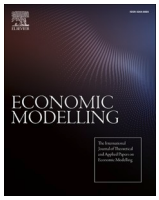
Economic Modelling 132 (2024) 106653

Contents lists available at ScienceDirect

Economic Modelling

journal homepage: www.journals.elsevier.com/economic-modelling



Money laundering governance and income shifting: Evidence from Australian financial institutions

Baban Eulaiwi [a,b], Nihad Shareef Khalaf [b], Ahmed Al-Hadi [a,c], Lien Duong [a], Grantley Taylor [a,*]

[a] School of Accounting, Economics and Finance, Curtin University, Australia
[b] College of Education for Women, Mathematic Department, Tikrit University, Iraq
[c] Department of Accounting, Sultan Qaboos University, Muscat, Oman

ARTICLE INFO

Handling Editor: Sushanta Mallick

Original content: ECMODE-D-23-00110 Money Laundering Governance and Income Shifting: Evidence from Australian Financial Institutions (Original data)

JEL classification:
G21
H26
M42

Keywords:
Money laundering governance
Income shifting
Tax havens
Business risk

ABSTRACT

This study investigates the relationship between strength in money laundering governance (MLG) and income shifting incentives using a sample of Australian multinational financial institutions. Firms exhibiting strength in MLG are less likely to engage in income shifting arrangements given that strength in MLG can enhance financial transparency around funding sources, transfers and use. Further, we find that firms with 1) tax havens use, 2) lawsuit and 3) business risk suppress the association between MLG and income shifting. Overall, in terms of economic significance, MLG reduces income shifting incentives by some 15 per cent. Our results are robust using additional tests. This study shows that strength in MLG has important implications in terms of firm managements' incentive to shift income. Finally, these findings suggest that money laundering controls constitute an important governance mechanism required in the achievement of fairness, equity and opacity in international capital and tax markets.

1. Introduction

Money laundering involves the process of disguising the origins of illicitly sourced funds often involving various complex layers of transactions or financial arrangements that transcend multiple jurisdictions (Graycar and Grabosky, 1996). In 2021, the Australian Transaction Reports and Analysis Centre (AUSTRAC) released a report highlighting that the Australian sector is exposed to money laundering risks ranging from medium (foreign subsidiary banks and branches) to high (major banks) (AUSTRAC, 2021). Despite the increasing development of money laundering governance (MLG) in Australian financial service sector entities, that report found that the effectiveness of money laundering governance varied significantly depending on the global reach of those entities, their customer base and the nature of their business. Typically, money laundering weaknesses could be associated with increased levels of drug trafficking, fraud and tax evasion (AUSTRAC, 2021). Recent breaches in money laundering in Australia include incursions by Westpac Bank, Bell Financial Group and Crown Casino. These join a long list of entities where investigations into money laundering breaches of controls have occurred globally (e.g. Deutsche Bank, HSBC, PNB Paribus, and Royal Bank of Scotland (Edwards et al., 2018; Yeoh, 2020).

The purpose of this study is twofold. First, we examine the relationship between the strength of money laundering governance and income shifting incentives of Australian financial services sector entities. Second, we further assess the extent of business risk on the association between money laundering governance and income shifting. We are motivated in this study to examine the association between the effectiveness of firms' money laundering governance and the extent of income shifting (or interchangeably profit shifting) use for a number of important reasons. In particular, the Financial Action Task Force and The Tax Justice Network Australia estimate that the concealment of illicitly sourced funds can be facilitated through complex international

* Corresponding author.
E-mail addresses: baban.eulaiwi@curtin.edu.au (B. Eulaiwi), nihad.shreef16@tu.edu.iq (N.S. Khalaf), alhadisam@yahoo.com (A. Al-Hadi), l.duong@curtin.edu.au (L. Duong), grantley.taylor@cbs.curtin.edu.au (G. Taylor).

https://doi.org/10.1016/j.econmod.2024.106653
Received 24 January 2023; Received in revised form 17 December 2023; Accepted 13 January 2024
Available online 16 January 2024

arrangements.[1] Specifically, income shifting and transfer pricing arrangements through shell companies and tax havens provide multinational firms with the opportunity to conceal the nature of the business objective, source and mechanism of transfer of funds. Hence, we are motivated to quantify and evaluate the association between firms' money laundering governance and income shifting incentives. Second, given that money laundering is a major source of business risk for financial firms operating internationally, we are motivated to assess the effectiveness of money laundering governance in suppressing the incentives to engage in income shifting in the presence of variable levels of business risk. Third, although prior studies have well-documented evidence about the importance of corporate governance to mitigate risk associated with income shifting (e.g. Richardson et al., 2021; Taylor and Richardson, 2012), this paper contributes to money laundering governance studies related to income shifting.

Money laundering governance refers to the system of rules, regulations and practices that are designed to prevent, detect and deter money laundering activities (Yepes, 2011). This involves measures such as customer due diligence, suspicious transaction reporting and regulatory oversight to ensure that financial institutions and other regulated entities are not used for illicit purposes. Our measure is particularly important in the context of financial institutions, as they are often the targets of money laundering activities. In Australia, for example, the Anti-Money Laundering and Counter-Terrorism Financing Act 2006 (AML/CTF Act) sets out the requirements for financial institutions to implement AML/CTF programs, which include customer due diligence, ongoing monitoring and suspicious matter reporting (Eulaiwi et al., 2021; Federal Register of Legislation, 2007). Effective corporate governance practices are essential for financial institutions to comply with these regulatory requirements and mitigate the risk of money laundering and other financial crimes. Prior research such as Unger et al. (2021) has highlighted that sophisticated financial engineering used by financial institutions could be used to augment opacity around money laundering arrangements and profit shifting. This provides motivation to empirically assess the relationship between money laundering governance and income shifting incentives. In particular, an assessment of such a relationship may provide evidence of the extent to which weakness in money laundering controls could assist in generating tax gaps and exacerbating the inequality in taxes paid as well as arbitrage mechanisms used to facilitate fund transfers globally.

Based on a sample of 1372 observations of Australian listed financial firms over the 2008 to 2018 period, we find that strength in money laundering governance is significantly negatively related to the extent of income shifting. Additional analysis demonstrates that strength in MLG suppresses the statistically significant and positive relationship between income shifting and tax haven utilization or the occurrence of a lawsuit against that firm. Finally, the positive and statistically significant relationship between proxies for business risk (as measured by volatility in return on assets or earnings) and income shifting is moderated by strength in money laundering governance. Our baseline analyses are robust to two-stage least squared tests that mitigate potential endogeneity concerns.

We make several important contributions. First, we answer the call from Hanlon and Heitzman (2010) for further research relating to firms' investment location decisions, including income shifting to lower taxed jurisdictions. We contribute to this important area of research in that we demonstrate, for the first time, that income shifting incentives are significantly negatively related to firms' strength in money laundering governance. We use an innovative measure of income shifting that was hand-collected from firms' accounting income to taxable income reconciliation statements. Specifically, we measure the reduction in tax payable due to the, on average, lower offshore tax rates applicable to income earned or allocated to offshore jurisdictions. This is recorded as a separate line item in reconciliation statements as 'reduction in tax on offshore income'. This has the effect of reducing income tax expense, as taxable income will be less owing to the overall lower tax rates applied to accounting profit. Our profit shifting variable could capture both legal and illegal components of income shifting because income may be shifted to offshore jurisdictions to meet working capital, capital management or treasury requirements in addition to being part of a scheme designed to reduce tax payable (Taylor and Richardson, 2012). Profit shifting is not exclusively legal when income is moved to offshore jurisdictions for working capital, capital management, or treasury requirements, nor is it always illegal when it is part of a scheme to reduce tax payable. Legality can also emerge in the context of tax payable reduction schemes. For instance, when a firm engages in transfer pricing activities, it might operate within the bounds of the arm's length principle, constituting legal profit shifting or tax avoidance, yet still aiming to reduce tax payable. Alternatively, operating outside this principle would characterize illegal profit shifting or tax evasion.

Second, we provide a nuanced examination of the association between MLG and income shifting by demonstrating that the negative association between these variables is suppressed in firms that use tax havens, are subject to a lawsuit and in those that are exposed to higher levels of business risk. Our measure of profit shifting will likely capture some of the mechanisms outlined in Beer et al. (2020) through which multinationals underrate tax avoidance including transfer mispricing, tax deferral, treaty shopping, and the strategic shifting of debt and intellectual property. Third, we expand upon the work of Beer et al. (2020), who examined the effectiveness of anti-avoidance provisions and regulations on profit shifting by demonstrating that strength in money laundering governance has an economically important effect on income shifting. Finally, these findings are likely to be of interest to financial services industry regulatory bodies both in Australia and globally.

The remainder of this paper proceeds as follows. Section 2 considers the theory and develops our hypothesis. Section 3 describes the research design and Section 4 reports the empirical results. Finally, Section 5 concludes the study.

2. Theory and hypothesis development

2.1. Background

In Australia, the *Anti-Money Laundering and Counter-Terrorism Financing Act 2006; AML/CTF Act 2006* is designed to assist corporations in identifying, managing and suppressing money laundering risks. Although firms are expected to develop MLG risk assessments based on the types of products and services provided, the quantum of funds transferred and the nature of the repository institutions and their jurisdictions, and the nature of the customers and recipients involved based on the *AML/CTF Act* (2006),[2] the nature and extent of money laundering risk assessments and mitigation strategies are highly variable (AUSTRAC, 2021). The Tax Justice Network (Australia) (2013 p5) states that:

"When other jurisdictions facilitate tax evasion and tax avoidance through providing secrecy to foreign entities, through failure to implement the Financial Action Task Force recommendations on anti-money laundering and counter terrorism financing and through allowing the use of shell companies, they also risk facilitating other forms of transnational crime and the funding of terrorism".

Given the evidence provided by the Tax Justice Network (2013) that money laundering is facilitated through income shifting to foreign entities, often to or through shell companies that create sufficient obfuscation of transactions so as to conceal the economic substance of those transactions, it is important to quantify empirically the relationship

[1] See: https://www.taxjustice.org.au/.

[2] See: https://www.legislation.gov.au/Details/C2021C00243.

between strength in money laundering governance and income shifting incentives.

