The effect of tax avoidance on earnings persistence: evidence from China

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Abstract

Purpose – The purpose of this paper is to investigate the relationship between tax avoidance and earnings persistence in the light of a developing economy, with the main focus on China.

Design/methodology/approach – In the analysis, the author conducts a survey on the tax avoidance situation of Chinese listed companies from 2012 to 2020. Then, a multivariate regression analysis is performed in order to analyse the relationship between corporate tax avoidance and earnings persistence.

Findings – The findings of the present study show that tax avoidance has a significant positive effect on earnings persistence. However, when the degree of tax avoidance is high, the "risk effect" of tax avoidance exceeds the "value effect", and tax avoidance will reduce the persistence of earnings. This conclusion is even more prominent when the company is non-state-owned. Further research shows the increase of institutional investors' shareholding ratio can improve "value effect" of tax avoidance, lessen "risk effect" of tax avoidance, and positively affect the relationship between tax avoidance and earnings persistence.

Practical implications – This study provides evidence for investors to understand the dual effect of tax avoidance on earnings persistence. The results may have implications for regulatory bodies. They can provide a better understanding of the corporate governance role of institutional investors in curbing opportunistic tax avoidance.

Originality/value – This study enriches the research on tax avoidance effects by analysing the impact of tax avoidance on earnings persistence. This study also compensates for the shortcomings of analysing earnings persistence mainly from the perspective of tax differences in the past, and promotes the study of the corporate governance effects of institutional investors under different levels of tax avoidance.

Keywords Tax avoidance, Earnings persistence, Property rights, Institutional investors

Paper type Research paper

1. Introduction

Earnings persistence refers to the degree to which earnings are maintained in the future (Lipe, 1990). It is an important standard to measure the quality of earnings (Atwood and Lewellen, 2019). Blaylock *et al.* (2012) believe that earnings persistence can also provide a reference for investors to evaluate the value of a company. Investors can use earnings persistence to better predict future earnings and obtain a company's equity value. Frankel and Litov (2009) suggested that a better understanding of the drivers of earnings persistence would help investors understand the information in the company's current earnings. Therefore, earnings persistence is important for managers, investors, and other stakeholders to make relevant decisions.

At present, China's economy is in a transition phase, and high-quality development is the theme of social development. Achieving sustainable surplus is an important way to achieve high-quality development. However, due to the narrow financing channels of most companies in China, the surplus of many companies is not sustainable, and some companies even have the situation of "excellent performance in one year, flat performance

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in two years, and poor performance in three years". Therefore, how to improve the sustainability of Chinese companies' earnings, promote their survival and development in the fierce market competition, and get closer to the goal of high-quality Chinese economy is still an urgent problem to solve. The determinants of earnings persistence have also become a hot topic for researchers. Regarding the impact of tax avoidance on earnings, scholars have mainly focused on the effects of book-tax differences. Hanlon (2005) argued that significant book-tax differences would lead to a persistent decline in earnings. Halimatus Sa'diyah and Dwi (2022) further found that only temporary book-tax differences can affect the sustainability of earnings. These studies ignore that tax avoidance is also an important source of book-tax differences and do not further analyse the impact of tax avoidance on earnings persistence.

Tax avoidance is the practice of taxpayers exploiting loopholes in the tax law, or within the limits of the tax law, to reduce the tax burden on companies. At present, China is in a transition period and many companies are facing the problems of insufficient working capital and financing difficulties, and reducing the tax burden has become an important economic goal for companies to alleviate capital pressure. According to the latest special report, Paying Taxes 2018, published by the World Bank and PricewaterhouseCoopers, Chinese companies rank 12th out of nearly 190 economies worldwide, with a tax burden of 67.3%, well above the global average for the period studied. In addition, China's imperfect tax collection and administration system, lower overall quality of tax personnel and limited tax supervision also provide room for tax avoidance activities. Management decision makers in Chinese companies have strong incentives to avoid taxes. A report on the State Taxation Administration's (SAT) anti-avoidance investigation shows that from August 2018 to February 2021, a total of 360,000 enterprises were investigated and dealt with for tax evasion, and 87.5 billion yuan in tax losses were recovered. However, the tax recovered is only the tip of the iceberg of the actual amount of tax avoidance, and in 2022, China's anti-tax avoidance revenue reached 46.9 billion yuan. It can be seen that tax avoidance is widespread among Chinese companies, and this behaviour has had a negative impact on both the country's tax revenue and its economic development.

Previous studies have proposed two views of tax avoidance, namely the "value effect" and the "risk effect". The "value effect" suggests that tax avoidance can be used as an endogenous way to reduce companies' capital expenditure, alleviate their financing constraints, and increase their ability to prevent financial risks (Desai and Dharmapala, 2009; Bayar *et al.*, 2018). According to this view, tax avoidance can promote earnings persistence. The "risk effect" suggests that tax avoidance exacerbates information asymmetry and agency conflict problems (Balakrishnan *et al.*, 2019), which further increases future financing costs (Shevlin *et al.*, 2019), cash holding costs (Hanlon *et al.*, 2017) and reputational loss costs (Gallemore *et al.*, 2014). At this point, corporate tax avoidance increases the overall risk of a company and reduces the sustainability of its earnings.

Taking Chinese listed companies as a sample, this study analyses the impact of tax avoidance on earnings persistence from the "value effect" and "risk effect" of tax avoidance. This study further analyses whether there are differences in the relationship between tax avoidance and earnings persistence in companies with different levels of tax avoidance and different property rights. At the same time, this paper also analyses whether the monitoring effect of external institutional investors can improve the effect of tax avoidance on earnings persistence.

