



Forecasting disorientation in the tax avoidance map: Tax haven subsidiaries and analyst forecasts

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ABSTRACT

In the context of economic globalization, China has actively encouraged its enterprises to “Go Global” to enhance their core competitiveness. However, in recent years, many companies have been drawn to the unique features of tax havens, establishing subsidiary in these regions to exploit regulatory and institutional arbitrage rather than focusing on genuine production and operations. This study uses panel data from Chinese listed companies from 2007 to 2022 to investigate the impact of tax haven subsidiary layout on analyst forecast accuracy and the underlying mechanisms. Our findings show that tax haven subsidiary layout significantly reduces analyst forecast accuracy. This negative effect is primarily driven by increased information asymmetry and heightened operational risks caused by tax haven subsidiary layout. Moreover, the impact is more pronounced in firms with higher controlling shareholder tunneling, lower media attention, stronger product market competition, and weaker tax enforcement. Our research contributes to a deeper understanding of the adverse effects of tax haven subsidiary layout, offering crucial insights for promoting efficient capital flow and sustainable economic development in emerging markets.

1. Introduction

As economic globalization and market integration continue to advance and deepen, an increasing number of companies are shifting their investment focus overseas in search of new growth opportunities. In this context, certain countries and regions are intensifying their efforts to attract foreign investment through preferential tax regimes, particularly tax havens that offer low or zero tax rates. These jurisdictions often feature weak legal and regulatory frameworks and promise strict confidentiality for investors (Durnev, Li, and Magnan, 2017). Such characteristics lower the transaction costs for companies entering these markets, enabling them to engage in regulatory or institutional arbitrage (Buckley, Sutherland, Voss, and El-Gohari, 2013). As a result, tax havens have become preferred destinations for international corporate investments, with wealth held in tax havens by various countries amounting to approximately 10 % of global GDP (Alstadsæter, Johannesen, and Zucman, 2018). However, much of the capital flowing into tax havens is primarily aimed at permanent or temporary tax avoidance, rather than genuine productive activities (Chen and Lehmer, 2020; Law and Mills, 2021).

Tax havens create a gray area for international tax planning and business strategies for companies worldwide, and the economic consequences have become a focal point in academic research. At the national level, tax havens can lead to capital outflows, eroding the tax base of the home country, causing substantial losses in tax revenue, and diminishing overall productivity (Bricongne, Delpuch, and Forero, 2023; Kemme, Parikh, and Steigner, 2017; Krautheim and Schmidt-Eisenlohr, 2011). From a corporate standpoint, while investments in tax havens can provide tax savings (Dyreg and Lindsey, 2009), they may also negatively impact corporate value (Choy, Lai, and Ng, 2017). This detrimental effect arises as tax haven investments exacerbate agency problems (Atwood and Lewellen, 2018) and weaken the quality of financial reporting (Lewellen, 2022).

Moreover, creditors may demand higher interest rates due to concerns about the solvency of companies investing in tax havens (Richardson, Taylor, and Obaydin, 2020). Similarly, auditors may increase audit fees due to the complex financial structures of these companies (Eulaiwi et al., 2021). However, compared to creditors and auditors, analysts hold a dual role as both information users and providers, which makes their function in the capital market particularly

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significant. Analysts closely monitor various aspects of a company's operations throughout the fiscal year and provide objective forecasts regarding the company's outlook (Altinkılıç, Balashov, and Hansen, 2013; Huang, Leavy, Zang, and Zheng, 2018). Their forecasts are often seen as more reliable and forward-looking, offering superior investment recommendations to investors (Loh and Mian, 2006), valuable insights for the bond market (Mansi, Maxwell, and Miller, 2010), and contributing to improved corporate investment efficiency within the industry (He, Guo, and Yue, 2023). However, the impact of tax haven subsidiary layout on analyst forecast accuracy has received limited attention in the literature. Our research seeks to address this gap.

The primary factors influencing analyst forecast accuracy are the quantity and quality of information analysts obtain about a company. On one hand, the quantity of information refers to the total amount of various information regarding the company and its operating environment. Factors such as voluntary information disclosures, management earnings forecasts, performance commitments, mandatory disclosure letters, and analysts' on-site visits can help analysts better understand the company's current situation and prospects, thereby improving forecast accuracy (Cheng, Du, Wang, and Wang, 2016; Hu, Xu, and Xue, 2022; Kim and Song, 2015; Liu, Yang, and Xiong, 2023; Tsao, Lu, and Keung, 2016). On the other hand, information quality refers to the accuracy, relevance, and completeness of the information. Elements such as the readability of annual reports, earnings quality, complexity of tone, and catering behavior in narrative disclosures affect analysts' efficiency in processing and interpreting information, thus influencing forecast accuracy (Du, Yu, Fu, and Ding, 2024; Kwon, Zhou, Wang, Cheng, and Qiao, 2023; Leavy, Li, and Merkley, 2011; Zhou, Ma, and Yang, 2024). Additionally, uncertainties in a company's operating activities, such as political uncertainty, policy changes, and environmental risks, also impact analyst forecast accuracy (Boubakri, Bouslimi, and Zhong, 2022; Liu, Zhou, Su, Liu, and An, 2023; Wang, Gan, and Li, 2021).

While existing research indicates that corporate tax avoidance can affect analyst forecast accuracy, the underlying reasons have not been thoroughly analyzed or confirmed (Balakrishnan, Blouin, and Guay, 2019; Francis, Neuman, and Newton, 2019). The tax haven subsidiary layout is not only a strategy for cross-border tax avoidance but also reflects investment behavior within a specific international context. The tax strategies and conditions offered by tax havens may simultaneously influence a company's information disclosure and operational activities. This creates additional challenges for analysts, and whether these challenges affect their forecast accuracy is a key question we aim to explore.

In recent years, the phenomenon of Chinese listed companies investing in tax havens has become increasingly common, rising from over 120 companies in 2004 (less than 10 % of the total) to more than 2300 companies in 2022 (nearly 50 % of the total). Since the "Go Global" strategy was introduced in 2000, China has steadily expanded its foreign investment scale, aiming to enhance its economic strength and position within the international value chain. However, while foreign investment plays a critical role in driving innovation and productivity growth in developing countries, much of the capital flowing into tax havens is not intended for genuine business development. Instead, it seeks tax benefits and regulatory arbitrage. This deviates from the original purpose of China's "Go Global" strategy, highlighting the need to fully assess the economic consequences of investments in tax havens.