We focus on the Australian financial services sector for several reasons. Importantly, Australia is also in a state of flux in terms of making changes to its anti-money laundering laws. Statutory reviews found that the existing anti-money laundering regime is overly complex and impedes the ability of regulated entities to understand and comply with their AML obligations. This can serve to impede money laundering risks if entities are fully compliant but in doing so may impede legitimate income shifting designed to facilitate the capital management objectives (and not necessarily tax evasion) of regulated entities. Additionally, Australia is one of five jurisdictions (out of a data set of 200 jurisdictions), in the Financial Action Task Force (FATF) Global Network (that also includes China and the US) that does not include tranche-two entities (high-risk professions specifically accountants and lawyers, trust and company service providers, real estate agents and high-value commodities) in their money laundering regulations (AUSTRAC, 2015). Hence, our sample of Australian financial institutions is drawn from a period under which tranche-two entities are not required to ensure MLG compliance. Given that high-profile lawyers and accountants are known to assist in the establishment of income shifting schemes (AUSTRAC, 2015), given that tranche-two entities are not captured under extant MLG legislation in Australia, this may facilitate income shifting arrangements.

2.2. Hypotheses development

2.2.1. Money laundering governance and income shifting

Prior research demonstrates that firms are more likely to engage in income shifting to lower taxed jurisdictions where they can often take advantage of flexibility in tax reporting and financial reporting, and the often lax regulatory and legal regimes, to promulgate effective income shifting (Hanlon and Heitzman, 2010; Shackelford and Shevlin, 2001). As an example of profit shifting in the Australian context, energy company Chevron engaged in profit shifting in 2018 through transfer pricing involving Australian and US financial institutions. Specifically, the US Chevron parent borrowed funds from US banks at a rate of 1.2 % and transferred those funds to its Australian subsidiary at a non-arm's-length rate of 9 %, thereby facilitating greater tax deductions on loan fees and interest expenses in Australia (El Hamad et al., 2023). The benefits of income shifting can be derived from jurisdictional arbitrage in taxation, financing and across governance, legal and regulatory environments. For instance, Sugathan and George (2015) find that transparency across both the home and foreign regimes reduces income shifting whilst increased monitoring mechanisms such as institutional investors reduces income shifting. In particular, they highlight that if income is shifted to/from jurisdictions with weak property rights, this will exacerbate income shifting due to the presence of 'organized crime, government expropriation and discretionary regulations' (Sugathan and George, 2015 p892).

The development of money laundering governance could impact firms' propensity to engage in income shifting arrangements via a number of mechanisms. First, effective money laundering governance encapsulates controls pertaining to 'know your customer', the establishment of governance designed to deal with the source and integrity of capital flows, and audit certification of the effectiveness of policies, procedures and training around money laundering governance. These governance attributes will, in the first instance, likely reduce the obfuscation required to effect income shifting arrangements. Monitoring of the source, amount, transfer prices (of goods and services) and localities of fund transfers will be affected by the treasury department and internal audit and/or risk committees. These committees will ensure that such transfers meet money laundering regulations and the firm's specific policies and procedures relating to money laundering governance. Second, given that effective money laundering governance involves audit attestation of controls, this will further diminish managements' opportunities to undertake aggressive income shifting arrangements. As such, management have reduced opportunities and incentives to participate in rent extraction activities designed to provide self-serving benefits at the expense of other stakeholders. The reason for this is that firms with effective money laundering governance will tend to be subject to reduced agency-related issues, will be subject to a higher-quality tax and financial reporting and operational environment, and hence opportunities to exploit tax or financial transparency will be less sustainable (Amar et al., 2019; Yeoh, 2020). To formally test the relationship between strength in money laundering governance and income shifting incentives, we develop a directional hypothesis stated as:

H1. Strength in money laundering governance is negatively associated with income shifting incentives.

2.2.2. The moderating role of tax haven utilization in the relationship between money laundering governance and income shifting incentives

We now test the moderating role of tax havens, as loci of poorer information quality and exchange, in the relationship between strength in money laundering governance and income shifting incentives. Tax haven utilization is used as a moderating variable because prior research has shown that income shifting is often undertaken to lower tax jurisdictions, which may include tax havens and offshore shell companies that augment financial obfuscation and legal and regulatory arbitrage (Bennedsen and Zeume, 2015; Desai and Dharmapala, 2009). To formally test the moderating role of tax haven utilization on the relationship between strength in money laundering governance and income shifting incentives, we develop a hypothesis stated as:

H2. Tax haven utilization moderates the negative relationship between strength in money laundering governance and income shifting incentives.

2.2.3. The moderating role of litigation risk in the relationship between money laundering governance and income shifting incentives

We now test the moderating role of lawsuits as evidence of litigation risk intensity on the relationship between strength in money laundering governance and income shifting incentives. We use the occurrence of lawsuits as a moderating variable because prior research has shown that increased litigation risk and actions suppress agency-related issues stemming from information asymmetry and consequent rent extraction by firm management (Pukthuanthong et al., 2017). To formally test the moderating role of litigation risk on the relationship between strength in money laundering governance and income shifting incentives, we develop a hypothesis stated as:

H3. The existence of lawsuits moderates the negative relationship between strength in money laundering governance and income shifting incentives.

2.2.4. The moderating role of business risk on the relationship between money laundering governance and income shifting incentives

We test the moderating role of business risk on the association between strength in money laundering governance and income shifting incentives. We use business risk as a moderating variable because prior research has shown that increased business risk is typically associated with weak governance structures, weak property rights, and agency effects and hence will likely facilitate income shifting (Klassen et al., 2017). To formally test the moderating role of business risk on the relationship between strength in money laundering governance and income shifting incentives, we develop a hypothesis stated as:

H4. The existence of business risk magnifies the negative relationship between strength in money laundering governance and income shifting incentives.

Table 1
Variable definitions.

Variables	Variable Description
	Independent Variables
MLG1	Sum of the seven money laundering governance characteristics that were used to generate MLG1(*AMLP, MLGC, MLCO, MLPOL, MLRISK, AMLATT and CUSTID*), scaled by the total expected score of these seven items.
MLG2	Factor analysis of money laundering governance, an eigenvalue obtained from seven money laundering governance characteristics (MLG2): anti-money laundering program (*AMLP*), money laundering specific governance characteristics (*MLGC*), money laundering training/compliance officer (*MLCO*), firm-based money laundering policies and procedures (*MLPOL*), money laundering risk assessment (*MLRISK*), anti-money laundering attestation (*AMLATT*) and customer ID program (*CUSTID*).
	Dependent Variables
INCS1	Income shifting for corporation, which is computed following Richardson et al. (2021) as follows: $INCS_{i,t} = \frac{WAVG\_FTR_{i,t}}{STR_{i,t}}$ i = firms; t = the financial year 2008–2018; $WAVG\_FTR_{i,t}$ = fractional reduction in the Australian STR due to lower (weighted average) foreign tax rates for firm i in year t; $STR_{i,t}$ = the Australian STR for firm i in year t.
INCS2	Dummy variable, coded 1 if *INCS* negative, and 0 otherwise.
BTD	Book-Tax-Differences is measured by taking the difference between accounting income and taxable income and divided that by total assets.
	Moderator Variables
THAV	A dummy variable, coded 1 if the corporation uses tax haven subsidiaries, and 0 otherwise.
LAWSUIT	A dummy variable assigned a value of one if there is at least one litigation lawsuit filed against the company during the year t period, and zero otherwise.
Vol(ROA)	Vol (ROA) is defined as the standard deviation of income before extraordinary items scaled by total assets at the beginning of the fiscal year, over a rolling 5-year period (Bryan and Mason, 2020).
Vol(Earnings)	Vol(Earnings) is defined as the firm-specific volatility of earnings calculated as the standard deviation of earnings over a rolling 5 year period (Dichev and Tang, 2009).
	Control Variables
SIZE	Natural logarithm of total assets.
ROA	Return on assets, measured as net income scaled by total assets.
SECURITIES	Total securities scaled by total assets.
COMLOAN	Sum of commercial and agricultural loans scaled by gross loans.
CAP_RATIO	Total risk-adjusted capital ratio.
INTANG	Intangible assets scaled by total assets.
LOSS	A dummy variable, coded 1 if the corporation has net income less than zero, and 0 otherwise.
CEO_TENURE	Natural logarithm of the number of years that the CEO has been chief executive officer of the corporation.
BD_IND	Proportion of board members that are independent directors.
BIG4	A dummy variable, coded 1 if the corporation is audited by a Big4 audit firm, and 0 otherwise.
M&A	A dummy variable coded 1 if the corporation is engaged in a merger or acquisition, and 0 otherwise.
SUB	Natural logarithm of total number of subsidiaries.
R-A_Dir	A dummy variable equal to 1 if there is at least one director retirement/resignation and an appointment of a new director in the same year, and 0 otherwise.

3. Research design

3.1. Sample selection and data source

We draw our sample from Australian financial institutions that have at least one offshore subsidiary and/or foreign-sourced income as we are interested in the income shifting incentives of those firms. Financial data were collected from Compustat Global – Fundamentals Annual database, whilst data pertaining to our independent variables were hand-collected from firms' annual reports. Data on the international tax haven location are extracted from the reported subsidiaries of Australian financial firms. To this extent, we use the Morningstar database that contains annual reports: accounting and financial information for a large number of Australian firms. Initially our sample consists of 211 listed companies from the Australian Securities Exchange after applying rigorous cleaning criteria, a final sample results in 164 firms, represented by 1326 firm-year observations. Table 1 provides variable definitions while Table 2, Panel A provides a summary of the sample selection. The sample distributions by year are presented in Panel B of Table 2.

Table 2
Panel A: Sample selection.