The contributions of this study are as follows. First, previous scholars have mainly focused on the impact of book-tax differences on earnings persistence. However, book-tax differences may be caused by tax avoidance or earnings management, so it cannot fully explain the effect of tax avoidance on earnings persistence. This study helps to understand the direct effect of tax avoidance on earnings. Second, the existing literature mainly

analyses the factors influencing earnings persistence from corporate strategy, agency problems, and internal control. Few literature examines the direct effect of tax avoidance on earnings persistence. The conclusion of this paper enriches and extends the existing literature on the factors influencing earnings persistence. Finally, this paper further analyses the influence of corporate property nature, institutional investors, and the degree of tax avoidance on the relationship between tax avoidance and earnings persistence. The conclusion helps us to understand the conditions under which tax avoidance may affect earnings persistence.

The rest of this paper is structured as follows: the second part is literature review, the third part is research hypothesis, the fourth part is research design, the fifth part is empirical results and research analysis, and the sixth part is research conclusion.

2. Literature review

There is a lack of uniformity in the research on the economic consequences of corporate tax avoidance. From a value effect perspective, some scholars argue that tax avoidance can reduce a company's tax expenses, thereby positively affecting the company's value. Huang *et al.* (2013) found that related party transactions motivated by tax avoidance can reduce the tax burden of enterprises and increase the overall value of enterprises. Cheng *et al.* (2017) also recognized the positive effect of tax avoidance in helping enterprises alleviate external financing pressure. Especially when the securities market encountered a critical period of monetary tightening, investors would give a good evaluation to enterprises adopting tax avoidance policies. Song *et al.* (2019) believe that tax avoidance minimises the likelihood of firms getting into financial difficulties and is conducive to coping with the uncertainty of the operating environment. Yan (2021) found that moderate corporate tax planning helps to reduce the degree of corporate financing constraints. And when the corporate governance mechanism is better, the modified positive effect is more significant.

Some scholars have analysed corporate tax avoidance based on agent theory, arguing that tax avoidance damages corporate value and increases corporate risk. Balakrishnan *et al.* (2019) believe that tax avoidance reduces the credibility of financial statements, blurs the actual performance of companies, and increases the risk of financial restatement. Tax avoidance may also increase the likelihood of managerial earnings management (Karjalainen *et al.*, 2023), company-paid consumption (Liao and Liu, 2016), and inefficient investment (Ha and Feng, 2020). These behaviours ultimately increased companies' future financing costs (Shevlin *et al.*, 2019), cash holding costs (Hanlon *et al.*, 2017), and reputational loss costs (Gallemore *et al.*, 2014), leading to an overall increase in company risk. However, few studies have analysed the economic consequences of corporate tax avoidance from the perspective of earnings persistence.

Earnings persistence is an important feature of accounting information quality and is significant to investors. There is a large body of research literature on earnings persistence. Some scholars analysed the characteristics of the company and found the agent problem of substantial shareholders (Desai and Dharmapala, 2009), competitive strategy (Xu and Wang, 2020), supplier/customer concentration (Cheng *et al.*, 2019), internal control quality (Ai Mei *et al.*, 2021), operating cycle (Mia and Yulius, 2022), and board composition (Nguyen *et al.*, 2022) would all have an impact on corporate earnings persistence. Some scholars analysed from the perspective of book-tax difference and believed that book-tax difference is the result of positive earnings management by managers. Aggressive earnings manipulation in the current period would inevitably lead to earnings reversal in the later period, thus reducing the earnings persistence of the company (Tian *et al.*, 2019). Blaylock *et al.* (2012) analysed the causes of book-tax differences and found that book-tax differences caused by upward management income had a more significant negative impact on earnings persistence than tax

differences caused by other reasons. Halimatus Sa'diyah and Dwi (2022) further analysed the impact of permanent differences, temporary differences, and operating cash flows on earnings persistence. They found that only temporary book-tax differences can affect earnings persistence.

Book-tax differences mainly come from three aspects, the normal differences between accounting standards and tax policies, positive earnings manipulation by managers, and tax avoidance behaviour by company. Previous studies mainly analysed from the perspective of managers' earnings management, ignored tax avoidance as an important source of book-tax differences, and did not further analyse the impact of tax avoidance on earnings persistence. Based on previous studies, this paper focuses on the impact of corporate tax avoidance on earnings persistence and further analyses the impact of institutional investors on the relationship between the two.

3. Hypotheses

Taxation is the government's compulsory share of the companies' income, which is an essential cost of production and operation. Based on the basic considerations of rational economic man, managers will try their best to reduce the tax burden of companies and convert the saved tax expenditure into cash flow, and then increase the after-tax benefits of shareholders. Effective tax avoidance can be used as an endogenous financing method to reduce the financing constraints faced by companies, provide financial guarantees for the companies, and enhance their sustainable operating ability (Bayar *et al.*, 2018; Yan, 2021). These are the embodiment of the "value effect" of tax avoidance. In particular, when companies face stringent market financing conditions or uncertain business environments, tax avoidance plays a more important role in increasing companies' value. Huang *et al.* (2013) found that affiliate transactions based on tax avoidance motives reduced the overall tax burden of the firms and further increased the overall value of the firms. Cheng *et al.* (2017) found that during the period of monetary policy tightening, tax avoidance can alleviate the potential financing constraints of firms. Some scholars also believe that the tax burden is an issue that managers need to consider when engaging in positive earnings management. Managers tend to carry out positive earnings management without paying much tax (Hui *et al.*, 2016). In other words, tax avoidance can inhibit the earnings management space and improve earnings persistence.

However, the "risk effect" suggests that tax avoidance increases the company's tax risk while increasing the company's retained earnings. The first is the information risk caused by tax avoidance. Tax avoidance is a game between companies and tax administrations. In order to reduce the likelihood of being detected by the authorities, companies intentionally do not disclose the details of transactions related to tax avoidance (Balakrishnan *et al.*, 2019). In addition, tax avoidance is often associated with abnormal accounting estimates, accounting judgements and affiliate transactions, which reduces the credibility of financial statements and increases the degree of information asymmetry (Balakrishnan *et al.*, 2019). In this environment, managers' decisions based on financial information may also be biased, leading to earnings volatility.

