)			**(-2.16)**		
THAV_LN*SAR		**-0.531** **			**-0.775** **	
		(-2.26)			**(-2.20)**	
THAV_CNT_LN*SAR			**-0.291** **			**-0.317**
			(-2.02)			**(-1.30)**
SIZE	0.097***	0.097***	0.099***	0.033	0.033	0.033
	(3.21)	(3.22)	(3.25)	(1.29)	(1.29)	(1.29)
LOSS	-0.146*	-0.145*	-0.147*	0.097**	0.097**	0.098**
	(-1.72)	(-1.70)	(-1.73)	(2.06)	(2.05)	(2.06)
ROA	-0.108	-0.109	-0.119	-0.135***	-0.135***	-0.139***
	(-1.47)	(-1.48)	(-1.60)	(-2.72)	(-2.71)	(-2.77)
SECURITIES	-0.010	-0.011	-0.017	-0.139**	-0.139**	-0.150**
	(-0.11)	(-0.12)	(-0.19)	(-2.03)	(-2.02)	(-2.18)
COM_LOAN	-0.361*	-0.364*	-0.364*	-0.251	-0.250	-0.259
	(-1.83)	(-1.84)	(-1.86)	(-1.45)	(-1.44)	(-1.49)
CAP_RATIO	0.003	0.003	0.003	0.001	0.001	0.001
	(1.20)	(1.20)	(1.16)	(0.87)	(0.87)	(0.97)
INTANG	0.012***	0.013***	0.014***	0.003	0.003	0.005**
	(3.93)	(4.02)	(4.61)	(1.53)	(1.47)	(1.98)
BIG4	0.415***	0.415***	0.402***	0.057	0.057	0.055
	(5.11)	(5.11)	(5.03)	(0.84)	(0.84)	(0.80)
BD_SIZE	0.165**	0.166**	0.160**	0.065	0.064	0.063
	(2.07)	(2.09)	(2.02)	(0.94)	(0.93)	(0.90)
BD_IND	-0.014	-0.017	-0.011	-0.032	-0.031	-0.030
	(-0.24)	(-0.29)	(-0.19)	(-0.72)	(-0.69)	(-0.66)
CEO_TENURE	0.048**	0.047*	0.041*	-0.049**	-0.049**	-0.047**
	(1.97)	(1.95)	(1.69)	(-2.29)	(-2.29)	(-2.25)
AUD_SIZE	0.092*	0.092*	0.080	0.101**	0.101**	0.093**
	(1.83)	(1.84)	(1.59)	(2.24)	(2.24)	(2.08)
AUD_CHNG	-0.119**	-0.122**	-0.121**	-0.016	-0.015	-0.019
	(-2.24)	(-2.29)	(-2.29)	(-0.34)	(-0.33)	(-0.42)
M&A	-0.021	-0.022	-0.021	0.015	0.015	0.015
	(-0.37)	(-0.39)	(-0.37)	(0.35)	(0.36)	(0.35)
YEAR FE	Yes	Yes	Yes	Yes	Yes	Yes
FIRM FE	Yes	Yes	Yes	Yes	Yes	Yes
N	1,024	1,024	1,024	1,024	1,024	1,024
Adj. R-sq	0.920	0.920	0.920	0.660	0.660	0.657

Variables are defined in the Appendix.
***, **, and * denotes statistical significance at the 1%, 5%, and 10% levels (two-tailed tests), respectively.