Number of firm-year observations over the 2008–2018 period	2321
Exclusions:	
- Foreign incorporated firms	(90)
- Missing data for corporate governance	(82)
- Missing data for control variables	(758)
Total sample	1391

Panel B: Sample Distribution by year

Year	Freq.	Per cent	Cum.
2008	94	7.13	7.13
2009	100	7.58	14.71
2010	102	7.73	22.44
2011	104	7.88	30.33
2012	104	7.88	38.21
2013	108	8.19	46.4
2014	123	9.33	55.72
2015	139	10.54	66.26
2016	144	10.92	77.18
2017	152	11.52	88.7
2018	149	11.3	100
Total	1319	100	

3.2. Baseline regression model

We estimate our baseline regression model, which examines the potential association between MLG and profit shifting incentives (H1) according to Eq. (1) as follows:

$$\mathrm{INCS}_{it} = \alpha_{0it} + \beta_1\ \mathrm{MLG}_{it} + \beta_{2-14}\mathrm{CONTROLS}_{it} + \varepsilon_{it}, \quad (1)$$

3.3. Dependent variable

The dependent variable is income shifting incentives. To improve the robustness of our empirical results, we employ two measures of income shifting in our study. The first one is *INCS1*, which is measured as the fractional reduction in the Australian statutory tax rate (STR) of 30 % due to lower-weighted average foreign tax rates, divided by the Australian STR. The calculation is presented below.

$$INCS1_{i,t} = \frac{WAVG\_FTR_{i,t}}{STR_{i,t}} \quad (2)$$

where i = firms, t = the financial year 2008–2018, $WAVG\_FTR_{i,t}$ = marginal reduction in the Australian STR due to the effect of average lower tax applied to foreign income for firm i in year t, and $STR_{i,t}$ = the Australian STR of 30 % for firm i in year t. $WAVG\_FTR_{i,t}$ was obtained from the accounting income to taxable income reconciliation statements provided in the tax footnotes in firms' annual financial reports following the procedure of Taylor and Richardson (2012) and Richardson et al. (2021). Within the accounting income to taxable income reconciliation statements, a negative adjustment to accounting income (taxed at a notional 30 %) is indicative of lower-weighted foreign taxes applied to foreign income relative to the case where that foreign income was to be taxed at the Australian statutory tax rate of 30 %. Larger negative adjustments to accounting income reflect larger amounts of foreign income taxed at lower-weighted foreign tax rates, which in turn gives rise to

Table 3
Factor analysis.

Factor	Eigenvalue	Difference	Proportion	Cumulative
AMLP	6.12218	5.82486	0.8746	0.8746
MLCS	0.29732	0.06858	0.0425	0.9171
MLCO	0.22874	0.09474	0.0327	0.9497
MLPOL	0.134	0.04653	0.0191	0.9689
MLRISK	0.08747	0.003	0.0125	0.9814
AMLATT	0.08447	0.03863	0.0121	0.9935
CUSTID	0.04584	.	0.0065	1.000
Variable	Factor1	Uniqueness		
AMLP	0.9377	0.1207		
MLCS	0.9535	0.0908		
MLCO	0.9082	0.1752		
MLPOL	0.9568	0.0845		
MLRISK	0.9601	0.0782		
AMLATT	0.9573	0.0837		
CUSTID	0.869	0.2448		
Factor rotation matrix				
		Factor1		
Factor1		1		

income shifting is represented by the difference between accounting income and taxable income (BTD), scaled by total assets following the procedure of Manzon and Plesko (2001). Given that prior research demonstrates that differences in accounting income and taxable income (book-tax differences or BTD) reflect permanent tax effects, we use BTD as an additional proxy measure of income shifting (Hanlon and Heitzman, 2010; Taylor and Richardson, 2012). The reason for this is that BTD can potentially reflect differences in accounting and taxation treatment of income and expenses across different jurisdictions. This may be reflected in the tax effect of R&D and other tax-deductible expenditure (interest expenses and loan fees) as well as differences in the tax treatment and classification of income, debt and equity across jurisdictions (e.g., Taylor and Richardson, 2012).

3.4. Independent variable

Our main independent variable of interest is the strength in money laundering governance (*MLG*). MLG comprises an index of 7 items, each of which measures strength in a particular area of money laundering

Table 4
(Panel A): Descriptive Statistics – all variables.

Variable	N	Mean	S.D.	Min	0.25	0.5	0.75	Max
INCS1	1319	0.18	0.77	0.00	0.00	0.00	0.00	4.78
INCS2	1319	0.22	0.42	0.00	0.00	0.00	0.00	1.00
BTD	1319	0.01	0.20	−0.72	−0.02	0.00	0.01	1.49
MLG1	1319	0.10	0.28	0.00	0.00	0.00	0.00	1.00
MLG2	1319	0.00	1.01	−0.36	−0.36	−0.36	−0.36	3.28
THAV	1319	0.13	0.34	0.00	0.00	0.00	0.00	1.00
LAWSUIT	1319	0.14	0.34	0.00	0.00	0.00	0.00	1.00
SIZE	1319	18.82	3.01	9.84	16.87	18.59	20.13	27.61
ROA	1319	−0.05	0.43	−2.76	−0.01	0.03	0.08	0.73
SECURITIES	1319	0.48	0.50	0.00	0.00	0.00	1.00	1.00
COMLOAN	1319	0.07	0.21	0.00	0.00	0.00	0.00	0.97
CAP_RATIO	1319	11.75	31.59	−3.75	0.00	1.35	7.07	182.00
INTANG	1319	0.07	0.15	0.00	0.00	0.00	0.06	0.93
LOSS	1319	0.24	0.43	0.00	0.00	0.00	0.00	1.00
CEO_TENURE	1319	1.10	0.92	0.00	0.00	1.10	1.79	3.37
BD_IND	1319	0.46	0.50	0.00	0.00	0.00	1.00	1.00
BIG4	1319	0.52	0.50	0.00	0.00	1.00	1.00	1.00
M&A	1319	0.10	0.30	0.00	0.00	0.00	0.00	1.00
SUB	1319	0.78	1.16	0.00	0.00	0.00	1.39	5.11
R_A_Dir	1319	0.23	0.42	0.00	0.00	0.00	0.00	1.00
RE_{gct}	1319	0.23	0.84	0.00	0.00	0.00	0.00	4.96
T_{gct} _TH	1319	−6.17	31.77	−194.85	0.00	0.00	0.00	30.00
MLG1*T_{gct}_TH	1319	7.14	10.66	0.00	0.00	0.00	12.33	30.00
MLG2*T_{gct} _TH	1319	−3.46	21.07	−168.10	0.00	0.00	0.00	11.14
T_{gct}	1319	−9.19	63.82	−497.32	0.00	0.00	0.00	66.78
MLG1*T_{gct}	1319	1.10	4.08	0.00	0.00	0.00	0.00	23.54
MLG2*T_{gct}	1319	1.41	14.27	−10.82	−3.01	0.00	0.00	77.15

(Panel B): Descriptive Statistics – money laundering governance items

Variable	N	Mean	S.D.	Min	0.25	0.5	0.75	Max
AMLP	1319	0.13	0.34	0.00	0.00	0.00	0.00	1.00
MLGC	1319	0.11	0.31	0.00	0.00	0.00	0.00	1.00
MLCO	1319	0.09	0.28	0.00	0.00	0.00	0.00	1.00
MLPOL	1319	0.10	0.30	0.00	0.00	0.00	0.00	1.00
MLRISK	1319	0.10	0.30	0.00	0.00	0.00	0.00	1.00
AMLATT	1319	0.09	0.28	0.00	0.00	0.00	0.00	1.00
CUSTID	1319	0.10	0.30	0.00	0.00	0.00	0.00	1.00

larger accounting-taxable income differentials and greater income shifting incentives for firm management (see Richardson et al., 2021).[3]

The second measure, *INCS2*, is a dummy variable coded 1 if the $INCS_{i,t}$ in Eq. (1) is negative and 0 otherwise. The third measure of governance. The seven items are: (1) existence of an anti-money laundering program (*AMLP*); (2) existence of a money laundering governance (*MLGC*); (3) existence of specific money laundering governance (*MLCO*); (4) existence of a money laundering policy (*MLPOL*); (5) existence of a money laundering risk framework (*MLRISK*); (6) attestation by the internal auditor that the money laundering is functioning effectively (*AMLATT*); and (7) existence of a customer identification program (*CUSTID*). Each of these items is scored as 1 if present in the annual report or codes of conduct, and 0 otherwise. Prior studies (e.g. Al-Hadi

[3] A potential limitation of this method is that it represents the incentive to shift income to lower-taxed jurisdictions. It does not represent actual income shifted per se.

Table 5
Pearson correlation matrix.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
(1) INCS1	1.00																		
(2) INCS2	0.65***	1.00																	
(3) BTD	0.05*	0.02	1.00																
(4) MLG1	−0.04	−0.05**	−0.04	1.00															
(5) MLG2	−0.04	−0.06**	−0.04	1.00***	1.00														
(6) THAV	0.22***	0.32***	0.04	0.34***	0.34***	1.00													
(7) LAWSUIT	0.12***	0.07***	0.01	0.39***	0.40***	0.33***	1.00												
(8) SIZE	0.13***	0.08***	−0.16***	0.60***	0.60***	0.30***	0.40***	1.00											
(9) ROA	−0.01	0.02	−0.64***	0.05*	0.05*	0.00	−0.03	0.33***	1.00										
(10) SECURITIES	−0.03	−0.07**	0.03	0.06**	0.06**	0.04*	0.09***	0.13***	0.00	1.00									
(11) COMLOAN	−0.06**	−0.04*	−0.04*	0.49***	0.49***	0.25***	0.28***	0.47***	0.04*	0.17***	1.00								
(12) CAP_RATIO	0.14***	0.11***	−0.06**	0.22***	0.22***	0.22***	0.14***	0.37***	0.07**	−0.03	0.05*	1.00							
(13) INTANG	0.13***	0.05*	0.03	−0.01	−0.01	0.17***	−0.03	−0.06**	0.02	−0.09***	−0.10***	−0.05*	1.00						
(14) LOSS	−0.01	−0.02	0.27***	−0.17***	−0.17***	−0.01	−0.03	−0.40***	−0.48***	0.13***	−0.09***	−0.13***	−0.03	1.00					
(15) CEO_TENURE	−0.05*	−0.06**	−0.02	0.03	0.03	0.03	0.00	0.18***	0.11***	0.04	0.01	0.09***	0.01	−0.15***	1.00				
(16) BD_IND	0.03	−0.01	−0.06**	0.32***	0.32***	0.18***	0.19***	0.53***	0.14***	−0.06**	0.20***	0.30***	0.06**	−0.27***	0.19***	1.00			
(17) BIG4	0.07***	0.03	0.02	0.19***	0.19***	0.19***	0.14***	0.29***	0.05**	0.04	0.12***	0.08***	0.02	−0.14***	0.02	0.13***	1.00		
(18) M&A	−0.01	−0.01	−0.02	0.00	0.00	0.09***	0.00	0.04	0.02	0.15***	−0.04	−0.02	0.02	0.06**	0.06**	0.02	−0.03	1.00	
(19) SUB	0.22***	0.17***	0.03	0.39***	0.39***	0.55***	0.38***	0.50***	−0.01	0.01	0.30***	0.29***	0.06**	−0.09***	0.07**	0.33***	0.22***	0.03	1.00

Variable definitions are reported in the Appendix. Coefficient estimates with t-statistics reported in parentheses. Statistical significance is denoted by ***, ** and *, corresponding to the 1 %, 5 % and 10 % levels of significance, respectively. The *p*-values are one-tailed for directional hypotheses and two-tailed otherwise.