The second is the agency risk of tax avoidance. In the modern corporate system, the interests of internal and external shareholders are not aligned, and the economic benefits of tax avoidance accrue mainly to insiders who make the tax decisions (Slemrod, 2004). Tax avoidance provides tools, opportunities, and justifications for managers to engage in illegal behaviours such as earnings management, insider trading, inefficient investment and resource transfers (Atwood and Lewellen, 2019; Desai and Dharmapala, 2009). Managers' motivation to engage in tax avoidance for personal gain will increase with tax avoidance. At this point, tax avoidance does not effectively improve corporate earnings.

Finally, there is the investment risk of tax avoidance. The existence of the agency conflict of tax avoidance causes managers' investment decisions to deviate from the goal of maximising shareholder value. They may use the free cash flow generated by tax avoidance to overinvest or abandon projects with NPV greater than zero. At the same time, managers may ignore other signals of investment risk and blindly invest in high-risk areas in order to qualify for tax incentives (Guenther *et al.*, 2017). Uncertainty in operation will ultimately reduce the sustainability of earnings.

In conclusion, corporate tax avoidance may increase earnings persistence by reducing companies' financing difficulties. It may also reduce earnings persistence by increasing corporate risk. The impact of corporate tax avoidance on earnings persistence is difficult to anticipate theoretically. But when tax avoidance is controlled within an effective range, tax avoidance behaviour mainly reflects the value effect, which is conducive to earnings persistence. The following hypotheses are therefore proposed.

H1. Corporate tax avoidance will positively affect the persistence of corporate earnings.

The coexistence of state-owned and non-state-owned companies is the institutional background of China. The different property rights of companies lead to different motives and effects of tax avoidance. First, State-owned enterprises have many financing channels, and the incentive to increase internal financing sources by reducing tax expenditures is weak. State-owned enterprises have assumed more social responsibilities and political functions, and are less likely to go bankrupt. Compared to non-state-owned enterprises, the "value effect" of tax avoidance is weaker for state-owned enterprises. Second, due to the government's reputation guarantee, state-owned listed companies face a lower degree of tax supervision and are less likely to be detected and punished by the audit. Their motivation to manipulate accounting information to cover up tax avoidance behaviour is weak. At the same time, under the political promotion incentive, managers of state-owned enterprises pay more attention to their political performance than to their financial performance. Their motivation to use tax avoidance for rent-seeking is reduced, and the agency costs of tax avoidance are low. This makes the "risk effect" of tax avoidance weak for state-owned companies.

In contrast, private enterprises have a single financing channel, and their motivation to obtain working capital through tax planning is stronger. The effective tax rate of private enterprises in China is still at about 4%, which is much lower than that of state-owned companies, indicating that the degree of tax planning degree of private enterprises may be higher. At the same time, managers of non-state-owned companies have more incentives to hide opportunistic behaviours through tax avoidance, as their returns mainly depend on the after-tax profits of their companies. Therefore, the "value effect" and "risk effect" of tax avoidance are more pronounced in private companies. Based on the above analysis, the following hypothesis is proposed.

H2. The impact of tax avoidance on earnings persistence is more pronounced in non-state-owned enterprises.

The choice of tax avoidance policy is a significant business decision made by management or controlling shareholders. The effectiveness of the decision is influenced by the tax avoidance motivation and the external governance force. As the representatives of external minority shareholders, institutional investors have more significant advantages in capital and information analysis. They can monitor the formulation and implementation of tax avoidance strategies in the following ways.

First, institutional investors can participate in the decision-making of major issues by exercising their voting rights, submitting proposals, and negotiating, thus strengthening the supervision of the company's business activities (Mei and Zhang, 2016). Institutional

investors can also obtain enough valuable corporate information through research and reduce the degree of information asymmetry between the company and external investors (Cheng *et al.*, 2017). Institutional investors can use their information processing capabilities and professional advantages to identify the self-serving behaviour of management hidden in tax avoidance transactions. As a result, institutional investors can reduce management's motivation to pursue private interests through tax avoidance, thereby reducing opportunistic tax avoidance.

Second, institutional investors can exert pressure on the share price to force management to continuously improve the company's operational efficiency and reduce the private gain of control. Because of the threat of exit, management must think carefully when choosing a tax avoidance strategy. The exit of institutional investors will have a significant impact on the company's share price. Jiang *et al.* (2015) take China's listed companies as a sample to show that the exit threat mechanism of China's capital market after the non-tradable share reform plays an effective governance role for controlling shareholders and managers. Finally, institutional investors can screen and send signals to the market. As insiders of company information, institutional investors' shareholding preferences, market transactions, or long-term holdings contain relevant company information and play the role of signal transmission. Cross-country empirical evidence suggests that institutional investors prefer to own large and well-managed companies (Aggarwal *et al.*, 2011). If institutional investors hold large stakes in a company, it implies that tax avoidance strategies are conducive to the sustainable development of the company. Otherwise, institutional investors may identify relevant risks and exclude them from the investment target.

In summary, institutional investors can play a more active role in corporate governance and correct tax avoidance decisions that are not conducive to the sustainable development of the company. Managers need to think carefully when choosing tax avoidance strategies to avoid negative signals to the market from institutional investors' withdrawal behaviour and negative effects on earnings persistence. Therefore, the following hypothesis is therefore proposed.

H3. The governance role of institutional investors can moderate the relationship between tax avoidance and earnings persistence.