Table 5
FFE Regression Results – The Moderating Effect of Whistle Blower Hotline Facility (H3)

Variables	AUD_FEE			NON_AUD_FEE		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	9.304***	9.285***	9.297***	-0.230	-0.229	-0.207
	(16.13)	(16.04)	(16.09)	(-0.88)	(-0.88)	(-0.79)
THAV_D	0.390**			0.309**		
	(2.36)			(1.99)		
THAV_LN		0.569***			0.296	
		(3.23)			(1.57)	
THAV_CNT_LN			0.714***			0.194
			(2.98)			(1.21)
CMN	-0.097	-0.094	-0.043	-0.130	-0.141	-0.121
	(-1.06)	(-1.02)	(-0.44)	(-1.14)	(-1.24)	(-1.04)
THAV_D*CMN	**-0.301***			**-0.329***		
	(-1.80)			**(-1.76)**		
THAV_LN*CMN		**-0.441****			**-0.357**	
		(-2.17)			**(-1.42)**	
THAV_CNT_LN*CMN			**-0.473****			**-0.283***
			(-2.43)			**(-1.66)**
SIZE	0.096***	0.097***	0.097***	0.034***	0.035***	0.035***
	(3.15)	(3.16)	(3.18)	(2.73)	(2.77)	(2.76)
LOSS	-0.139	-0.137	-0.141*	0.093	0.093	0.091
	(-1.62)	(-1.59)	(-1.65)	(1.50)	(1.50)	(1.47)
ROA	-0.100	-0.102	-0.110	-0.142***	-0.143***	-0.145***
	(-1.31)	(-1.33)	(-1.42)	(-2.88)	(-2.91)	(-2.95)
SECURITIES	-0.018	-0.021	-0.021	-0.137*	-0.142*	-0.144*
	(-0.20)	(-0.23)	(-0.23)	(-1.76)	(-1.82)	(-1.84)
COM_LOAN	-0.404*	-0.407*	-0.384*	-0.299*	-0.304*	-0.296*
	(-1.81)	(-1.83)	(-1.72)	(-1.87)	(-1.90)	(-1.85)
CAP_RATIO	0.002	0.002	0.002	0.001	0.001	0.001
	(0.94)	(0.95)	(0.85)	(0.85)	(0.88)	(0.82)
INTANG	0.013***	0.013***	0.014***	0.004*	0.005**	0.005**
	(4.01)	(4.40)	(4.62)	(1.76)	(2.04)	(2.12)
BIG4	0.415***	0.415***	0.400***	0.059	0.059	0.055
	(5.05)	(5.06)	(4.94)	(1.07)	(1.08)	(1.01)
BD_SIZE	0.156*	0.160*	0.152*	0.066	0.069	0.065
	(1.91)	(1.95)	(1.85)	(1.08)	(1.12)	(1.06)
BD_IND	-0.013	-0.021	-0.012	-0.030	-0.034	-0.029
	(-0.21)	(-0.33)	(-0.20)	(-0.68)	(-0.76)	(-0.67)
CEO_TENURE	0.051**	0.050**	0.041	-0.046**	-0.046**	-0.048**
	(2.02)	(1.98)	(1.60)	(-2.30)	(-2.29)	(-2.36)
AUD_SIZE	0.091*	0.092*	0.080	0.104**	0.102**	0.097**
	(1.75)	(1.78)	(1.53)	(2.31)	(2.27)	(2.16)
AUD_CHNG	-0.126**	-0.130**	-0.121**	-0.012	-0.016	-0.012
	(-2.30)	(-2.40)	(-2.24)	(-0.29)	(-0.40)	(-0.30)
M&A	-0.022	-0.023	-0.021	0.012	0.012	0.013
	(-0.37)	(-0.38)	(-0.35)	(0.31)	(0.33)	(0.34)
YEAR FE	Yes	Yes	Yes	Yes	Yes	Yes
FIRM FE	Yes	Yes	Yes	Yes	Yes	Yes
N	1,024	1,024	1,024	1,024	1,024	1,024
Adj. R-sq	0.903	0.903	0.903	0.659	0.659	0.659

Variables are defined in the Appendix.
***, **, and * denotes statistical significance at the 1%, 5%, and 10% levels (two-tailed tests), respectively.