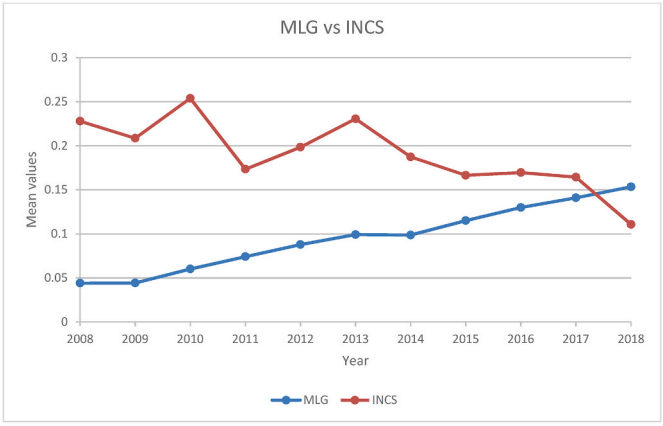


Fig. 1. Bivariate Plot showing the relation between money laundering governance (MLG) and income shifting (INCS).

et al., 2021; Sartip, 2008) suggest that each of these specific attributes has been considered as a major element of our MLG measurement and all are recognized in the risk-focused audit models of the Basel Committee of the Bank of International Settlements. Strong MLG structure was established in order to reduce the risk of money laundering, and to provide a framework for how employees are deal and report suspicious activities regarding money laundering risk in accordance with Australian Anti-Money Laundering and Counter-Terrorism Financing Act 2006. We create two measures of MLG, i.e., MLG1 and MLG2. *MLG1* is calculated as the sum of the seven MLG attributes scaled by the total expected score of these seven variables. The second measure of firm money laundering governance (*MLG2*) is captured through a factor component analysis (FCA) of the seven money laundering characteristics that were used to generate *MLG1* (*AMLP, MLGC, MLCO, MLPOL, MLRISK, AMLATT* and *CUSTID*). The higher the values of *MLG1* and *MLG2,* the higher the level of money laundering governance in a firm.

Table 3 represents the results for the factor analysis of *MLG2* to identify the commonalties or factors that form the measure of *MLG2*. From the seven factors mentioned above, factors with an eigenvalue greater than one are retained (Bushman et al., 2004; Eulaiwi et al., 2022). Given that all seven components are dichotomous, we apply factor analysis that can be performed using a polychoric correlation matrix. Subsequently, to further clarify the interpretation of the factors, they are rotated using the *promax rotation* technique. The eigenvalue of *MLG2* captures 87.46 % of the variation in the *MLG* characteristics, signifying that the *MLG2* factor represents a significant proportion of the characteristics and is an appropriate measure. Table 3 shows that the majority of the commonalities have a factor loading of greater than 90 %, except for *CUSTID* (87 %), indicating that the factor captures substantial commonalities among the *MLG* characteristics and construct validity is achieved.

Our other independent variables are used as moderating variables that may impact the relationship between INCS and MLG. We use THAV, a dummy variable scored as 1 if a firm lists at least one tax haven jurisdiction in its list of significant subsidiaries, otherwise scored as 0 (Eulaiwi et al., 2021), and LAWSUIT, a dummy variable scored as 1 if a firm is subject to a lawsuit in that year, otherwise scored as 0 (Joseph et al., 2015). We include two measures of business/audit risk as moderation variables in our models as part of additional analysis – ROA volatility, and earnings volatility (Bryan and Mason, 2020; Dichev and Tang, 2009).

3.5. Control variables

Consistent with previous studies, our control variables include a suite of known and possible determinants of income shifting comprising firm

Table 6
The association between money laundering governance and income shifting.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	OLS		Tobit		OLS	
	INCS1	INCS1	INCS2	INCS2	BTD	BTD
Constant	−1.067***	−1.124***	−0.227***	−0.246***	−0.189***	−0.194***
	(−4.68)	(−4.79)	(−3.09)	(−3.29)	(−2.86)	(−2.90)
ML1	**−0.570*** **		**−0.174*** **		**−0.056*** **	
	(−5.55)		**(−5.04)**		**(−3.80)**	
ML2		**−0.157*** **		**−0.048*** **		**−0.015*** **
		(−5.57)		**(−5.10)**		**(−3.83)**
SIZE	0.070***	0.070***	0.017***	0.018***	0.008**	0.008**
	(5.48)	(5.48)	(4.23)	(4.25)	(2.39)	(2.39)
ROA	−0.108**	−0.108**	−0.007	−0.007	−0.330***	−0.330***
	(−2.02)	(−2.01)	(−0.35)	(−0.35)	(−7.25)	(−7.25)
SECURITIES	−0.057	−0.057	−0.042**	−0.042**	0.019*	0.019*
	(−1.49)	(−1.48)	(−2.52)	(−2.51)	(1.94)	(1.94)
COMLOAN	−0.372***	−0.372***	−0.070*	−0.069*	−0.034**	−0.034**
	(−5.33)	(−5.32)	(−1.75)	(−1.73)	(−2.45)	(−2.45)
CAP_RATIO	0.002**	0.002**	0.001**	0.001**	−0.000**	−0.000**
	(2.07)	(2.06)	(2.47)	(2.46)	(−2.46)	(−2.47)
INTANG	0.732***	0.730***	0.103**	0.102**	0.073**	0.073**
	(2.91)	(2.90)	(2.25)	(2.24)	(2.16)	(2.15)
LOSS	0.017	0.017	0.002	0.002	−0.017	−0.017
	(0.30)	(0.30)	(0.09)	(0.09)	(−1.15)	(−1.15)
CEO_TENURE	−0.062***	−0.062***	−0.018**	−0.018**	0.008*	0.008*
	(−3.00)	(−3.01)	(−2.36)	(−2.37)	(1.87)	(1.87)
BD_IND	−0.155***	−0.155***	−0.059***	−0.059***	−0.003	−0.003
	(−2.73)	(−2.73)	(−3.45)	(−3.45)	(−0.29)	(−0.29)
BIG4	0.022	0.022	−0.010	−0.010	0.015*	0.015*
	(0.57)	(0.57)	(−0.68)	(−0.68)	(1.70)	(1.70)
M&A	−0.047	−0.047	−0.010	−0.010	−0.011	−0.011
	(−0.71)	(−0.71)	(−0.42)	(−0.42)	(−1.26)	(−1.27)
SUB	0.132***	0.132***	0.041***	0.041***	0.000	0.000
	(4.45)	(4.46)	(5.57)	(5.59)	(0.01)	(0.02)
YEAR FE	YES	YES	YES	YES	YES	YES
N	1319	1319	1319	1319	1319	1319
Adj. R2	0.108	0.108			0.420	0.420
Pseudo R2			0.596	0.599		

All variables are defined in Appendix I. The t-statistics are in parentheses. ***, ** and * indicate statistical significance at 1 %, 5 % or 10 % level, respectively.

size (*SIZE*). SIZE is included in our regression model following Rego (2003) and Richardson and Taylor (2015), claiming that larger firms can achieve economies of scale through income shifting and can rely on their resource base to reduce corporate taxes. SIZE is measured as the natural logarithm of total assets. Return on assets (*ROA*) is measured as pre-tax profit divided by total assets. ROA is included in our study as a model to control for firm profitability and operating performance. Previous studies show that ROA is statistically significant and positively associated with tax avoidance and income shifting activities (Armstrong et al., 2012; Richardson and Taylor, 2015). Further, studies show that firms with more profit can rely on their availability of resources to establish tax haven entities as offshore financial centres (Kim and Li, 2014). Specific control variables, such as number of securities (*SECURITIES*), the sum of commercial loans (*COMLOAN*), the total risk-adjusted capital ratio (*CAP_RATIO*), were incorporated in our regression in order to capture more characteristics (Ettredge, et al., 2014; Eulaiwi et al., 2022, 2021; Mitra et al., 2019; Richardson and Taylor, 2015). We also include intangible assets (*INTANG*), measured as intangible assets scaled by total assets, existence of negative net income (*LOSS*), CEO tenure (*CEO_TENURE*), measured as the natural logarithm of the number of years that the CEO has been chief executive of the corporation as control variables. Board independence (*BD_IND)* is measured as the proportion of board members that are independent directors. Big4 auditor (*BIG4*) is measured as a dummy variable, coded 1 if the corporation is audited by a Big4 audit firm, and 0 otherwise. Furthermore, 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 M&A activity, and 0 otherwise. Finally, we control for the total number of subsidiaries (*SUB*) measured as natural log of total number of subsidiaries.

4. Empirical results

4.1. Descriptive statistics

The descriptive statistics of the dependent variable and suite of determinants are provided in Table 4, Panel A. We find that our dependent variable have means of 0.18 (*INCS1*) and 0.22 (*INCS2*), reflecting an average lower tax applied to foreign income for firm *i* in year *t* of 18 % and negative adjustments to expected accounting income of 22 %, respectively. Some 13 % of firms record at least one subsidiary domiciled within a tax haven jurisdiction[4] in year *t*, while some 14 % of firms are subject to a lawsuit. We also provide the descriptive statistics of each of the seven items that comprise our money laundering index (Table 4, Panel B). The mean values of each of these items range from 9 % to 13 %.