In emerging markets like China, challenges such as imperfect market information disclosure systems, lengthy implementation cycles for regulatory measures, and the limited ability of individual investors to access and interpret information are common. As a result, the timely and professional insights provided by analysts become particularly important. This makes it essential to examine the impact of tax haven subsidiary layout on analyst forecast accuracy in the Chinese context. The findings from this research can also be extended to other emerging markets, offering valuable insights for other countries as well.

Based on this, we selected Chinese A-share listed companies from 2007 to 2022 as our sample to analyze the impact of tax haven subsidiary layout on analyst forecast accuracy. The study finds that tax haven subsidiary layout significantly reduces analyst forecast accuracy. This conclusion remains robust after a series of tests, including the use of instrumental variable methods, the Heckman two-stage model, the substitution of core variables, and the exclusion of special samples. In our mechanism analysis, we find that tax haven subsidiary layout decreases forecast accuracy by increasing information asymmetry and exacerbating operational risk. Heterogeneity analysis reveals that the negative impact of tax haven subsidiary layout on analyst forecast accuracy is more pronounced in companies with higher controlling shareholder tunneling, lower media attention, stronger product market competition, and weaker tax enforcement.

The potential contributions of this paper are as follows: First, our research is the first to investigate the impact of tax haven subsidiary layout on analyst forecast accuracy in the Chinese context. While existing studies have shown that tax haven investments can lead to negative evaluations from creditors and auditors (Eulawi et al., 2021; Richardson, Taylor, and Obaydin, 2020), few have explored whether these investments affect the analyst forecasts who serve as professional evaluators of companies. Unlike creditors and auditors, who focus on specific aspects of a company, analysts continuously monitor the overall operational status of companies and provide relevant decision-making guidance to managers, investors, and creditors based on the company's prospects. Given the comprehensive nature of analyst forecasts, the forward-looking aspect of their analyses, and the significant influence of their recommendations, it is crucial to examine how tax haven investments specifically impact analyst forecasts. Our research seeks to address this gap in the literature.

Second, our research expands the study of factors affecting analyst forecast accuracy from the perspective of tax haven subsidiary layout, enhancing the understanding of the internal mechanisms of this causal relationship and its heterogeneity under different contexts. While existing studies have found that corporate tax avoidance reduces analyst forecast accuracy (Balakrishnan, Blouin, and Guay, 2019; Francis, Neuman, and Newton, 2019), their focus is primarily on the correlation between the degree of corporate tax avoidance and analyst forecasts, without specifically examining how a particular tax avoidance measure affects analyst forecasts. Our research not only focuses on the strategies companies use to achieve tax avoidance through tax haven subsidiaries but also analyzes the unique institutional environments of tax havens to understand the internal mechanisms by which tax haven subsidiary layout influence analyst forecasts. Additionally, we incorporate multi-level heterogeneity analysis to identify causal differences in various contexts. This extension helps to clarify the underlying reasons why tax haven subsidiary layout constrain analyst forecast accuracy.

Third, our research contributes to strengthening the regulation of cross-border investments in emerging markets and guiding the implementation of external development strategies. We observe that as China continues to encourage companies to "Go Global," a significant portion of capital is diverted to tax havens. This suggests that while emerging markets are eager to promote outward investment, they must also enhance the regulation of capital flows and foster international cooperation. By making coordinated adjustments to cross-border investment strategies, these markets can establish a more equitable, rational, and open investment environment, ensuring effective capital flows and sustainable economic development. Our research also provides valuable insights for other emerging economies, encouraging companies worldwide to better engage in global market competition and contribute to stable global economic growth.

The paper is organized as follows. Section 2 presents the theoretical analysis and research hypothesis. Section 3 describes the research design. Section 4 reports and analyses the empirical results. Section 5 explores the mechanisms and reveals the heterogeneous effects. Section 6 provides the conclusions and implications.

2. Theoretical analysis and hypothesis development

The inherent characteristics of tax havens, along with managerial information manipulation under these conditions, contribute to increased corporate information asymmetry. One of the key features of tax havens is their absence or low rates of taxation, which serve as the primary incentive for companies to establish subsidiaries there (Hines and Rice, 1994; OECD, 1998). Companies can transfer profits to tax havens using techniques such as transfer pricing and thin capitalization, enabling international tax avoidance (Davies, Martin, Parenti, and Toubal, 2018; Dharmapala, 2008; Dyreng and Lindsey, 2009). These specialized tax avoidance strategies add complexity to corporate structures and business operations, resulting in convoluted cash flows and distorted cost-profit relationships. This obscures the true sources and sustainability of company profits (Balakrishnan, Blouin, and Guay, 2019; Chen, Hepfer, Quinn, and Wilson, 2018). As a result, the effectiveness of financial reports in conveying accurate information to external parties is diminished, thereby increasing information asymmetry between the company and its stakeholders.

Additionally, tax havens are characterized by a high confidentiality in banking, taxation, and business, as well as a lack of information exchange with regulatory authorities in other countries (Jones and Temouri, 2016). This further increases the level of information asymmetry both within and outside the company. Furthermore, the low transparency and complexity created by tax havens offer a natural “umbrella” for managers to engage in self-serving activities. To conceal rent-seeking behavior, managers often resort to practices such as whitewashing accounting entries, obfuscating company accounts, and manipulating accounting information. These actions increase the difficulty of understanding financial information or even hide certain details altogether, thereby exacerbating information asymmetry (Durnev, Li, and Magnan, 2017; Frank, Lynch, and Rego, 2009).

The increase in information asymmetry leads to a reduction in the availability of company information, which serves as the objective basis for analyst forecasts (Lang and Lundholm, 1996). This makes it difficult for analysts to fully and accurately understand a company's internal operations, limiting their ability to interpret how current financial information relates to future cash flows. As a result, analyst forecast accuracy is diminished (Byard and Shaw, 2003; Lehavy, Li, and Merkley, 2011).

The tax haven subsidiary layout not only affects the level of information asymmetry between the company and external stakeholders but also increases its operational risk. On one hand, the secretive environment of tax havens, combined with the company's complex tax avoidance strategies, provides managers with more opportunities to conceal the transfer of company resources, making it more difficult for external shareholders to monitor self-serving behaviors (Durnev, Li, and Magnan, 2016). The reduction in the marginal cost of opportunistic behavior strengthens managers' incentives to pursue personal gains. Additionally, the extra cash generated from tax avoidance enables opportunistic behaviors such as excessive on-the-job consumption and overinvestment, potentially leading to the expropriation of company resources (Atwood and Lewellen, 2018). Together, these factors exacerbate agency problems, ultimately increasing the company's operational risk.