4. Data and methodology

4.1 Sample selection

Following the global financial crisis in 2008, companies are in a stable phase of development and can effectively avoid the effects of a volatile external environment. Earnings persistence reflects future profitability and requires two years of earnings data. This paper takes Chinese A-share listed companies from 2012 to 2020 as a sample. It conducts the following screening: (1) Remove the samples of financial institutions and insurance companies because companies in these industries are under strict supervision and have to comply with specific rules and regulations. (2) Remove ST or *ST companies; (3) Remove samples with missing values. In the end, 17,048 sample observations were obtained. The nominal tax rates used in this paper are taken from the Wind database. The accounting data are taken from the CSMAR database. To avoid the influence of extreme values, all continuous variables were winsorized with 1% at the beginning and 1% at the end.

4.2 Variable definition

4.2.1 Measurements of tax avoidance. There is currently no agreed methodology for measuring tax avoidance, which can be broadly divided into two categories. The first category

is the effective tax rate and its variants. In China, the measurement of effective tax rates lacks horizontal comparability due to the different nominal tax rates of many enterprises. The second category is the book-tax difference and its variants. The difference includes not only the difference caused by inconsistent accounting standards and tax laws, but also the difference caused by the subjective behaviour of companies, such as earnings management.

There is currently no agreed methodology for measuring tax avoidance, which can be broadly divided into two categories. The first category is the effective income tax rate and its variants. In China, the measurement of effective tax rates lacks horizontal comparability due to the different nominal tax rates of many companies. The second category is the book-tax difference and its variants. This includes not only the difference caused by inconsistent accounting standards and tax laws, but also the difference caused by companies' subjective behaviour, such as earnings management. In order to eliminate this confound, this article follows Desai and Dharmapala (2009) and uses the DDBTD to measure tax avoidance, thus obtaining an indicator that can accurately measure the degree of tax avoidance. The detailed formula is as follows:

$$BTD_{i,t} = \alpha TACC_{i,t} + \mu_i + \varepsilon_{i,t} \tag{1}$$

where, BTD = (pre-tax accounting profit - taxable income)/year-end total assets, taxable income = (Income tax expense - deferred income tax expense)/nominal income tax rate. TACC= (net profit - net cash flow from operating activities)/year-end total assets. DDBTD = $\mu_i+\varepsilon_{i,t,}$ represents the part of BTD that cannot be explained by accruals. A larger value indicates a higher degree of corporate tax avoidance.

4.2.2 Measurements of earnings persistence. Based on the research of Blaylock *et al.* (2012), this paper uses the coefficient of current earnings on subsequent earnings in a linear first-order autoregressive model to measure earnings persistence.

$$EARN_{t+1} = \beta_0 + \beta_1 EARN_t + \varepsilon_t \tag{2}$$

EARN is the total return on total assets of the company. If β_1 is significantly positive, the current period's earnings are highly correlated with the next period's earnings. In other words, earnings persistence is high.

4.2.3 Control variables. Following previous literature, this article controls for the following variables that may affect tax avoidance. Company size (SIZE) is measured by the natural logarithm of total assets. Larger firms may be subject to greater operating variability, which is not conducive to maintaining earnings persistence. Company leverage (LEV) is the ratio of total assets to total liabilities. High leverage increases the risk of bankruptcy and has a negative impact on earnings persistence. Company growth (GROW) is measured by the ratio of increase in operating income in year t to operating income in year t−1. Differences in growth levels across companies may affect earnings persistence. Board independence (INDIR) refers to the proportion of independent directors in the total number of board members. Independent directors can improve corporate governance and earnings persistence. The top four audit firms (TOP4) can provide high audit quality and affect the earnings quality of company. In addition, we also control for industry and year dummy variables.

4.2.4 Research models. In order to test the impact of corporate tax avoidance on earnings persistence, this paper adds tax avoidance and its interaction with current earnings based on model (2), and constructs the following model:

$$\begin{aligned} EARN_{i,t+1} = {} & \beta_0 + \beta_1 DDBTD_{i,t} + \beta_2 EARN_{i,t} + \beta_3 EARN_{i,t} \times DDBTD_{i,t} + \beta_4 SIZE_{i,t} \\ & + \beta_5 LEV_{i,t} + \beta_6 GROW_{i,t} + \beta_7 INDIR_{i,t} + \beta_8 AUDITOR_{i,t} + \beta_9 YEAR + \beta_{10} INDUSTRY + \varepsilon_{i,t} \end{aligned} \tag{3}$$

In order to test whether institutional investors affect the relationship between tax avoidance and earnings persistence, this paper introduces the interaction term EARN × INST × DDBTD in model (3) and constructs model (4) as follows:

$$EARN_{i,t+1} = \beta_0 + \beta_1 DDBTD_{i,t} + \beta_2 EARN_{i,t} + \beta_3 INST_{i,t} + \beta_4 EARN_{i,t} \times DDBTD_{i,t} + \beta_5 INST_{i,t} \times DDBTD_{i,t} + \beta_6 EARN_{i,t} \times DDBTD_{i,t} \times INST_{i,t} + \beta_7 SIZE_{i,t} + \beta_8 LEV_{i,t} + \beta_9 GROW_{i,t} + \beta_{10} INDIR_{i,t} + \beta_{11} AUDITOR_{i,t} + \beta_{10} YEAR + \beta_{11} INDUSTRY + \varepsilon_{i,t} \quad (4)$$

The dependent variable is next period earnings $EARN_{i,t+1}$; $DDBTD_{i,t}$ is tax avoidance. If the coefficient of $EARN_{i,t} \times DDBTD_{i,t}$ is positive, it means that tax avoidance helps to the improve earnings persistence. If it is negative, it means that tax avoidance reduces earnings persistence.