Table 6
GMM Estimator Regression Results – Tax Haven Use and Pricing of Audit and Non-audit Services (H1)

	AUD_FEE			NON_AUD_FEE		
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	1.244**	1.077***	1.351***	-0.278*	-0.617***	-0.361***
	(2.47)	(3.13)	(2.83)	(-1.95)	(-3.29)	(-2.80)
Lagged dependent variable $_{(t-1)}$	0.768***	0.753***	0.778***	0.440***	0.335***	0.607***
	(11.49)	(15.51)	(13.52)	(5.70)	(3.95)	(8.47)
THAV_D	**0.283*****			**0.107***		
	(3.20)			**(1.78)**		
THAV_LN		**0.103****			**0.078****	
		(2.03)			**(2.37)**	
THAV_CNT_LN			**0.597*****			**0.092****
			(4.61)			**(2.00)**
SIZE	0.072***	0.077***	0.060***	0.019***	0.023**	0.012**
	(3.91)	(4.43)	(4.48)	(2.92)	(2.38)	(2.06)
LOSS	-0.210***	-0.226***	-0.199***	-0.051	-0.042	-0.012
	(-3.46)	(-3.55)	(-3.36)	(-1.14)	(-0.95)	(-0.29)
ROA	-0.083*	-0.124**	-0.060	-0.012	-0.024	0.001
	(-1.74)	(-2.57)	(-1.36)	(-0.50)	(-0.86)	(0.03)
SECURITIES	-0.039	-0.027	-0.049	0.085**	0.082*	0.065*
	(-1.03)	(-0.58)	(-1.24)	(1.99)	(1.70)	(1.96)
COM_LOAN	0.180	0.301**	0.400***	0.180**	0.107	0.017
	(1.07)	(2.33)	(2.87)	(1.97)	(1.02)	(0.19)
CAP_RATIO	0.001	0.001**	0.001	0.001***	0.002***	0.001**
	(1.15)	(2.53)	(1.64)	(2.83)	(3.05)	(2.20)
INTANG	0.009***	0.010***	0.011***	0.005***	0.006***	0.003*
	(3.18)	(3.54)	(3.59)	(3.04)	(3.68)	(1.83)
BIG4	0.059	0.088*	0.090**	0.105***	0.120***	0.100***
	(1.24)	(1.89)	(2.00)	(2.62)	(2.90)	(3.55)
BD_SIZE	0.207**	0.281***	0.113**	0.148***	0.238***	0.141***
	(2.45)	(4.51)	(2.51)	(2.71)	(3.74)	(2.96)
BD_IND	-0.082**	-0.112***	-0.079**	-0.001	0.003	-0.034
	(-2.50)	(-3.37)	(-2.41)	(-0.03)	(0.06)	(-1.03)
CEO_TENURE	0.049***	0.036**	0.029*	-0.024	0.000	-0.010
	(3.17)	(2.09)	(1.89)	(-1.60)	(0.03)	(-0.94)
AUD_SIZE	0.034	0.021	0.026	0.003	0.025	0.024
	(1.06)	(0.69)	(0.86)	(0.10)	(0.65)	(0.82)
AUD_CHNG	-0.128***	-0.043	-0.096**	0.034	0.027	0.019
	(-2.95)	(-0.88)	(-2.18)	(0.91)	(0.66)	(0.42)
M&A	-0.008	0.021	-0.017	0.030	0.049*	0.067***
	(-0.27)	(0.75)	(-0.63)	(1.10)	(1.87)	(2.93)
YEAR FE	Yes	Yes	Yes	Yes	Yes	Yes
N	881	881	881	881	881	881
M1 test	0.07	0.07	0.09	0.00	0.00	0.00
M2 test	0.12	0.12	0.15	0.66	0.81	0.52
Sargan *p*-value	0.63	0.86	0.86	0.31	0.21	0.14

Variables are defined in the Appendix.
***, **, and * denotes statistical significance at the 1%, 5%, and 10% levels (two-tailed tests), respectively.