On the other hand, with the strengthening of international tax cooperation in recent years and the improvement of China's domestic laws and regulations, the legal risks associated with aggressive tax avoidance in tax havens have increased (Li, Ma, and Shuai, 2022; Chen, Li, Lu, and Li, 2024). If such practices are not recognized by tax authorities, companies may not only face hefty fines but also administrative and criminal penalties (Lewellen, Mauler, and Watson, 2021). This increases the risk of funding shortages and liquidity issues, adding uncertainty to the company's ongoing business operations. Furthermore, the reputational damage resulting from violations and penalties can adversely affect the company's financing activities and its relationships with suppliers and customers (Beladi, Chao, and Hu, 2018; Gallemore,

Maydew, and Thornock, 2014; Hanlon and Slemrod, 2009). The uncertainty surrounding continuous business operations further heightens operational risk.

The heightened operational risks increase the volatility of company earnings, reducing overall information certainty (Zhang, 2006). This decrease in predictability makes it more challenging for analysts to produce accurate forecasts and raises the costs associated with gathering and processing information. As a result, analyst forecast accuracy is reduced (Das, Levine, and Sivaramakrishnan, 1998; Song, Kim, and Won, 2009).

Based on the above analysis, we propose the following hypothesis:

H1. Tax haven subsidiary layout will significantly reduce analyst forecast accuracy.

3. Empirical design

3.1. Sample selection and data sources

We select Chinese A-share listed companies from 2007 to 2022 as the initial sample and draw on the relevant literature to exclude the following sample observations: (1) companies in the financial industry; (2) companies treated by ST and *ST; (3) companies without subsidiaries incorporated in tax havens; (4) companies not followed by any analysts; (5) observations for which the relevant data are missing. Our study ultimately contains 11,201 observations. All firm-level continuous variables are winsorized at the 1st and 99th percentiles to mitigate the influence of extreme values on estimation outcomes. All data covered in this paper are mainly from the China Stock Market & Accounting Research Database (CSMAR) and Chinese Research Data Services Platform (CNRDS).

3.2. Model specification

To study the impact of tax haven subsidiary layout on analyst forecast accuracy, we construct the following econometric model:

$$Accuracy_{i,t} = \alpha_0 + \beta_1 THSL_{i,t} + \lambda Controls_{i,t} + \mu_i + \nu_t + \varepsilon_{i,t} \quad (1)$$

Where the subscript i, t denote the firm and year respectively. *Accuracy* represents analyst forecast accuracy. *THSL* represents the tax haven subsidiary layout. *Controls* represents a set of control variables described in detail in the subsequent section. In addition, to eliminate the influence of factors that do not change individually or over time, we control the firm and year fixed effects. To alleviate possible problems of heteroskedasticity and sequence correlation, we also adjust for clustering of the standard errors of the regression coefficients at the firm level.

3.3. Variable definition

3.3.1. Analyst forecast accuracy (accuracy)

Following Duru and Reeb (2002) and Behn, Choi, and Kang (2008), we use the inverse of analyst forecast bias to measure analyst forecast accuracy. Analyst forecast bias is defined as the absolute value of the difference between the mean of analysts' forecasted earnings per share (EPS) and the actual EPS, divided by the closing stock price at the end of the previous year. In this context, the EPS forecast refers to the last forecast made by each analyst for the same company between the release of the previous year's annual report and the release of the current year's annual report. Additionally, if a research report is signed by more than one analyst, we use the forecast of the first-ranked analyst.

$$Accuracy_{i,t} = (-1) \times \frac{|mean_FEPS_{i,t} - EPS_{i,t}|}{Price_{i,t-1}} \quad (2)$$

Where *mean_FEPS* denotes the mean value of analysts' forecasted earnings per share of firm i at year t . *EPS* denotes the actual earnings per

share of firm i at year t . $Price$ denotes the stock price of firm i at year $t-1$.

3.3.2. Tax haven subsidiary layout (THSL)

Drawing on Richardson, Taylor, and Obaydin (2020), we measure $THSL$ as the number of tax haven subsidiaries divided by the total number of a firm's subsidiaries. In the absence of a unified list of specific tax havens, we adopt two widely used standards based on existing research and practice. The first is the OECD standard (OECD, 1998), the earliest official list proposed by the international organization. It identifies 42 countries or regions as tax havens based on four key criteria: (1) no or nominal taxation on relevant income, (2) lack of effective information exchange due to secrecy laws preventing tax authorities from accessing necessary information, (3) lack of transparency, and (4) no substantial activity operating requirements. The second is the Hines standard (Hines, 2010), which is commonly used in academic literature and includes 52 countries or regions. This standard focuses primarily on the actual tax rate paid by companies rather than the official tax rate. For example, Luxembourg's official corporate tax rate is 29 %, but companies can enter into private agreements with Luxembourg tax authorities to pay a significantly lower rate (sometimes 1 % or less). Consequently, we construct the variables $THSL_OECD$ and $THSL_Hines$ to measure tax haven subsidiary layout based on the two lists respectively.

3.3.3. Control variables (controls)

Following existing studies (Dai, Chao, and Wang, 2021; Liu, Zhou, Su, Liu, and An, 2023; Tam and Tian, 2023), we include the following control variables in the model: firm size ($Size$), financial leverage ($Leverage$), market-to-book ratio (MTB), profitability (ROA), annual stock return ($Return$), daily stock return volatility ($Volatility$), equity concentration ($Top1$), board independence ($INDEP$), audit quality ($Audit$), institutional shareholder ownership ($INSTIT$), analyst coverage ($Coverage$), and forecast horizon ($Horizon$). The definitions and calculations of these variables are provided in Table 1.

4. Empirical results

4.1. Summary statistics

Table 2 reports descriptive statistics for the main variables in this paper. As can be seen from Table 2, the minimum value of analyst forecast accuracy ($Accuracy$) is -0.1524 , and the maximum value is 0.0000 . The mean value is -0.0134 , which is lower than the median. This indicates that the analyst forecast accuracy is relatively low for

some companies in the sample, which drags down the average level. The mean values of $THSL_OECD$ and $THSL_Hines$ are 0.1115 and 0.1157 , respectively. This indicates that, on average, the proportion of tax haven subsidiaries in listed companies, as a percentage of total subsidiaries, is approximately 11 %. The minimum values of $THSL_OECD$ and $THSL_Hines$ are 0.0051 and 0.0085 , and the maximum values are 0.5000 and 0.5000 . This suggests that tax haven subsidiary layout varies considerably across different listed companies. The descriptive statistics of the remaining variables are consistent with those of previous studies.