4.2. Pearson correlation results

In Table 5, we find significant negative correlations between INCS2 and MLG1 and MLG2 ($p < 0.05$). A bivariate plot showing the relation between money laundering governance (MLG) and income shifting (INCS) is provided as Fig. 1. Significant correlations between our dependent variable and several control variables are evident (*SIZE,*

[4] A similar statistic was recorded by Taylor and Richardson (2012) with tax haven utilization of Australian listed firms having a mean of 14.1 %.

Table 7
The moderation effect of tax haven use.

Variables	Model 1	Model 2	Model 3	Model 4
	OLS		Tobit	
	INCS1	INCS1	INCS2	INCS2
Constant	−1.268***	−1.299***	−0.278***	−0.288***
	(−5.54)	(−5.57)	(−3.83)	(−3.91)
MLG1	**−0.303*** **		**−0.084** **	
	(−4.07)		**(−2.10)**	
MLG2		**−0.084*** **		**−0.024** **
		(−4.13)		**(−2.16)**
THAV	0.817***	0.720***	0.187***	0.158***
	(5.79)	(5.66)	(6.68)	(6.07)
MLG1*THAV	**−0.990*** **		**−0.292*** **	
	(−6.22)		**(−5.41)**	
MLG2*THAV		**−0.271*** **		**−0.080*** **
		(−6.20)		**(−5.36)**
SIZE	0.082***	0.082***	0.020***	0.021***
	(6.35)	(6.35)	(5.02)	(5.05)
ROA	−0.148***	−0.148***	−0.016	−0.016
	(−2.89)	(−2.90)	(−0.85)	(−0.86)
SECURITIES	−0.037	−0.037	−0.036**	−0.036**
	(−1.00)	(−1.00)	(−2.20)	(−2.19)
COMLOAN	−0.446***	−0.446***	−0.083**	−0.082**
	(−6.12)	(−6.11)	(−2.11)	(−2.10)
CAP_RATIO	0.001	0.001	0.000*	0.000*
	(1.38)	(1.37)	(1.77)	(1.76)
INTANG	0.401*	0.401*	0.022	0.023
	(1.86)	(1.86)	(0.49)	(0.49)
LOSS	−0.031	−0.031	−0.009	−0.009
	(−0.54)	(−0.55)	(−0.48)	(−0.48)
CEO_TENURE	−0.061***	−0.061***	−0.018**	−0.018**
	(−3.08)	(−3.08)	(−2.38)	(−2.38)
BD_IND	−0.150***	−0.150***	−0.059***	−0.059***
	(−2.74)	(−2.73)	(−3.51)	(−3.51)
BIG4	−0.007	−0.007	−0.015	−0.015
	(−0.18)	(−0.19)	(−1.07)	(−1.07)
M&A	−0.101	−0.101	−0.021	−0.021
	(−1.45)	(−1.45)	(−0.90)	(−0.90)
SUB	0.052**	0.052**	0.025***	0.025***
	(2.29)	(2.30)	(3.12)	(3.12)
YEAR FE	YES	YES	YES	YES
N	1319	1319	1319	1319
Adj. R2	0.175	0.175		
Pseudo R2			0.869	0.872

All variables are defined in Appendix I. The t-statistics are in parentheses. ***, ** and * indicate statistical significance at 1 %, 5 % or 10 % level, respectively.

Table 8
The moderation effect of lawsuits.

Variables	Model 1	Model 2	Model 3	Model 4
	OLS		Tobit	
	INCS1	INCS1	INCS2	INCS2
Constant	−1.032***	−1.080***	−0.229***	−0.243***
	(−4.56)	(−4.67)	(−3.05)	(−3.21)
MLG1	**−0.485*** **		**−0.132*** **	
	(−5.31)		**(−3.22)**	
MLG2		**−0.133*** **		**−0.037*** **
		(−5.32)		**(−3.25)**
LAWSUIT	0.244**	0.211**	0.071***	0.057**
	(2.38)	(2.28)	(2.71)	(2.40)
MLG1*LAWSUIT	**−0.335** **		**−0.136** **	
	(−2.54)		**(−2.39)**	
MLG2*LAWSUIT		**−0.093** **		**−0.038** **
		(−2.56)		**(−2.40)**
SIZE	0.067***	0.067***	0.017***	0.017***
	(5.26)	(5.26)	(4.09)	(4.11)
ROA	−0.102*	−0.101*	−0.006	−0.006
	(−1.85)	(−1.84)	(−0.30)	(−0.30)
SECURITIES	−0.053	−0.053	−0.040**	−0.039**
	(−1.38)	(−1.37)	(−2.39)	(−2.38)
COMLOAN	−0.340***	−0.340***	−0.057	−0.056
	(−5.02)	(−5.01)	(−1.42)	(−1.40)
CAP_RATIO	0.002**	0.002**	0.001**	0.001**
	(2.05)	(2.04)	(2.19)	(2.18)
INTANG	0.725***	0.723***	0.099**	0.098**
	(2.90)	(2.89)	(2.16)	(2.16)
LOSS	0.003	0.003	−0.002	−0.002
	(0.05)	(0.05)	(−0.11)	(−0.11)
CEO_TENURE	−0.056***	−0.056***	−0.017**	−0.017**
	(−2.73)	(−2.73)	(−2.14)	(−2.15)
BD_IND	−0.156***	−0.156***	−0.060***	−0.060***
	(−2.74)	(−2.73)	(−3.52)	(−3.52)
BIG4	0.018	0.018	−0.012	−0.012
	(0.45)	(0.45)	(−0.80)	(−0.80)
M&A	−0.045	−0.046	−0.010	−0.010
	(−0.68)	(−0.68)	(−0.42)	(−0.42)
SUB	0.126***	0.126***	0.040***	0.040***
	(4.29)	(4.31)	(5.37)	(5.39)
YEAR FE	YES	YES	YES	YES
N	1319	1319	1319	1319
Adj. R2	0.114	0.114		
Pseudo R2			0.643	0.647

All variables are defined in Appendix I. The t-statistics are in parentheses. ***, ** and * indicate statistical significance at 1 %, 5 % or 10 % level, respectively.

SECURITIES, COMLOAN, CAP_RATIO, INTANG, CEO_TENURE, BIG4 and *SUB* ($p < 0.10$ or better). Variance inflation factors (VIFs) do not exceed 3 and hence multicollinearity amongst the determinant variable set is unlikely to be an issue (Kutner et al., 2004).

4.3. Regression results

To test H1, we run our baseline regression model (Eq. (1)) following firm level clustering (Petersen, 2009). Our results are presented as Table 6. Coefficients (except for year fixed effects) are tabulated in parentheses. The MLG1 and MLG2 coefficients are negative and significantly associated with our income shifting incentive measure using both ordinary least squares and Tobit regression models. Our findings are economically important. A one-standard deviation increase in strength in money laundering governance is associated with a reduction in income shifting incentives by some 15 % (calculated as standard deviation of MLG1 (0.28) (see Table 3 Panel A) × MLG1 regression coefficient (−0.570) (see Table 4) = −0.1596 or −15.96 %).[5] If a firm increases its MLG1 score by 28 %, it will reduce its incentive to engage in income shifting by some 15 %. Alternatively, if a firm increases its money laundering governance controls (MLG1) from 0 % (i.e. none of the control items are evident) to 100 % (all of the control items are evident), this will have the effect of reducing income shifting, on average, by 57 % (i.e. −0.57 × 100 % = 57.0 %). Similar to that of our INCS variable, we find a negative and significant relationship between MLG and BTD. These results provide robust support for H1, whereby strength in money laundering governance diminishes significant firms' incentives and capacity to income shift. Control variables comprising *SIZE, ROA, COMLOAN, CAP_RATIO, INTANG, CEO_TENURE, BD_IND* and *SUB* coefficients are significant (at least at $p < 0.05$).

4.4. Moderation results

We now assess whether the negative relationship between strength in money laundering governance and income shifting is moderated through tax haven use (Table 7), the level of litigation risk (Table 8) and business risk (Table 9). In Table 7, we observe that the coefficient on our tax haven variable is positive and significantly associated with income shifting incentives, consistent with that established in prior literature, whereby tax havens are typified as loci of earnings management, tax avoidance where firms that use such jurisdictions obtain benefits derived from regulatory and financial arbitrage. However, the coefficients on our interaction terms *MLG1*THAV and MLG2*THAV* are

[5] Similar economic effects are found for MLG2.