4.3 Description statistics

Table 1 shows the descriptive statistics of the variables. The mean and median of tax avoidance (DDBTD) are both positive, indicating that companies' accounting profits are generally higher than their taxable income after controlling for the influence of total accruals. A considerable proportion of companies engage in tax avoidance behaviour. The mean of earnings (EARNt) is 0.054, with a median of 0.045, indicating that the earnings of the sample companies are generally normally distributed and that most of the sample are profitable companies. The mean of institutional investors (INST) is 3.521. There are also companies where institutional investors do not hold any shares, which is in line with reality. The average company size (SIZE) is 22.18 and the average financial leverage (LEV) is 0.44, both within a reasonable range. The mean and median of company growth (Grow) are 0.248 and 0.134 respectively, with a standard deviation of 0.591, indicating that the growth status of different companies is highly variable and the average growth rate is high. The average of the top 4 audit firms (TOP4) is 0.061, which is in line with the mean values in existing research. The average proportion of independent directors (INDIR) is 0.373, which meets the requirement in the Companies Act that at least one-third of the board of directors of listed companies should be independent.

In order to identify pairwise univariate associations and to detect multicollinearity between the independent variables, correlation analysis (Pearson correlations) was carried out in this article. Table 2 shows the test results of the correlation coefficients of each variable. Tax avoidance (DDBTD) has a significant positive correlation with next period earnings ($EARN_{t+1}$), indicating that the increase in tax avoidance has a positive impact on next period earnings, which provides initial support for this study's prediction on the relationship between tax avoidance and earnings as discussed earlier. The correlation coefficient between next period earnings ($EARN_{t+1}$) and current period earnings ($EARN_t$) is 0.578, indicating that

Variables	N	Mean	Std Dev	Max	Minimum	Median
DDBTD	17,048	0.003	0.074	0.229	−0.225	0.004
$EARN_t$	17,048	0.054	0.063	0.775	−3.434	0.045
INST	17,048	3.521	5.840	67.872	0.000	1.038
SIZE	17,048	22.18	1.354	28.52	15.42	22.00
LEV	17,048	0.444	0.604	55.41	−0.195	0.428
GROW	17,048	0.248	0.591	4.501	−0.489	0.134
TOP4	17,048	0.061	0.239	1.000	0.000	0.000
INDIR	17,048	0.373	0.056	0.800	0.000	0.333

Table 1.
Descriptive statistics

Source(s): Created by author

	$EARN_{t+1}$	DDBTD	$EARN_t$	INST	SIZE	LEV	GROW	TOP4	INDIR
$EARN_{t+1}$	1								
DDBTD	0.127***	1							
$EARN_t$	0.578***	0.075***	1						
INST	0.098***	0.052***	0.086***	1					
SIZE	−0.059***	0.025***	0.008	0.428***	1				
LEV	−0.107***	−0.036***	−0.328***	0.076***	0.106***	1			
GROW	0.096***	−0.030***	0.097***	0.036***	0.018**	0.016**	1		
TOP4	0.026***	0.060***	0.023***	0.238***	0.396***	0.039***	−0.025***	1	
INDIR	−0.021***	−0.013*	−0.019**	−0.043***	0.048***	0.002	0.015*	0.051***	1

Source(s): Created by author

Table 2.
Test of correlation coefficient of variables

current period earnings can be carried over to the next period to a high degree. Institutional ownership (INST) is positively and significantly correlated with next period earnings ($EARN_{t+1}$), indicating that institutional investors can play their role in monitoring and governance to improve corporate performance. The remaining control variables have a good correlation with company earnings, indicating that the choice of control variables is relatively reasonable. All correlation coefficients of the study variables were below 0.5, and the highest variance inflation factor (VIF) was vell below the critical value of 10, indicating that the correlations were not sufficient to cause multicollinearity problems.

5. Empirical results

5.1 Tax avoidance and earnings persistence

By conducting Hausman tests on the panel data, this paper uses a two-way fixed effects model for regression analysis. Industry and year fixed effects are controlled to mitigate the impact of endogeneity issues arising from unobservables that vary with industry and time on the results. The results of the regression analysis of tax avoidance and earnings persistence based on Model (3) are presented in Table 3. The explanatory power of the full set of variables in this study is estimated by the adjusted R^2 figure of 21.2, which indicates that the independent variables in the model can explain 21.2% of the next year's earnings. This implies that the variables in this study are important in determining the company's earnings. The regression coefficients of current accounting earnings ($EARN_t$) are 0.368, 0.348, and 0.396 respectively, which are all significant at 1%, indicating that the sample has good earnings persistence. The regression results of the full sample in column (1) show that the coefficient of

		$EARN_{t+1}$	
	ALL (1)	Q1 (2)	Q3 (3)
$EARN_t$	0.368***	0.348***	0.396***
	(47.644)	(20.183)	(22.619)
DDBTD	0.061***	0.061***	0.109***
	(11.866)	(4.312)	(6.350)
DDTBT × $EARN_t$	0.104***	0.099***	−0.324***
	(26.989)	(15.817)	(−4.914)
SIZE	−0.015***	−0.020***	−0.012***
	(−29.937)	(−17.996)	(−10.051)
LEV	−0.006***	−0.012**	−0.024***
	(−9.742)	(−2.095)	(−4.152)
GROW	0.006***	0.007***	0.005***
	(12.122)	(7.483)	(4.246)
TOP4	0.007**	0.003	0.004
	(2.100)	(0.418)	(0.634)
INDIR	0.007	0.024	−0.006
	(0.767)	(1.378)	(−0.350)
Constant	0.374***	0.470***	0.315***
	(32.058)	(19.313)	(11.592)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
N	17,048	5,110	5,105
R^2	0.212	0.237	0.200

Note(s): *,** and *** is significant level of 10, 5 and 1%, respectively; *t*-statistics in brackets
Source(s): Created by author

Table 3.
Regression results of tax activism and earnings persistence

DDTBT × EARN is 0.104, which is significant at the 1% level, indicating that the "value effect" of tax avoidance on earnings is higher than the "risk effect", and tax avoidance can significantly improve earnings persistence. Therefore, H1 is supported. The results of this study are consistent with the results of previous studies (Tian *et al.*, 2019). Among the control variables, SIZE and LEV are significantly negative, indicating that the expansion of company size and the improvement of asset-liability ratio increase the risk of company and affect the stability of operation. The coefficients of GROW and TOP4 are positive, indicating that the increase in operating income and the external monitoring mechanism can improve the stability of company performance.