4.2. Baseline regression results

Table 3 reports the baseline regression results of the impact of tax haven subsidiary layout on analyst forecast accuracy. The results show the coefficients of $THSL_OECD$ and $THSL_Hines$ are all negative and significant at the 5 % statistical level ($\beta = -0.0111$, $t = -2.15$; $\beta = -0.0107$, $t = -2.11$). The higher the proportion of a company's tax haven subsidiaries, the lower the analyst forecast accuracy. In terms of economic significance, for each standard deviation change in the tax haven subsidiary layout ($THSL_OECD$ and $THSL_Hines$), there will be respective changes in analyst forecast accuracy ($Accuracy$) by 0.107 % and 0.105 %, which equates to 7.994 % and 7.841 % of the mean analyst forecast accuracy over the sample period. It is evident that tax haven subsidiary layout significantly reduces analyst forecast accuracy, supporting hypothesis H1 of this paper.

A possible explanation is that investments in tax havens reduce corporate information transparency (Durnev, Li, and Magnan, 2017; Lewellen, 2022). Since company information is the primary basis for analyst forecasts, the information asymmetry directly affects forecast accuracy. Additionally, according to the tax avoidance theory within the agency framework by Desai, Dyck, and Zingales (2007) and Desai and Dharmapala (2009), investments in tax havens exacerbate corporate agency problems. Furthermore, with increasingly stringent regulations against tax evasion (Li, Ma, and Shuai, 2022), tax havens introduce more operational risks, making earnings more volatile. This added complexity increases the difficulty of analyst forecasts, thereby reducing their accuracy (Song, Kim, and Won, 2009).

4.3. Endogenous problems

The empirical findings of this study may be vulnerable to omitted variable bias and sample self-selection issues. Specifically, the omission of certain key variables may contribute to a notable negative correlation between tax haven subsidiary layout and analyst forecast accuracy. Additionally, the measurement of both the dependent and independent variables is constrained: only firms with tax haven subsidiary can measure their layout, and only firms followed by analysts can assess forecast accuracy. This distribution pattern in the sample may result in regression outcomes influenced by self-selection bias. To address these potential endogeneity challenges, we employ both an instrumental variable approach and a Heckman two-stage model.

4.3.1. Instrumental variable approach

Given that tax haven subsidiary layout is driven by both tax avoidance and overseas investment motives, finding ideal instrumental variables that satisfy both exogeneity and relevance conditions is challenging. Therefore, we use a common approach by employing the lagged term of the endogenous variable and the annual industry mean as instrumental variables. We then perform regression using two-stage least squares (2SLS). The lagged one-period term and annual industry mean of tax haven subsidiary layout meet the criteria for selecting instrumental variables, as both are strongly correlated with the current layout but are not directly related to the current analyst forecast accuracy.

Columns (1) and (2) of Table 4 report the regression results of the instrumental variable approach. The test of instrumental variable

Table 1
Definition of variables.

Variables	Variable definition
$Accuracy$	The opposite number of analyst forecast bias, where analyst forecast bias equals the absolute difference between the mean of the forecasted EPS and the real EPS, divided by the stock price at the end of last year
$THSL_OECD$	Number of subsidiaries incorporated in tax havens identified by the OECD standard / Total number of the firm's subsidiaries
$THSL_Hines$	Number of subsidiaries incorporated in tax havens identified by the Hines standard / Total number of the firm's subsidiaries
$Size$	Natural logarithm of total assets
$Leverage$	Total liabilities / Total assets
MTB	Market value of equity / Book value of equity
ROA	Net Profit / Total assets
$Return$	Annual stock return for the firm
$Volatility$	Standard deviation of daily stock returns
$Top1$	Number of shares held by the largest shareholder / Total share capital
$INDEP$	Number of independent directors / Total number of board members
$Audit$	Dummy variable, takes 1 if the firm is audited by an international Big 4 auditing firm, 0 otherwise
$INSTIT$	Number of shares held by institutional investors / Total share capital
$Coverage$	Natural logarithm of the total number of analysts following the firm
$Horizon$	Natural logarithm of the average days between the forecast date and the corresponding date of the actual financial report

Table 2
Descriptive statistics.

Variable	N	Mean	SD	Min	Median	Max
Accuracy	11,201	−0.0134	0.0232	−0.1524	−0.0059	0.0000
THSL_OECD	11,201	0.1115	0.0965	0.0051	0.0833	0.5000
THSL_Hines	11,201	0.1157	0.0982	0.0085	0.0870	0.5000
Size	11,201	22.9130	1.4056	20.4151	22.6897	27.0485
Leverage	11,201	0.4529	0.1916	0.0715	0.4566	0.8556
MTB	11,201	3.4133	2.8057	0.4520	2.5761	15.9281
ROA	11,201	0.0465	0.0543	−0.1719	0.0425	0.2106
Return	11,201	0.1687	0.6036	−0.6401	0.0099	2.6471
Volatility	11,201	0.0292	0.0088	0.0127	0.0280	0.0549
Top1	11,201	0.3383	0.1492	0.0834	0.3161	0.7445
INDEP	11,201	0.3791	0.0559	0.3333	0.3636	0.5714
Audit	11,201	0.1197	0.3247	0.0000	0.0000	1.0000
INSTTT	11,201	0.4916	0.2565	0.0110	0.5219	0.9561
Coverage	11,201	1.8559	1.0570	0.0000	1.9459	3.6889
Horizon	11,201	5.1989	0.4480	3.2452	5.2651	5.9135

Note: This table provides descriptive statistics for the main variables. All variables are defined in Table 1, and for each variable, we present its mean, standard deviation, minimum, median, maximum, and number of non-missing observations. There is a sample of 11,201 observations in the study. All continuous variables are winsorized at the 1st and 99th percentiles.

Table 3
Baseline regression results.

	(1)	(2)
	Accuracy	Accuracy
THSL_OECD	−0.0111** (−2.15)	
THSL_Hines		−0.0107** (−2.11)
Size	0.0001 (0.12)	0.0001 (0.13)
Leverage	0.0012 (0.38)	0.0012 (0.39)
MTB	−0.0005** (−2.39)	−0.0005** (−2.38)
ROA	0.2538*** (22.15)	0.2537*** (22.15)
Return	−0.0022*** (−4.21)	−0.0022*** (−4.21)
Volatility	−0.0853* (−1.84)	−0.0852* (−1.83)
Top1	0.0014 (0.28)	0.0014 (0.28)
INDEP	−0.0172** (−2.56)	−0.0172** (−2.55)
Audit	0.0016 (1.03)	0.0016 (1.03)
INSTTT	0.0029 (1.00)	0.0028 (0.98)
Coverage	0.0019*** (4.87)	0.0019*** (4.87)
Horizon	−0.0104*** (−20.72)	−0.0104*** (−20.73)
Constant	0.0321 (1.48)	0.0319 (1.47)
Firm	YES	YES
Year	YES	YES
Observations	11,201	11,201
Adj. R ²	0.425	0.425

Note: This table reports baseline regression results of the impact of tax haven subsidiary layout on analyst forecast accuracy. The dependent variable is the analyst forecast accuracy calculated by eq. (2). The independent variable is the proportion of subsidiaries incorporated in tax havens by the OECD standard and Hines standard, respectively. Columns (1) and (2) control for firm-fixed and year-fixed effects. All variables are defined in Table 1. ***, **, and * denote significant at the 1 %, 5 %, and 10 % statistical levels, respectively. Numbers in parentheses are adjusted t-values clustered by firm.

validity shows that the Kleibergen-Paap rk LM statistic are 101.338 and 102.435, and the Kleibergen-Paap rk Wald F statistic are 180.558 and 178.636, which rejects the under-identification hypothesis and the weak

Table 4
Endogenous problems.