Table 9
The effect of ROA/Earnings Volatility.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
	OLS				Tobit			
	INCS1				INCS2			
Constant	−1.186***	−1.247***	−1.071***	−1.111***	−0.288***	−0.309***	−0.124	−0.136
	(−4.95)	(−5.06)	(−3.95)	(−4.01)	(−3.58)	(−3.78)	(−1.46)	(−1.57)
MLG1	**−0.651*** **		**−0.476*** **		**−0.203*** **		**−0.118*** **	
	(−5.48)		**(−4.60)**		**(−5.43)**		**(−2.96)**	
MLG2		**−0.179*** **		**−0.130*** **		**−0.056*** **		**−0.033*** **
		(−5.50)		**(−4.57)**		**(−5.48)**		**(−2.98)**
Vol(ROA)	0.028***	0.007***			0.004	0.001		
	(2.61)	(2.59)			(0.53)	(0.66)		
Vol(Earnings)			−0.004	−0.007			−0.002	−0.003
			(−0.81)	(−1.64)			(−1.04)	(−1.55)
MLG1_Vol(ROA)	**−0.196*** **				**−0.027**			
	(−2.62)				**(−0.48)**			
MLG2_Vol(ROA)		**−0.056*** **				**−0.008**		
		(−2.64)				**(−0.47)**		
MLG1_Vol(Earnings)			**−0.032*** **				**−0.009** **	
			(−3.05)				**(−2.05)**	
MLG2_Vol(Earnings)				**−0.009*** **				**−0.002** **
				(−3.03)				**(−2.02)**
SIZE	0.078***	0.077***	0.067***	0.067***	0.019***	0.019***	0.010**	0.010**
	(5.57)	(5.57)	(4.55)	(4.54)	(4.35)	(4.36)	(2.20)	(2.19)
ROA	−0.105*	−0.106*	−0.144*	−0.144*	−0.009	−0.009	−0.012	−0.012
	(−1.67)	(−1.69)	(−1.90)	(−1.90)	(−0.42)	(−0.43)	(−0.54)	(−0.54)
SECURITIES	−0.114***	−0.113***	−0.058	−0.058	−0.057***	−0.056***	−0.038**	−0.037**
	(−2.70)	(−2.69)	(−1.54)	(−1.53)	(−3.06)	(−3.05)	(−2.10)	(−2.10)
COMLOAN	−0.274***	−0.274***	−0.196**	−0.198**	−0.044	−0.043	−0.025	−0.025
	(−3.64)	(−3.64)	(−2.47)	(−2.49)	(−1.00)	(−0.98)	(−0.63)	(−0.63)
CAP_RATIO	0.002**	0.002**	0.004***	0.004***	0.001**	0.001**	0.001***	0.001***
	(2.03)	(2.02)	(3.23)	(3.22)	(2.46)	(2.44)	(4.33)	(4.31)
INTANG	0.875***	0.874***	1.092***	1.090***	0.137***	0.136***	0.198***	0.198***
	(3.19)	(3.18)	(3.47)	(3.46)	(2.86)	(2.85)	(4.01)	(4.00)
LOSS	−0.005	−0.005	−0.017	−0.018	−0.001	−0.001	−0.011	−0.011
	(−0.08)	(−0.08)	(−0.24)	(−0.25)	(−0.06)	(−0.06)	(−0.49)	(−0.49)
CEO_TENURE	−0.054**	−0.054**	−0.055**	−0.055**	−0.007	−0.007	−0.010	−0.010
	(−2.28)	(−2.29)	(−2.35)	(−2.35)	(−0.80)	(−0.81)	(−1.16)	(−1.16)
BD_IND	−0.153**	−0.153**	−0.297***	−0.296***	−0.055***	−0.055***	−0.083***	−0.082***
	(−2.30)	(−2.30)	(−4.37)	(−4.37)	(−2.95)	(−2.94)	(−4.47)	(−4.47)
BIG4	0.101**	0.101**	0.106***	0.106***	0.012	0.012	0.022	0.022
	(2.27)	(2.27)	(2.87)	(2.88)	(0.75)	(0.76)	(1.41)	(1.41)
M&A	−0.027	−0.027	−0.052	−0.052	−0.016	−0.016	−0.015	−0.015
	(−0.34)	(−0.34)	(−0.88)	(−0.88)	(−0.61)	(−0.61)	(−0.63)	(−0.63)
SUB	0.111***	0.111***	0.143***	0.143***	0.036***	0.036***	0.048***	0.048***
	(3.60)	(3.61)	(4.92)	(4.92)	(4.58)	(4.60)	(6.40)	(6.41)
YEAR FE	YES	YES	YES	YES	YES	YES	YES	YES
N	1083	1083	951	951	1083	1083	951	951
Adj. R2	0.125	0.125	0.184	0.184				
Pseudo R2					0.819	0.823	−24.13	−24.12

All variables are defined in Appendix I. The t-statistics are in parentheses. ***, ** and * indicate statistical significance at 1 %, 5 % or 10 % level, respectively.

significant and negative ($p < 0.01$) across all models, suggesting that firms with effective money laundering governance in place negate the risks associated with tax haven use.

In Table 8, we observe that the coefficient on our lawsuit variable, a measure of litigation risk, is positive and significantly associated with our income shifting incentive variable (at $p < 0.05$ or better). Firms subject to higher levels of litigation risk reflect higher levels of managerial opportunistic behaviour or weaknesses in internal controls or systems. However, the coefficients on our interaction terms *MLG1*LAWSUIT* and *MLG2*LAWSUIT* are significant and negative ($p < 0.01$) across all models, suggesting that firms with effective money laundering governance in place negate the risks associated with increased litigation risk.

In Table 9, we observe that the coefficient on our business risk variable, as measured by volatility in either ROA or earnings, is positive and significantly associated with our income shifting incentive variable (at $p < 0.05$ or better) in models 1 and 2 only. Firms subject to higher levels of business risk are more likely to be incentivized to income shift owing to managements' ability to exploit weaknesses in internal control or transparency to opportunistically shift income. However, the coefficients on our interaction terms MLG1*Vol(*ROA*) and MLG2*Vol (*Earnings*) are significant and negative ($p < 0.01$) across most models, suggesting that firms with effective money laundering governance negate the effects of increased business risk.

4.5. Endogeneity

We conduct an instrumental variable two-stage least square (2SLS) research design to mitigate risks around biased regression coefficients that may potentially result from reverse causality and/or simultaneity (Larcker and Rusticus, 2010; Wooldridge, 2010). Our first-stage test involves incorporation of an instrumental variable that captures changes in board member composition. Specifically, our instrumental variable is denoted *R-A_Dir*, equal to 1 if there is at least one director retirement/resignation and the appointment of a new director in the same year, and 0 otherwise.

We were able to obtain this variable from Connect4 database. We include the compositional change of a board member as an instrumental

Table 10
Instrumental variable 2SLS results.

Panel A: First-stage regression results		
Variable	**Model 1**	**Model 2**
	MLG1	*MLG2*
Constant	−0.765***	−3.135***
	(−14.50)	(−16.33)
R-A_Dir	0.106***	0.383***
	(5.97)	(5.96)
LewbelMLG_IV	0.112***	0.408***
	(19.64)	(19.80)
ALL CONTROLS	YES	YES
YEAR_FE	YES	YES
N	1319	1319

Panel B: Post-estimation tests	Model 1	Model 2
Description	***INCS***	
1. Underidentification test		
Kleibergen–Paap rk LM statistic	90.878	90.843
Chi-sq(1) *P*-value	0.000	0.000
2. Weak identification test		
Cragg–Donald Wald F statistic	435.359	439.299
Stock–Yogo (2005) critical value	19.93	19.93
3. Overidentification test		
Hansen J statistic	0.496	0.521
Chi-sq(1) *p*-value	0.4814	0.4703
4- Endogeneity test		
Durbin–Wu–Hausman tests	8.818	8.727
Chi-sq(1) *P*-value	0.0030	0.0031

Panel C: Second-stage regression results		
VARIABLES	**Model 1**	**Model 2**
	INCS	
Constant	−1.252***	−1.326***
	(−5.01)	(−5.08)
MLG1	**−0.781*** **	
	(−4.90)	
MLG2		**−0.215*** **
		(−4.90)
All variables in Main Specification	YES	YES
YEAR FE	YES	YES

R-A_Dir is a dummy variable equal to 1 if at least one director has retired/resigned and the firm has appointed a new director in the same year, and 0 otherwise. LewbelMLG_IV denotes instrumental variable calculated following Lewbel (1997). Specifically, we first calculate the mean value of the money laundering governance of firms operating in the same specific financial industry as firm *i* in year *t*. We next calculate the cube of the difference between firm's money laundering governance degree in year t and the mean value. Finally, we use that cube value as the instrumental variable (LewbelMLG_IV).

reason for these reasons. The appointment of a director can provide fresh perspectives and different experience to the boardroom, which can assist in better decision-making. New directors can bring expertise in corporate governance and regulations ensuring compliance requirements are met, thereby improving systems of control in the firm. The retirement or resignation of a director can change the risk dynamics of the board, which may initiate change and a review of existing strategies and how a firm is adapting to financial and operational risks (Dou, 2017). Thus, we propose that the retirement and appointment of a replacement director (*R-A_Dir*) could influence the strength in money laundering governance (our endogenous variable) but not necessarily the income shifting incentives of a firm. Additionally, we include a second instrumental variable *LewbelMLG_IV* following the approach of Lewbel (1997) in our first-stage model. Specifically, we first calculate the mean value of the money laundering governance of firms operating in the same specific financial industry as firm i in year t. We next calculate the cube of the difference between firm's money laundering governance degree in year t and the mean value. Finally, we use that cube value as the instrumental variable – *LewbelMLG_IV*.

The first-stage regression model used to predict MLG is estimated as follows:

$$MLG_{it} = \alpha_{0it} + \beta_1 R - A\_Dir_{it} + \beta_2 LewbelMLG\_IV + \beta_{3-13}\ CONTROLS + \varepsilon_{it} \quad (3)$$

The first-stage regression model results, reported in Table 10 (Panel A), show that the regression coefficients of *R-A_Dir* and *LewbelMLG_IV* are positively and significantly associated ($p < 0.01$) with *MLG*. We also compute several post-estimation tests (see Table 10, Panel B) to validate the suitability of these instrumental variables. First, we compute the underidentification test. We find that the Anderson LM statistic is significant ($p < 0.01$) in all of the regression model specifications (models 1 and 2), so our IVs are relevant. Second, we calculate the weak identification test and observe that the Cragg–Donald Wald *F* statistic for each regression model specification (models 1 and 2) is above the Stock and Yoga (2005) critical value of 19.93 (based on a 10 % maximal IV size), so weak IVs are not a concern for our regression estimates. Third, we compute the overidentification test and find that the Hansen J-statistic is not significant, which indicates that our IVs are not overidentified and are thus satisfactory. Finally, we conduct the Hausman (1978) test for endogeneity and find that it generally rejects the exogeneity of the IVs, indicating that the 2SLS regression estimates are essentially preferable to the regression estimates. Overall, we conclude that our IVs enhance the validity of the inferences in the second-stage regression specifications. For the second-stage regression model reported in Table 10 (Panel C), we find that the regression coefficient for MLG is negatively and significantly associated with INCS across all of the regression model specifications ($p < 0.01$), so H1 is again supported by these results.

We also assess the endogeneity of our moderation equations. Prior research (e.g. Bergström et al., 2011) demonstrates that an increase in business risk is likely to be positively associated with income shifting and negatively associated with strength in money laundering governance. Money laundering governance will likely play an important role in diminishing business risk around capital flows for financial institutions (De Boyrie et al., 2005; Dobrowolski and Sułkowski, 2019). However, the joint effect of business risk and money laundering governance on income shifting is uncertain. Hence, we include an interaction term (MLG*Business Risk) in our model to see its effect on income shifting. We find that the interaction between money laundering governance (MLG) and business risk (litigation risk) is negatively associated with our income shifting variable. We are interested in the sign and significance of the interaction terms for both MLG* litigation (MLG* Business Risk) and its effect on the income shifting. However, to avoid the possibility of measurement error, we use the procedure employed by Lewbel (1997) to assess whether endogeneity is an issue with our moderation equations. Our results are provided as Table 11. We find that the coefficients on our interaction terms LewbelMLG*Lawsuit and LebelMLG*Vol(ROA) are negative and significant. The coefficients on Lawsuit and Vol(ROA) are significant and positive and the coefficients of MLG1 and MLG2 are significant and negative.