In order to analyse the impact of different degrees of tax avoidance on earnings persistence, this paper divides the sample into three groups according to the quantile of tax avoidance. The bottom third of the sample was classified as the low tax avoidance group(Q1), and the top third of the sample was classified as the high tax avoidance group (Q3). A regression analysis was performed for each. Table 3 shows that the coefficient of DDTBT × $EARN_t$ in column (2) is significantly positive (0.099, $p < 0.01$), but the coefficient in column (3) was significantly negative (−0.324, $p < 0.01$). This means that when tax avoidance is low, managers are more likely to choose tax avoidance. At this time, the opacity of accounting information is not sufficient to act as a "barrier" to managers seeking personal gain. The "value effect" of tax avoidance dominates. Tax avoidance can increase internal capital retention, strengthen companies' ability to continue operations, and thus enhance earnings persistence. Conversely, when tax avoidance is high, the measurement of costs and expenses is more aggressive, and the tax risk is higher. The information asymmetry gives managers an incentive to engage in opportunistic tax avoidance. At this point, the "risk effect" of tax avoidance dominates and earnings persistence is therefore reduced.

In order to examine the differences in the impact of tax avoidance on earnings persistence between different types of companies, this article divides the sample into state-owned enterprises (SOEs) and non-state-owned enterprises (NSOEs) for regression analysis. Table 4 shows the results of the grouping regression after distinguishing the ownership of the companies. When the degree of tax avoidance is low(Q1), the coefficient of DDBTD × EARN is significantly positive in both state-owned companies and non-state-owned companies (0.028, $p < 0.01$; 0.036, $p < 0.01$). This result indicates that the "value effect" of low tax avoidance does not disappear with different property rights. At the same time, the impact of tax avoidance on earnings persistence is more pronounced in non-state-owned companies, which confirms H2. When the degree of tax avoidance is high (Q3), the coefficient of DDBTD × EARN is negative for non-state-owned companies (−0.010, $p < 0.01$), but the coefficient is positive for state-owned companies (0.031, $p < 0.1$). The result indicates that the "risk effect" caused by high tax avoidance is mainly present in non-state-owned companies. In the case of the full sample, the coefficient of the cross-multiplication term (DDBTD*ROA) between corporate tax avoidance and current earnings is significantly higher in non-state-owned companies than in state-owned companies, which further verifies H2. In short, tax avoidance may have a more positive impact on earnings persistence in state-owned companies. In non-state-owned companies, the impact of tax avoidance on earnings persistence depends on the intensity of tax avoidance strategies adopted by companies.

Table 5 shows the regression results of the impact of institutional investors on the relationship between corporate tax avoidance and earnings persistence. When the degree of tax avoidance is low (Q1), the coefficient of DDBTD × $EARN_t$ is significantly positive (0.104, $p < 0.01$), indicating that moderate tax avoidance is conducive to improving earnings persistence. The coefficient of DDBTD × $EARN_t$ × INST is significantly positive (0.008, $p < 0.01$), indicating that institutional investors can enhance the value effect of tax avoidance due to their professional advantages in information gathering. When the degree of corporate tax avoidance is high (Q3), the coefficient of DDBTD × EARN is significantly negative, but

	$EARN_{t+1}$					
	SOE			NSOE		
	Q1	Q3	ALL	Q1	Q3	ALL
DDBTD	0.080***	0.072***	0.070***	0.064***	0.087***	0.078***
	(3.831)	(2.959)	(8.231)	(3.719)	(3.570)	(9.532)
$EARN_t$	0.657***	0.699***	0.679***	0.497***	0.601***	0.628***
	(17.001)	(17.594)	(35.266)	(12.182)	(14.692)	(32.609)
DDBTD*$EARN_t$	0.028***	0.031*	0.024***	0.036***	−0.010***	0.094***
	(3.804)	(1.758)	(5.478)	(4.665)	(−3.862)	(5.724)
SIZE	−0.021***	−0.020***	−0.019***	−0.029***	−0.019***	−0.021***
	(−7.923)	(−7.166)	(−15.968)	(−12.214)	(−7.336)	(−19.669)
LEV	0.041***	−0.023**	0.004	0.009	−0.023*	0.001
	(2.684)	(−2.061)	(0.664)	(0.750)	(−1.752)	(0.623)
GROW	0.004***	−0.008	0.009	−0.007	−0.005	0.006
	(2.607)	(−0.225)	(0.472)	(−0.099)	(−0.754)	(0.011)
TOP4	0.009	0.010	0.004	0.014	−0.005	0.015*
	(0.847)	(0.710)	(0.714)	(0.812)	(−0.291)	(1.726)
INDIR	−0.058*	0.002	0.009	0.100**	0.048	0.063***
	(−1.833)	(0.082)	(0.617)	(2.494)	(1.153)	(3.291)
Constant	0.501***	0.474***	0.449***	0.616***	0.415***	0.451***
	(8.316)	(7.453)	(16.479)	(11.995)	(7.164)	(19.164)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
N	2,015	2,325	7,253	3,095	2,780	9,795
R^2	0.278	0.263	0.260	0.178	0.216	0.190

Note(s): *,** and *** is significant level of 10, 5 and 1%, respectively; *t*-statistics in brackets
Source(s): Created by author

Table 4.
Tax avoidance and earnings persistence: based on property rights

DDBTD × EARN × INST is significantly positive (0.019, $p < 0.01$). It shows that increasing the shareholding of institutional investors is conducive to increasing their voice on the board of the company. Institutional investors can prevent the occurrence of "tunnelling" by large shareholders or managers and reduce the negative impact of the risk effect of tax avoidance on earnings persistence.