	(1)	(2)	(3)	(4)
	Accuracy	Accuracy	Accuracy	Accuracy
THSL_OECD	−0.0221** (−2.30)		−0.0113** (−2.20)	
THSL_Hines		−0.0199** (−2.02)		−0.0110** (−2.16)
IMR			−0.0026 (−1.60)	−0.0026 (−1.62)
Constant			0.0481** (1.98)	0.0480** (1.97)
Controls	YES	YES	YES	YES
Firm	YES	YES	YES	YES
Year	YES	YES	YES	YES
Observations	11,116	11,116	11,201	11,201
K-P rk LM statistic	101.338	102.435		
K-P rk Wald F statistic	180.558	178.636		
Hansen J statistic	0.9185	0.8111		
Adj. R ²			0.425	0.425

Note: This table reports regression results after mitigating endogeneity issues. Columns (1)–(2) present regression results from the instrumental variable method, where the instrumental variables are the lagged one-period term and annual industry mean of the endogenous variable. Columns (3)–(4) show the regression results of the Heckman two-stage model. All variables are defined in Table 1. ***, **, and * denote significant at the 1 %, 5 %, and 10 % statistical levels, respectively. Numbers in parentheses are adjusted t-values clustered by firm.

instrumental variable hypothesis. And p-value of Hansen J-test are 0.9185 and 0.8111 respectively, there is no over-identification problem, which indicates that the instrumental variables satisfy the exogeneity requirement. The regression coefficients of THSL_OECD and THSL_Hines are significantly negative, which supports the research hypothesis of this paper. These results show that the research hypotheses of this paper still hold after considering the omitted variable bias.

4.3.2. Heckman two-stage model

In the first stage of the Heckman two-stage model, we construct a Probit selection model. Here, the dependent variable is defined as 1 if the company has a subsidiary in a tax haven and analysts issue forecast reports for it; otherwise, it is 0. Additionally, to satisfy the valid pre-requisite conditions for the selection model, we introduce a new control variable: the degree of internationalization, measured by the ratio of overseas revenue to total revenue, on top of the previously controlled variables. We then obtain the inverse Mills ratio (IMR) through Probit regression. In the second stage, we incorporate the IMR estimated from

the first stage as a control variable into model (1) and perform the regression again.

Columns (3) and (4) of Table 4 show the regression results of the Heckman two-stage model, where the regression coefficients of *IMR* are insignificant, indicating that there is no self-selection problem for our samples in this paper. The regression coefficients of *THSL_OECD* and *THSL_Hines* are significantly negative, which is not significantly different from the baseline regression results. These results show that the research hypotheses of this paper still hold after mitigating the self-selection problem.

4.4. Robustness tests

4.4.1. Substitution of the core variables

To avoid bias from indicator measures, we employ the following methodology to substitute the core variables. For the dependent variable, drawing on Lang and Lundholm (1996), *Accuracy2* is redefined as the opposite number of analyst forecast bias, where forecast bias is calculated as the absolute difference between the median of all analysts' final EPS forecasts for a given year and the firm's actual EPS, divided by the stock price at the end of last year. For the independent variables, we substitute the structural indicator of the proportion of subsidiaries with a scale indicator, using the absolute number of tax haven subsidiaries to reassess tax haven subsidiary layout. Specifically, we calculate the tax haven subsidiary layout as the natural logarithm of the total number of subsidiaries incorporated in tax havens (*THSL_OECD2* and *THSL_Hines2*).

Table 5 reports the regression results after substituting the core variables. The results in columns (1)–(2) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are significantly negative after substituting the dependent variables. The results in columns (3)–(4) show that the regression coefficients of *THSL_OECD2* and *THSL_Hines2* are significantly negative after substituting the independent variables. The above results still support the findings of this paper.

4.4.2. Exclusion of special samples

To mitigate the influence of special samples on our empirical findings, we adopt two approaches. First, following Hong and Kubik (2003), we exclude samples with fewer than three following analysts for the

Table 5
Substitution of the core variables.

	(1)	(2)	(3)	(4)
	Accuracy2	Accuracy2	Accuracy	Accuracy
<i>THSL_OECD</i>	−0.0106** (−2.03)			
<i>THSL_Hines</i>		−0.0106** (−2.04)		
<i>THSL_OECD2</i>			−0.0013** (−2.11)	
<i>THSL_Hines2</i>				−0.0013** (−2.05)
Constant	0.0481** (2.20)	0.0481** (2.19)	0.0199 (0.92)	0.0204 (0.95)
Controls	YES	YES	YES	YES
Firm	YES	YES	YES	YES
Year	YES	YES	YES	YES
Observations	11,201	11,201	11,201	11,201
Adj. R ²	0.417	0.417	0.427	0.425

Note: This table reports regression results after substituting the core variables. The dependent variable for columns (1)–(2) is analyst forecast accuracy calculated by Lang and Lundholm (1996). The independent variable for columns (3)–(4) is the natural logarithm of the total number of subsidiaries incorporated in tax havens identified by the OECD standard and Hines standard, respectively. All variables are defined in Table 1. ***, **, and * denote significant at the 1 %, 5 %, and 10 % statistical levels, respectively. Numbers in parentheses are adjusted t-values clustered by firm.

current year from our original research samples. Second, we remove samples affected by the 2008–2009 financial crisis and the 2015 Chinese stock market crash. The extreme shocks from these events could cause significant fluctuations in company earnings and lead to more conservative analyst forecasts, which may distort our results.

Table 6 reports the regression results after excluding special samples. The results in columns (1)–(2) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are significantly negative after excluding samples with fewer than three analysts following for the current year. The results in columns (3)–(4) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are significantly negative after excluding samples during the 2008–2009 financial crisis and the 2015 Chinese stock market crash. All these results support the research conclusion of this paper.