4.6. Alternative measure of profit shifting

We also employ the methodology employed by Fatica and Gregori (2020) where we develop a variable to capture firms' profit shifting incentive, calculated as the weighted average corporate tax rate differential between that of a subsidiary and that of all other affiliates within that corporate group. This variable is termed T_{gct}. We use the number of subsidiaries in a particular jurisdiction to apply the weights when calculating the corporate tax rate differential. We do not employ sales (following Huizinga and Laeven, 2008) or number of employees (following Fatica and Gregori, 2020) as the extent of profit shifting and/or transfer pricing manipulation may not necessarily be reflected by input factors into a production process in a jurisdiction (e.g. tax haven use for instance) and may be reflected more by the number of subsidiaries represented in a particular jurisdiction. The reason for this is that cross-jurisdictional arbitrage in the treatment of services, royalties,

Table 11
Addressing endogeneity for moderation equations.

Variable	Model 1	Model 2	Model 3	Model 4
	INCS	INCS	INCS	INCS
LewbelMLG1_LAWSUIT_IV	**−0.616*** (−3.32)**			
LewbelMLG2_LAWSUIT_IV		**−0.168*** (−3.29)**		
LewbelMLG1_Vol_IV			**−0.960** (−2.17)**	
LewbelMLG2_Vol_IV				**−0.017* (−1.69)**
MLG1	−0.377*** (−4.38)		−0.521* (−1.66)	
MLG2		−0.104*** (−4.39)		−0.039*** (−3.00)
LAWSUIT	0.304*** (2.75)	0.241** (2.51)		
Vol(ROA)			0.137** (2.16)	0.002 (1.64)
ALL CONTROLS	YES	YES	YES	YES
Intercept	−1.081*** (−4.76)	−1.116*** (−4.82)	−1.327* (−1.80)	−0.260** (−2.47)
N	1319	1319	1083	1083
YEAR_FE	YES	YES	YES	YES
Model fits:				
1. Underidentification test				
Kleibergen–Paap rk LM statistic	68.706	68.554	5.416	16.797
Chi-sq(1) *P*-value	0.000	0.000	0.0200	0.0000
2. Weak identification test				
Cragg–Donald Wald F statistic	1068.313	1065.443	267.619	1247.986
Stock–Yogo (2005) critical value	16.38	16.38	16.38	16.38
3. Overidentification test				
Hansen J statistic	No	No	No	No
Chi-sq(1) *p*-value				
4. Endogeneity test				
Durbin–Wu–Hausman tests	6.764	6.236	3.459	2.797
Chi-sq(1) *P*-value	0.0093	0.0125	0.0629	0.0945

The t-statistics are in parentheses. ***, ** and * indicate statistical significance at 1 %, 5 % or 10 % level, respectively.

income and interest and the success of any transfer pricing manipulation could be better achieved through use of multiple affiliates in a given jurisdiction. The success or otherwise of these schemes is conditional on a lack of information exchange and information opacity. Similarly, we observe many affiliates which are incorporated or registered in a particular tax haven jurisdiction such as the Cayman Islands designed to augment profit concealment, to take advantage of the weak legal and regulatory regimes or to meet capital management and treasury requirements. We calculate two separate measures of T_{gct} – one with tax haven jurisdictions in the pool (T_{gct} _TH) and one that excludes tax havens (T_{gct}). The reason for this division is that tax havens attract a nil or nominal corporate tax rate and hence the tax rate differentials with affiliates in those jurisdictions and other affiliates with be significantly greater than those that exclude tax haven jurisdictions. We develop the following model of reported earnings before tax (RE_{gct}) by each affiliate g generated in a foreign jurisdiction c in year t:

$$RE_{gct} = T_{gct} + Controls \quad (4)$$

where RE_{gct} denotes pre-tax reported earnings (RE) by each group g on its operations at time t in a foreign country c, and Controls represent the suite of controls employed in Equation (1). The reported earnings of a corporate group g will comprise actual earnings that are reported plus unobserved earnings derived from income shifting (Merz and Overesch, 2016). We then interact our T_{gct} or T_{gct} _TH variables with our measures of money laundering to ascertain how the profit shifting incentive, as represented by tax rate differentials with a corporate group, impact our RE_{gct} variable. Our results are provided as Table 12. As expected, the coefficient on our money laundering governance variables MLG1 and MLG2 are negative at significant at 10 %. The coefficient of our tax incentive variables (Tgct_TH) reflecting tax rate differentials across jurisdictions that include tax havens are positive and statistically significant at 1 % as observed in model 1 and model 2 of Table 12. The coefficient of our tax incentive variables (Tgct) reflecting tax rate differentials across jurisdictions that do not include tax havens are positive and statistically significant at 10 % in model 3 and is non-significant in model 4. Overall, these results reflect greater tax rate differentials between Australia and offshore jurisdictions, particularly if affiliates include tax havens, which give rise to increased propensity to shift income and consequent higher reported earnings (RE_{gct}). Consistent with the findings of Fatica and Gregori (2020), the reported profits are significantly impacted by the presence of tax haven jurisdiction with a corporate group. The reason for this could relate to the regulatory arbitrage and financial secrecy achieved through use of tax haven jurisdictions which increases the propensity to shift income (Fatica and Gregori, 2020; Taylor et al., 2018). The coefficient on our interaction terms between our tax incentive variables and our two measures of money laundering governance MLG1 and MLG2 are significant and negative indicating that increased levels of governance suppress firms' ability to shift income effectively thereby reducing reported earnings. Strength in money laundering governance constrains the reported profits of entities because of the reporting and verification procedures around source and transfer parameters of funding (De Boyrie et al., 2005).

5. Conclusion

This study explores the relationship between strength in money laundering governance and income shifting. We also analyze the moderating effect of tax haven use and the level of litigation risk and business risk on that relationship. We find that strength in money

Table 12
Effect of money laundering governance on Reported Earnings.

Variables	Model 1	Model 2	Model 3	Model 4
	RE_{gct}	RE_{gct}	RE_{gct}	RE_{gct}
Constant	−0.006	−0.034	−0.088	−0.079
	(−0.03)	(−0.15)	(−0.41)	(−0.36)
MLG1	**−0.272***		**0.093**	
	(−1.86)		**(0.47)**	
MLG2		**−0.075***		**0.026**
		(−1.86)		**(0.48)**
T_{gct} _TH	0.002***	0.002***		
	(2.96)	(2.96)		
T_{gct}			0.006*	0.003
			(1.91)	(1.18)
MLG1* T_{gct} _TH	**−0.002****			
	(−2.52)			
MLG2* T_{gct} _TH		**−0.001****		
		(−2.51)		
MLG1* T_{gct}			**−0.026*****	
			(−3.10)	
MLG2* T_{gct}				**−0.007*****
				(−3.11)
SIZE	0.015	0.015	0.017	0.017
	(1.23)	(1.23)	(1.47)	(1.47)
ROA	0.111***	0.111***	0.109***	0.108***
	(3.00)	(3.00)	(2.92)	(2.92)
SECURITIES	0.021	0.021	0.038	0.038
	(0.37)	(0.37)	(0.67)	(0.67)
COMLOAN	0.051	0.052	0.013	0.013
	(0.30)	(0.30)	(0.07)	(0.07)
CAP_RATIO	−0.000	−0.000	−0.000	−0.000
	(−0.16)	(−0.17)	(−0.45)	(−0.45)
INTANG	−0.250**	−0.251**	−0.301***	−0.301***
	(−2.37)	(−2.38)	(−2.82)	(−2.82)
LOSS	−0.076	−0.076	−0.084	−0.084
	(−1.25)	(−1.25)	(−1.34)	(−1.34)
CEO_TENURE	−0.039	−0.039	−0.035	−0.035
	(−1.48)	(−1.48)	(−1.35)	(−1.35)
BD_IND	−0.093*	−0.093*	−0.103*	−0.103*
	(−1.65)	(−1.65)	(−1.83)	(−1.84)
BIG4	0.004	0.004	0.002	0.002
	(0.08)	(0.09)	(0.05)	(0.05)
M&A	0.134	0.134	0.138	0.138
	(1.33)	(1.33)	(1.37)	(1.37)
SUB	0.097**	0.097**	0.055	0.055
	(2.56)	(2.56)	(1.42)	(1.41)
YEAR FE	YES	YES	YES	YES
N	1326	1326	1326	1326
Adj. R2	0.027	0.027	0.028	0.028

RE_{gct} represents the before tax earnings reported by each discrete affiliate g in a foreign country c in year t following the approach of Fatica and Gregori (2020), and Huizinga and Laeven (2008). T_{gct} _TH = multilateral tax differential with tax havens; T_{gct} = multilateral tax differential without tax havens.

laundering governance is significantly negatively associated with the extent of income shifting incentives. Our findings are economically important. A one-standard deviation increase in strength in money laundering governance is associated with a reduction in income shifting incentives by some 15 %. Additional analysis demonstrates that strength in money laundering governance suppresses the statistically significant and positive relationship between income shifting and tax haven utilization or the occurrence of a lawsuit against that firm. Finally, the positive and statistically significant relationship between proxies for business risk (as measured by volatility in return on assets or earnings) and income shifting is moderated by strength in money laundering governance. Our baseline analyses are robust to two-stage least squared tests that mitigate potential endogeneity concerns. Our findings are generalizable beyond the Australian market. The money laundering governance attributes that comprise our money laundering governance index are key attributes required by offshore financial institutions and are embedded in global anti-money laundering legislation. Hence our findings are relevant to the global market in terms of both money laundering governance and profit shifting.