5.2 Robustness test

5.2.1 Change the dependent variable. In order to avoid the measurement bias of a single indicator, in this paper replaced the earnings indicator (EARN) is replaced by operating profit on average total assets (MEARN), and the results of the retest are shown in Table 6. In the lower tax avoidance group (Q1), the coefficient of DDBTD × MEARN is significantly positive (0.042, $p < 0.01$), but in the high tax avoidance group (Q3), the coefficient is significantly negative (−0.152, $p < 0.05$). In the case of the whole sample, tax avoidance is conducive to maintaining earnings persistence, and the coefficient of DDBTD × MEARN is significantly positive (0.018, $p < 0.01$). The results are consistent with the original findings, indicating that the conclusion of this paper is robust.

5.2.2 Subdivision of tax avoidance degree. In order to further analyse the impact of different levels of tax avoidance on earnings persistence, this paper groups the samples according to tax avoidance quintile. The lowest fifth of the sample was divided into the low tax avoidance group (Q1), and the highest fifth into the high tax avoidance group (Q5). A regression analysis was performed for reach. The results are presented in columns (4) and (5) of Table 6. As shown in column (4), the coefficient of DDBTD × EARN is significantly positive (0.088, $p < 0.01$) when the degree of tax avoidance is low. That is, tax avoidance can improve

	$EARN_{t+1}$	
	Q1	Q3
DDBTD	0.040**	0.100***
	(2.564)	(5.865)
$EARN_t$	0.371***	0.399***
	(17.484)	(22.671)
INST	0.001***	0.000**
	(7.357)	(2.542)
DDBTD × $EARN_t$	0.104***	−0.932***
	(14.930)	(−6.767)
DDBTD × $EARN_t$ × INST	0.008***	0.019***
	(3.677)	(5.227)
SIZE	−0.020***	−0.013***
	(−18.601)	(−10.722)
LEV	−0.008	−0.012*
	(−1.418)	(−1.916)
GROW	0.007***	0.004***
	(6.791)	(3.824)
TOP4	0.003	0.004
	(0.417)	(0.636)
INDIR	0.026	−0.003
	(1.493)	(−0.199)
Constant	0.455***	0.319***
	(18.797)	(11.779)
Year FE	Yes	Yes
Industry FE	Yes	Yes
N	5,110	5,105
R^2	0.252	0.211

Note(s): *,** and *** is significant level of 10, 5 and 1%, respectively; *t*-statistics in brackets
Source(s): Created by author

Table 5.
Tax avoidance, institutional investors and earnings persistence

earnings persistence, reflecting the "value effect" of tax avoidance. However, when the degree of tax avoidance is higher (Q5), the coefficient of DDBTD × EARN is significantly negative (−0.270, $p < 0.01$). This suggests that the "risk effect" of higher level of tax avoidance is not conducive to earnings persistence. This is in line with previous studies.

5.2.3 Endogenous issues. Because there may be unobservable missing variables that affect both corporate tax avoidance and earnings persistence, the regression results are inconsistent. This paper uses two-stage least squares method (IV-2SLS) to deal with the endogeneity of missing variables. Following the research of Fisman and Svensson (2007), the average tax aggressiveness of other companies in the same industry (AGTAGavg) is chosen as the instrumental variable. Corporate tax avoidance behaviour is influenced by other companies in the same industry, and there is an obvious peer effect. The instrumental variables satisfy the correlation requirement. At the same time, the tax avoidance behaviour of other companies in the industry will not affect the sustainability of the company's earnings measurement, which satisfies the exogenous condition of the instrumental variables.

Heckman two-stage method is used to reduce the possible sample selection bias. First, corporate tax avoidance is grouped according to the industry year median. If the median is exceeded, the value is 1, otherwise it is 0. Grouped corporate tax avoidance (TAXD) is used as the dependent variable in the first stage regression. Second, company size (SIZE), asset-liability ratio (LEV), company growth (GROW), top 4 audit firms (TOP4), and board independence (INDIR) are selected as independent variables in the first stage of the regression

	$MEARN_{t+1}$			$EARN_{t+1}$	
	Q1	Q3	ALL	Q1	Q5
	(1)	(2)	(3)	(4)	(5)
DDBTD	0.070***	0.130***	0.072***	0.046**	0.118***
	(3.365)	(5.565)	(6.560)	(2.534)	(5.329)
MEARN	0.084***	0.119***	0.002***		
	(7.405)	(4.902)	(3.172)		
DDBTD × MEARN	0.042***	−0.152**	0.018***		
	(6.550)	(−2.051)	(10.131)		
EARN				0.302***	0.350***
				(14.371)	(16.055)
DDBTD × EARN				0.088***	−0.270***
				(12.189)	(−3.343)
SIZE	−0.030***	−0.020***	−0.023***	−0.020***	−0.011***
	(−18.384)	(−11.839)	(−20.497)	(−13.481)	(−6.578)
LEV	−0.031***	0.007	−0.088***	−0.018**	−0.020***
	(−3.616)	(0.841)	(−77.029)	(−2.272)	(−2.780)
GROW	0.011***	0.012***	0.011***	0.008***	0.006***
	(7.910)	(7.367)	(9.480)	(6.549)	(4.014)
TOP4	0.006	0.006	0.010	0.007	0.006
	(0.672)	(0.626)	(1.490)	(0.848)	(0.754)
INDIR	−0.002	−0.009	−0.036**	0.002	0.019
	(−0.066)	(−0.386)	(−1.987)	(0.109)	(0.843)
Constant	0.717***	0.496***	0.604***	0.488***	0.281***
	(19.916)	(12.810)	(24.422)	(14.992)	(7.368)
Year FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
N	5,110	5,105	17,048	3,403	3,407
R^2	0.142	0.091	0.318	0.237	0.177

Table 6.
Regression results of robustness analysis

Note(s): *,** and *** is significant level of 10, 5 and 1%, respectively; *t*-statistics in brackets
Source(s): Created by author

analysis. The inverse Mills ratio (IMR) is then calculated and included in the model (3) as a control variable for the regression.