5. Additional analyses

5.1. Mechanisms analyses

The previous empirical results have preliminarily confirmed the negative correlation between tax haven subsidiary layout and analyst forecast accuracy. However, the underlying mechanisms behind this relationship have not yet been explored. Based on theoretical analysis, there are two potential mechanisms may explain this outcome: increased information asymmetry and heightened operational risk. Therefore, this section will further investigate how tax haven subsidiary layout reduces analyst forecast accuracy from these two perspectives.

5.1.1. Information asymmetry mechanism

The complex tax avoidance strategies employed by companies through tax haven subsidiary layout, coupled with information manipulation by management to conceal self-serving behavior, increase information asymmetry between the company and analysts. This, in turn, reduces analyst forecast accuracy. We selected two indicators to measure information asymmetry: first, the KV index (KV) as measured by Kim and Verrecchia (2001), where a higher KV value indicates a stronger dependence of stock returns on trading volume information and thus a higher level of information asymmetry; second, the bid-ask spread (BS) as proposed by Cheng, Dhaliwal, and Neamtiu (2011), where a higher BS value indicates greater information disparities among market participants and, consequently, higher information asymmetry.

Table 7 reports the regression results of the information asymmetry mechanism. The results in columns (1) and (2) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are significantly positive,

Table 6
Exclusion of specific samples.

	(1)	(2)	(3)	(4)
	Accuracy	Accuracy	Accuracy	Accuracy
<i>THSL_OECD</i>	−0.0100** (−2.02)		−0.0105** (−2.02)	
<i>THSL_Hines</i>		−0.0094* (−1.96)		−0.0101* (−1.93)
Constant	0.0157 (0.70)	0.0155 (0.69)	0.0437* (1.85)	0.0435* (1.84)
Controls	YES	YES	YES	YES
Firm	YES	YES	YES	YES
Year	YES	YES	YES	YES
Observations	8597	8597	9985	9985
Adj. R ²	0.395	0.394	0.439	0.439

Note: This table reports the regression results after excluding special samples. Columns (1)–(2) show the results after excluding samples with fewer than three analysts following for the year. Columns (3)–(4) show the results after excluding samples during the financial crisis of 2008–2009 and the Chinese stock market crash of 2015. All variables are defined in Table 1. ***, **, and * denote significant at the 1 %, 5 %, and 10 % statistical levels, respectively. Numbers in parentheses are adjusted t-values clustered by firm.

Table 7
Information asymmetry mechanism.

	(1)	(2)	(3)	(4)
	KV	KV	BS	BS
<i>THSL_OECD</i>	0.1158*** (4.51)		0.0466*** (3.16)	
<i>THSL_Hines</i>		0.1106*** (4.40)		0.0423*** (2.92)
Constant	0.7652*** (9.78)	0.7674*** (9.81)	0.9679*** (16.34)	0.9696*** (16.37)
Controls	YES	YES	YES	YES
Firm	YES	YES	YES	YES
Year	YES	YES	YES	YES
Observations	11,201	11,201	11,201	11,201
Adj. R ²	0.685	0.685	0.677	0.677

Note: This table reports the regression results of information asymmetry mechanism. Information asymmetry is measured by KV index(KV) and bid-ask spread(BS). Columns (1)–(2) show the results of the KV index. Columns (3)–(4) show the results of the bid-ask spread. All variables are defined in Table 1. ***, **, and * denote significant at the 1 %, 5 %, and 10 % statistical levels, respectively. Numbers in parentheses are adjusted t-values clustered by firm.

which suggests that tax haven subsidiary layout significantly increases KV index. The results in columns (3) and (4) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are significantly positive, which suggests that tax haven subsidiary layout significantly increases bid-ask spread. This suggests that information asymmetry is an impact mechanism by which tax haven subsidiary layout reduces analyst forecast accuracy, consistent with expectations.

5.1.2. Operational risk mechanism

The tax haven subsidiary layout can expose a company to substantial agency problems and legal risks, which in turn increases its operational risk. This heightened risk makes it more challenging for analysts to accurately predict company earnings, thereby reducing the accuracy of their forecasts. We measure operational risk using earnings volatility (EV) and expected default probability (EDP). For earnings volatility, following the methodology of John, Litov, and Yeung (2008), we use the standard deviation of the industry-adjusted ROA over the past three years as a measure. A higher EV value indicates greater instability in operational performance and higher operational risk. For expected default probability, we refer to the simplified default probability model used by Bharath and Shumway (2008). A higher EDP value indicates a greater likelihood of default and higher operational risk.

Table 8 reports the regression results of the operational risk

Table 8
Operational risk mechanism.

	(1)	(2)	(3)	(4)
	EV	EV	EDP	EDP
<i>THSL_OECD</i>	0.0474** (2.06)		0.0480** (2.04)	
<i>THSL_Hines</i>		0.0441** (1.96)		0.0429* (1.88)
Constant	0.4985*** (5.14)	0.4999*** (5.16)	−0.5073*** (−5.38)	−0.5053*** (−5.37)
Controls	YES	YES	YES	YES
Firm	YES	YES	YES	YES
Year	YES	YES	YES	YES
Observations	11,201	11,201	11,201	11,201
Adj. R ²	0.330	0.330	0.207	0.207

Note: This table reports the regression results of operational risk mechanism. Operating risk is measured by earnings volatility (EV) and expected default probability (EDP). Columns (1)–(2) show the results of the earnings volatility. Columns (3)–(4) show the results of the expected default probability. All variables are defined in Table 1. ***, **, and * denote significant at the 1 %, 5 %, and 10 % statistical levels, respectively. Numbers in parentheses are adjusted t-values clustered by firm.

mechanism. The results in columns (1) and (2) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are significantly positive, which suggests that tax haven subsidiary layout significantly increases earnings volatility. The results in columns (3) and (4) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are significantly positive, which suggests that tax haven subsidiary layout significantly increases expected default frequency. This suggests that operational risk is an impact mechanism by which tax haven subsidiary layout reduces analyst forecast accuracy, consistent with expectations.

5.2. Heterogeneity analyses

The tax haven subsidiary layout is a prominent form of corporate tax avoidance. Prior empirical findings suggest that such subsidiaries primarily reduce analyst forecast accuracy by increasing information asymmetry and exacerbating operational risks. To further investigate the varying impacts of tax haven subsidiary layout under different conditions, we will analyze their heterogeneous effects on analyst forecast accuracy from four distinct perspectives: controlling shareholder tunneling, media attention, product market competition, and tax enforcement.