We make several important contributions. First, we answer the call from Hanlon and Heitzman (2010) for further research relating to firms' investment location decisions, including income shifting to lower-taxed jurisdictions. We contribute to this important area of research in that we demonstrate, for the first time, that income shifting incentives are significantly negatively related to firms' strength in money laundering governance. Second, we add to the literature by demonstrating that consideration of host country tax rates as they relate to firms' investment or income allocation locations are important where firms' use tax haven jurisdictions, are subject to litigation risk evidenced by way of lawsuits and their level of business risk, and that these factors are moderated by strength in firms' money laundering governance. These findings are likely to be of interest to financial services industry regulatory bodies both in Australia and globally. Importantly, as advanced by Unger et al. (2021), money laundering controls as an important class of governance can assist in the achievement of fairness, equity and opacity in the international capital and tax markets. Finally, the findings of this study suggest that money laundering governance is important in enhancing economic stability through the control of capital sources and flows in financial markets.

Declaration of competing interest

The authors have no conflicts of interests to declare.

Data availability

doi:10.17632/n8p5f77zrg.1
ECMODE-D-23-00110 Money Laundering Governance and Income Shifting: Evidence from Australian Financial Institutions (Original data) (Mendeley Data)

Acknowledgements

The authors would like to thank the participants of the Global China Accounting Association conference November 2022 for their valuable comments.

References

Al Hadi, A., Taylor, G., Richardson, G., Eulaiwi, B., 2021. Money laundering control systems, external auditor specialization and tax haven use: an empirical analysis of US multinational financial corporations. Int. J. Audit. 25 (2), 582–601.
Amar, W.B., Luo, H., Li, T., Magnan, M., 2019. The corrosive effect of offshore financial centers on multinational firms' disclosure strategy. Eur. Account. Rev. 28 (3), 483–512.
Armstrong, C.S., Blouin, J.L., Larcker, D.F., 2012. The incentives for tax planning. J. Account. Econ. 53 (1–2), 391–411.
AUSTRAC, 2015. e. Available at: sa-brief-real-estate_0.pdf (austrac.gov.au). Strategic analysis brief: Money laundering through real estate.
AUSTRAC, 2021. Key findings overview: Australian banking sector money laundering and terrorism financing risk assessments. Available at: https://www.austrac.gov.au/sites/default/files/2021-09/Overview_Australian%20Banking%20Sector%20ML_TF%20risk%20assessments%202021.pdf.
Beer, S., De Mooij, R., Liu, L., 2020. International corporate tax avoidance: a review of the channels, magnitudes, and blind spots. J. Econ. Surv. 34 (3), 660–688.
Bennedsen, M., Zeume, S., 2015. Corporate tax havens and shareholder value. In: Proceedings. Annual Conference on Taxation & Minutes of the Annual Meeting of the National Tax Association, 108. National Tax Association, pp. 1–62.
Bergström, M., Svedberg Helgesson, K., Mörth, U., 2011. A new role for for-profit actors? The case of anti-money laundering and risk management. J. Commun. Media Stud.: J. Common. Mark. Stud. 49 (5), 1043–1064.
Bushman, R., Piotroski, J., Smith, A., 2004. What determines corporate transparency? J. Account. Res. 42 (2), 207–252.
Bryan, D.B., Mason, T.W., 2020. Earnings volatility and auditor risk assessments: evidence from auditor resignations. Account. Horiz. 34 (4), 33–56.
De Boyrie, M.E., Pak, S.J., Zdanowicz, J.S., 2005. The impact of Switzerland's money laundering law on capital flows through abnormal pricing in international trade. Appl. Financ. Econ. 15 (4), 217–230.
Desai, M.A., Dharmapala, D., 2009. Corporate tax avoidance and firm value. Rev. Econ. Stat. 91 (3), 537–546.

Dobrowolski, Z., Sułkowski, Ł., 2019. Implementing a sustainable model for anti-money laundering in the United Nations development goals. Sustainability 12 (1), 244.
Dou, Y., 2017. Leaving before bad times: does the labor market penalize pre-emptive director resignations? J. Account. Econ. 63 (2–3), 161–178.
Dichev, I.D., Tang, V.W., 2009. Earnings volatility and earnings predictability. J. Account. Econ. 47 (1–2), 160–181.
Edwards, G., Duran, C., Sacchi, F., Ackermann, B., Conversano, L., 2018. Déjà vu all over again: money laundering and sanctions woes to continue to haunt Europe's banks. Available at: https://www.allnews.ch/sites/default/files/ratingsdirect_dejavualloveragainmoneylaunderingandsanctionswoescontinuetohaunteuropesbanks_399688 77_oct-16-2018.pdf.
El Hamad, W., Moerman, L., Pupovac, S., 2023. Chevron Australia and Tax Justice Network: A Case of Rhetoric. Pac. Account. Rev.
Ettredge, M., Fuerherm, E.E., Li, C., 2014. Fee pressure and audit quality. Account. Org. Soc. 39 (4), 247–263.
Eulaiwi, B., Al-Hadi, A., Duong, L., Clark, K., Taylor, G., Perrin, B., 2022. Audit pricing and corporate whistleblower governance: evidence from Australian financial firms. Account. Finance 62 (2), 2339–2384.
Eulaiwi, B., Al-Hadi, A., Taylor, G., Dutta, S., Duong, L., Richardson, G., 2021. Tax haven use, the pricing of audit & non-audit services, suspicious matters reporting obligations and whistle blower hotline Facilities: evidence from Australian financial corporations. J. Contemp. Account. Econ. 17 (2), 100262.
Fatica, S., Gregori, W.D., 2020. How much profit shifting do European banks do? Econ. Modell. 90, 536–551.
Federal Register of Legislation, 2007. Anti-Money Laundering and Counter-terrorism Financing Act 2006 Act No. 169. Available at: https://www.legislation.gov.au/Details/C2007C00686.
Graycar, A., Grabosky, P. (Eds.), 1996. Money Laundering in the 21st Century: Risks & Countermeasures. Australian Institute of Criminology, Canberra, pp. 3–23.
Hanlon, M., Heitzman, S., 2010. A review of tax research. J. Account. Econ. 20, 127–178.
Hausman, J.A., 1978. Specification tests in econometrics. Econometrica: J. Econom. Soc. 1251–1271.
Huizinga, H., Laeven, L., 2008. International profit shifting within multinationals: a multi-country perspective. J. Publ. Econ. 92 (5–6), 1164–1182.
Joseph, A., Chelsea, L., Alfred, Y., 2015. Corporate litigation & executive turnover. J. Corp. Finance 34 (C), 268–292.
Kim, J.B., Li, T., 2014. Multinationals' offshore operations, tax avoidance, and firm-specific information flows: international evidence. J. Int. Financ. Manag. Account. 25 (1), 38–89.
Klassen, K.J., Lisowsky, P., Mescall, D., 2017. Transfer pricing: strategies, practices, and tax minimization. Contemp. Account. Res. 34 (1), 455–493.
Kutner, M.H., Nachtsheim, C.J., Neter, J., Li, W., 2004. Building the regression model I: model selection and validation. Appl. Linear Stat. Models 343–383.
Larcker, D.F., Rusticus, T.O., 2010. On the use of instrumental variables in accounting research. J. Account. Econ. 49 (3), 186–205.
Lewbel, A., 1997. Constructing instruments for regressions with measurement error when no additional data are available, with an application to patents & R&D. Econometrica 65, 1201–1213.
Manzon Jr., G.B., Plesko, G.A., 2001. The relation between financial and tax reporting measures of income. Tax Law Rev. 55, 175.
Merz, J., Overesch, M., 2016. Profit shifting and tax response of multinational banks. J. Bank. Finance 68, 57–68.
Mitra, S., Jaggi, B., Al-Hayale, T., 2019. Managerial overconfidence, ability, firm governance and audit fees. Rev. Quant. Finance Account. 52, 841–870.
Petersen, M., 2009. Estimating standard errors in finance panel data sets: Comparing approaches. Rev. Financ. Stud. 22 (1), 435–480.
Pukthuanthong, K., Turtle, H., Walker, T., Wang, J., 2017. Litigation risk and institutional monitoring. J. Corp. Finance 45, 342–359.
Rego, S.O., 2003. Tax-avoidance activities of US multinational corporations. Contemp. Account. Res. 20 (4), 805–833.
Richardson, G., Taylor, G., 2015. Income shifting incentives and tax haven utilization: evidence from multinational US firms. Int. J. Account. 50 (4), 458–485.
Richardson, G., Taylor, G., Obaydin, I., Hasan, M.M., 2021. The effect of income shifting on the implied cost of equity capital: evidence from US multinational corporations. Account. Bus. Res. 51 (4), 347–389.
Sartip, A., 2008. Auditing the integrity of AML programs: periodic audits of a financial institution's anti-money laundering program can help ensure a sound strategy that mitigates the risks associated with the practice. Intern. Audit. 65 (1), 55–59.
Shackelford, D., Shevlin, T., 2001. Empirical tax research in accounting. J. Account. Econ. 31, 321–387.
Stock, J.H., Yogo, M., 2005. In: Testing for weak instruments in IV regression. Identification and Inference for Econometric Models: A Festschrift in Honor of Thomas Rothenberg. Cambridge University Press, Cambridge, U.K., pp. 80–108
Sugathan, A., George, R., 2015. The influence of governance infrastructure & corporate governance on profit shifting. J. Int. Bus. Stud. 46, 886–916.
Tax Justice Network Australia (TJN-Aus), 2013. Submission to Issues Paper on Implications of the Modern Global Economy for the Taxation of Multinational Enterprises.
Taylor, G., Richardson, G., 2012. International corporate tax avoidance practices: evidence from Australian firms. Int. J. Account. 47 (4), 469–496.
Taylor, G., Richardson, G., Al-Hadi, A., Obaydin, I., 2018. The effect of tax haven utilization on the implied cost of equity capital: evidence from US multinational firms. J. Int. Account. Res. 17 (2), 41–70.
Unger, B., Rossel, L., Ferwerda, J., 2021. Combating Fiscal Fraud and Empowering Regulators: Bringing Tax Money Back into the COFFERS. Oxford University Press, p. 368.
Wooldridge, J.M., 2010. Econometric Analysis of Cross Section & Panel Data. MIT Press.
Yeoh, P., 2020. Banks' vulnerabilities to money laundering activities. J. Money Laund. Control 23 (2), 122–135.
Yepes, C.V., 2011. Compliance with the AML/CFT International Standard: Lessons from a Cross-Country Analysis. IMF, Washington, D.C.. Authorized for distribution by Ross Leckow, WP/11/177.