5.2.1. Controlling shareholder tunneling

In capital markets where equity concentration is generally high, controlling shareholders often exploit the resources of listed companies through complex financial maneuvers and related party transactions (Johnson, La Porta, Lopez-de-Silanes, and Shleifer, 2000). In firms with a higher controlling shareholder tunneling, these shareholders are more likely to leverage the opacity of tax havens, using tax avoidance as a pretext to establish tax haven subsidiary for personal gain. Their frequent cross-border transactions and strong incentives to manipulate financial statements further increase information asymmetry. Additionally, as controlling shareholders exploit company resources more extensively, the company is more likely to face working capital shortages and heightened operational risks. Therefore, if information asymmetry and operational risk drive the relationship between tax haven subsidiary layout and analyst forecast accuracy, we expect this relationship to be more pronounced in firms with a higher controlling shareholder tunneling. Following the approach of Jiang, Lee, and Yue (2010) and Gong, Wang, and Yang (2020), we use the proportion of other receivables to total assets to measure the controlling shareholder tunneling. We then divide the samples into two groups based on the median level of controlling shareholder tunneling: one group with a higher controlling shareholder tunneling and the other with a lower tunneling, before conducting a group test.

Table 9 reports the regression results for heterogeneous effects from controlling shareholder tunneling perspective. The results in columns (1) and (3) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are −0.0253 and −0.242, and both are significant at the 1 % statistical level. The results in columns (2) and (4) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are −0.0029 and −0.0030, and neither is significant. The negative correlation between tax haven subsidiary layout and analyst forecast accuracy is more pronounced for firms with a higher controlling shareholder tunneling compared to those with a lower tunneling. This suggests that controlling shareholder tunneling increases information asymmetry and operational risk, thereby exacerbating the negative impact of tax haven subsidiary layout on analyst forecast accuracy.

5.2.2. Media attention

Media's information gathering and dissemination can significantly supplement a company's public disclosures (Bushee, Core, Guay, and Hamm, 2010). For companies with higher media attention, the degree of information asymmetry with external stakeholders is lower. Additionally, the media serves as an important external supervisory force, providing a key channel for the public and tax authorities to access

Table 9
Controlling shareholder tunneling.

	Accuracy			
	(1)	(2)	(3)	(4)
	Higher	Lower	Higher	Lower
<i>THSL_OECD</i>	−0.0253*** (−2.80)	−0.0029 (−0.51)		
<i>THSL_Hines</i>			−0.0242*** (−2.73)	−0.0030 (−0.51)
Constant	0.1154*** (3.23)	−0.0152 (−0.54)	0.1152*** (3.23)	−0.0151 (−0.54)
Controls	YES	YES	YES	YES
Firm	YES	YES	YES	YES
Year	YES	YES	YES	YES
Observations	5600	5601	5600	5601
Adj. R ²	0.497	0.390	0.497	0.390

Note: This table reports the regression result of heterogeneous effect from the controlling shareholder tunneling perspective. The samples in columns (1) and (3) are firms with a higher controlling shareholder tunneling, and the samples in columns (2) and (4) are firms with a lower controlling shareholder tunneling. All variables are defined in Table 1. ***, **, and * denote significant at the 1 %, 5 %, and 10 % statistical levels, respectively. Numbers in parentheses are adjusted t-values clustered by firm.

company information. Increased media attention can help mitigate agency issues and regulate behaviors such as tax irregularities (An, Jin, Liu, and Zheng, 2022; Qi, Li, and Zhang, 2023), thereby further reducing operational risks. Therefore, if information asymmetry and operational risk are driving factors in the relationship between tax haven subsidiary layout and analyst forecast accuracy, we expect the negative impact of tax haven subsidiary layout on forecast accuracy to be more pronounced for companies with lower media attention. Following the method of He, Xu, Wang, and Chan (2023), we use the number of times a company appears in online news headlines to measure media attention. We then divide the sample into two groups based on the median level of media attention: one group with higher media attention and one with lower attention, and conduct a group test.

Table 10 reports the regression results for heterogeneous effects from media attention perspective. The results in columns (1) and (3) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are −0.0089 and −0.0079, and neither is significant. The results in columns (2) and (4) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are −0.0138 and −0.0147, and both are significant at the 5 % statistical level. The negative correlation between tax haven

Table 10
Media attention.

	Accuracy			
	(1)	(2)	(3)	(4)
	Higher	Lower	Higher	Lower
<i>THSL_OECD</i>	−0.0089 (−1.29)	−0.0138** (−2.02)		
<i>THSL_Hines</i>			−0.0079 (−1.15)	−0.0147** (−2.25)
Constant	0.0150 (0.48)	0.0026 (0.08)	0.0145 (0.47)	0.0033 (0.09)
Controls	YES	YES	YES	YES
Firm	YES	YES	YES	YES
Year	YES	YES	YES	YES
Observations	5573	5628	5573	5628
Adj. R ²	0.408	0.475	0.408	0.475

Note: This table reports the regression result of heterogeneous effect from the media attention perspective. The samples in columns (1) and (3) are firms with higher level of media attention, and the samples in columns (2) and (4) are firms with lower level of media attention. All variables are defined in Table 1. ***, **, and * denote significant at the 1 %, 5 %, and 10 % statistical levels, respectively. Numbers in parentheses are adjusted t-values clustered by firm.

subsidiary layout and analyst forecast accuracy is more pronounced for firms with a lower media attention compared to those with a higher attention. This suggests that media attention plays a corporate governance role by reducing information asymmetry and operational risk, thereby mitigating the negative impact of tax haven subsidiary layout on analyst forecast accuracy.

5.2.3. Product market competition

Changes in the level of product market competition can prompt companies to adjust their strategies to gain or maintain a competitive advantage (Teece, Pisano, and Shuen, 1997). The higher the market competition, the greater the pressure and uncertainty faced by companies, which can weaken their ability to generate cash flow (Huang and Lee, 2013). To defend against competitors, companies are more likely to resort to tax planning and other measures (Kubick, Lynch, Mayberry, and Omer, 2014). Therefore, we expect the negative impact of tax haven subsidiary layout on analyst forecast accuracy to be more pronounced for companies in with higher product market competition. Following the approach of Cremers, Nair, and Peyer (2008), we use the median Lerner index of individual firms within an industry to measure the product market competition. We then divide the sample into two groups based on the median level of product market competition: one group with higher product market competition and the other with lower competition, and conduct a group test.

Table 11 reports the regression results for heterogeneous effects from product market competition perspective. The results in columns (1) and (3) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are −0.0156 and −0.0157, and both are significant at the 1 % statistical level. The results in columns (2) and (4) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are −0.0116 and −0.0092, and neither is significant. That is, the negative correlation between tax haven subsidiary layout and analyst forecast accuracy is more pronounced for firms with a higher product market competition than those with a lower product market competition. This indicates that product market competition increases corporate tax avoidance tendencies and behaviors, exacerbating the negative impact of the placement of tax haven subsidiary layout on analyst forecast accuracy.

5.2.4. Tax enforcement

The primary purpose of tax regulation is to ensure that taxpayers comply with tax laws and regulations, thereby preventing tax violations. In regions with stronger tax enforcement, tax authorities can play a more

Table 11
Product market competition.

	Accuracy			
	(1)	(2)	(3)	(4)
	Stronger	Weaker	Stronger	Weaker
<i>THSL_OECD</i>	−0.0156*** (−2.93)	−0.0116 (−0.98)		
<i>THSL_Hines</i>			−0.0157*** (−3.06)	−0.0092 (−0.79)
Constant	0.0451 (1.64)	0.0541 (1.27)	0.0452 (1.64)	0.0534 (1.25)
Controls	YES	YES	YES	YES
Firm	YES	YES	YES	YES
Year	YES	YES	YES	YES
Observations	5615	5586	5615	5586
Adj. R ²	0.468	0.425	0.468	0.425

Note: This table reports the regression result of heterogeneous effect from the product market competition perspective. The samples in columns (1) and (3) are firms with a higher product market competition, and the samples in columns (2) and (4) are firms with a lower product market competition. All variables are defined in Table 1. ***, **, and * denote significant at the 1 %, 5 %, and 10 % statistical levels, respectively. Numbers in parentheses are adjusted t-values clustered by firm.

effective supervisory role, and the increased cost of tax avoidance reduces companies' incentives to invest in tax havens (Gavious, Livne, and Chen, 2022; Lee, 2017). Conversely, in regions with weaker tax enforcement, tax violations are less likely to be detected and sanctioned, making companies more inclined to establish subsidiaries in tax havens. Therefore, we expect the negative impact of tax haven subsidiary layout on analyst forecast accuracy to be more pronounced for companies in with weaker tax enforcement. Following the approach of Mertens (2003), we use the ratio of actual tax revenue to expected tax revenue for each region to measure tax enforcement. We then divide the sample into two groups based on the median level of tax enforcement: one group with stronger tax enforcement and the other with weaker enforcement, and conduct a group test.

Table 12 reports the regression results for heterogeneous effects from tax enforcement perspective. The results in columns (1) and (3) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are -0.0042 and -0.0052 , and neither is significant. The results in columns (2) and (4) show that the regression coefficients of *THSL_OECD* and *THSL_Hines* are -0.0198 and -0.0190 , and both are significant at the 5 % statistical level. That is, the negative correlation of tax haven subsidiary layout on analyst forecast accuracy is more pronounced for firms with weaker tax enforcement than those with stronger tax enforcement. This indicates that tax regulation plays a clear role in curbing corporate tax avoidance tendencies and behaviors, and can mitigate the negative impact of tax haven subsidiary layout on analyst forecast accuracy.

6. Conclusions

With the deepening of China's "Go Global" strategy, the international cooperation framework of the "Belt and Road" initiative, and the continuous development of a new open economic system, overseas investment activities by listed companies have played an increasingly important role in the country's economic growth. However, given the substantial capital flows to tax havens, it has become urgent and necessary to further explore their economic consequences. Our research, using data from Chinese listed companies between 2007 and 2022, empirically examines the impact of tax haven subsidiary layout on analyst forecast accuracy. The study finds that tax haven subsidiary layout negatively affects analyst forecast accuracy, a conclusion that remains robust after a series of checks. Mechanism analysis shows that increased information asymmetry and heightened operational risks are the channels through which tax haven subsidiary layout influence analyst forecast accuracy. Heterogeneity analysis further reveals that this negative relationship is more pronounced in companies with higher controlling shareholder tunneling, lower media attention, stronger product market competition, and weaker tax enforcement.

Based on the research findings, we offer the following insights: For enterprises, while establishing subsidiaries in tax havens can provide tax savings, it also reduces the accuracy of analyst earnings forecasts. Since analyst forecasts significantly influence the decisions of other stakeholders, a decline in forecast accuracy may result in unexpected costs for the company. Therefore, companies should recognize that investing in tax havens is a "double-edged sword." They should carefully weigh the benefits and costs of tax avoidance, adopt compliant tax-saving measures, and formulate strategies that support the long-term development of the business.

For analysts, the presence of subsidiaries in tax havens adds layers of complexity to a company's operations and informational landscape, complicating the forecasting process. Accurate earnings forecasts are critical for maintaining an analyst's reputation and determining their compensation. As a result, when evaluating companies with investments in tax havens, analysts must devote more time and effort to gather data and reduce information asymmetry. A thorough understanding of the company's governance structure is also essential to identify potential agency issues. Moreover, analysts need a deep understanding of the regulatory environment in tax havens to assess whether such foreign

Table 12

Tax enforcement.

	Accuracy			
	(1)	(2)	(3)	(4)
	Stronger	Weaker	Stronger	Weaker
<i>THSL_OECD</i>	-0.0042 (-0.64)	-0.0198^{**} (-2.22)		
<i>THSL_Hines</i>			-0.0052 (-0.82)	-0.0190^{**} (-2.10)
Constant	-0.0121 (-0.37)	0.0658^{*} (1.87)	-0.0116 (-0.35)	0.0657^{*} (1.87)
Controls	YES	YES	YES	YES
Firm	YES	YES	YES	YES
Year	YES	YES	YES	YES
Observations	5436	5761	5436	5761
Adj. R ²	0.390	0.448	0.390	0.448

Note: This table reports the regression result of heterogeneous effect from the tax enforcement perspective. The samples in columns (1) and (3) are firms with stronger tax enforcement, and the samples in columns (2) and (4) are firms with weaker tax enforcement. All variables are defined in Table 1. ***, **, and * denote significant at the 1 %, 5 %, and 10 % statistical levels, respectively. Numbers in parentheses are adjusted t-values clustered by firm.

investments increase operational uncertainty, requiring adjustments to their forecasts.

For the government, while promoting the "Go Global" strategy to encourage international expansion, it must also recognize that many enterprises are exploiting regulatory and institutional arbitrage in tax havens without genuine operational intent. To manage this issue effectively in its foreign development strategy, the government should implement differentiated regulatory measures to carefully supervise the overseas investment activities of these companies. For firms investing in tax havens, targeted tax enforcement, along with independent media oversight, can improve governance. Additionally, the government should strengthen oversight of enterprises with strong incentives for controlling shareholder tunneling and those facing intense product market competition to deter inappropriate behaviors effectively.

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Data availability

Data will be made available on request.

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