Table 7 shows the second stage regression results. Among them, the coefficient of IMR is significant at 10%, indicating that there is some self-selection bias in the corporate tax avoidance data. The coefficient of DDBTD*ROA is significantly positive at the 1% level, indicating that the above problem of self-selection bias is not sufficient to affect the conclusion of this paper.

6. Conclusions

This paper selects Chinese A-share listed companies as samples to analyse the impact of tax avoidance on earnings persistence. The result shows that tax avoidance has a significant positive effect on earnings persistence.

According to the degree of tax avoidance, it is found that when the degree of tax avoidance is low, the "value effect" of tax avoidance dominates, and tax avoidance can improve the sustainability of earnings. However, when the degree of tax avoidance is high, the risk effect of tax avoidance outweighs the value effect, and tax avoidance reduces the persistence of earnings. Cross-sectional analysis based on the type of property rights shows that the "value effect" of low tax avoidance does not disappear with different property rights. The "risk effect" of high tax avoidance occurs mainly in non-state-owned companies. At the same time,

	$EARN_{t+1}$	
	IV-2SLS	Heckman
$EARN_t$	0.479***	0.532***
	(13.541)	(7.826)
DDBTD	0.425***	0.063***
	(11.980)	(6.969)
DDBTD × $EARN_t$	0.191***	0.024***
	(7.138)	(4.842)
SIZE	−0.013***	−0.001**
	(−19.803)	(−2.341)
LEV	0.007***	0.003***
	(9.147)	(3.931)
GROW	0.004***	0.005
	(5.081)	(0.685)
TOP4	0.007*	0.003
	(1.733)	(0.080)
INDIR	0.004	0.010
	(0.417)	(0.907)
IMR		0.028*
		(1.954)
Constant	0.322***	0.082
	(20.121)	(0.104)
Year FE	Yes	Yes
Industry FE	Yes	Yes
N	17,048	17,048
R-squared	0.225	0.313

Note(s): *,** and *** is significant level of 10, 5 and 1%, respectively; *t*-statistics in brackets
Source(s): Created by author

Table 7. Endogeneity test results

institutional investors are an effective external governance body, and increasing the shareholding ration of institutional investors can improve the value effect of tax avoidance and reduce the risk effect of tax avoidance. Specifically, when the degree of corporate tax avoidance is low, the supervision of institutional investors can strengthen the positive relationship between tax avoidance and earnings persistence; when the degree of corporate tax avoidance is high, institutional investors can weaken the negative relationship between tax avoidance and earnings persistence and positively affect the relationship between corporate tax avoidance and earnings persistence.

The empirical analysis of this paper discusses the influence of different levels of tax avoidance on corporate earnings persistence. Institutional investors can influence earnings persistence by strengthening the "value effect" and weakening the "risk effect" of tax avoidance. The deductive reasoning and empirical analysis have specific research implications for companies to formulate reasonable and appropriate tax avoidance policies. The analysis helps to build and improve monitoring system of institutional investors' shareholding and improve the information disclosure content of listed companies.

First, Companies should not take minimizing the effective tax rate as the goal of tax avoidance, but also take into account the costs and benefits of tax avoidance, and pay attention to the self-interested behaviour and irrational short-sightedness of management behind tax avoidance. Second, the government should improve the system for listed companies to disclose relevant policy information on tax avoidance, such as adding relevant industry standards and implementing regulations. The government should also require companies to report relevant information on tax adjustment in their financial statements and

notes. Improving the tax information disclosure system is not only conducive to improving the transparency of accounting information and reducing the agency cost of management, but also conducive to the sustainable improvement of corporate earnings and the high-quality development of companies. Finally, strengthening the governance role of external supervisors helps to improve the quality of corporate accounting information and to reduce information asymmetries caused by the separation of powers. Securities regulators should improve institutional mechanisms that facilitate the participation of long-term institutional investors in the capital market, encourage institutional investors to hold shares, and support market investors to disclose research information on corporate tax and economic activities. This has a positive effect on alleviating agency problems, reducing the cost of supervision, improving the sustainability of corporate earnings, and promoting the stable development of companies.

There is also scope for further research in this paper. First, this paper only examines the impact of corporate income tax avoidance on earnings persistence. It does not examine the impact of turnover tax avoidance on earnings persistence. This is mainly due to the fact that the turnover tax, represented by VAT, is recorded on a cash basis and it is difficult to obtain the relevant data from the balance sheet and income statement, which are prepared on an accrual basis. Second, the impact of corporate tax avoidance on earnings persistence may be influenced by a number of factors, such as the internal and external governance environment of the company. This paper has not explored this issue in depth and future research can expand in this direction.

References

Aggarwal, R., Erel, I., Ferreira, M. and Matos, P. (2011), "Does governance travel around the world? Evidence from institutional investors", *Journal of Financial Economics*, Vol. 100 No. 1, pp. 154-181, doi: 10.1016/j.jfineco.2010.10.018.

Ai Mei, Z., Yang, X.N., Wu, W.H. and Li, X.B. (2021), "A study of the impact of internal control deficiencies and remediation on surplus persistence", *Macroeconomics*, Vol. 11, pp. 149-163.

Atwood, T.J. and Lewellen, C. (2019), "The complementarity between tax avoidance and manager diversion: evidence from tax haven firms", *Contemporary Accounting Research*, Vol. 36 No. 1, pp. 259-294, doi: 10.1111/1911-3846.12421.

Balakrishnan, K., Blouin, J.L. and Guay, W.R. (2019), "Tax aggressiveness and corporate transparency", *The Accounting Review*, Vol. 94 No. 1, pp. 45-69, doi: 10.2308/accr-52130.

Bayar, O., Huseynov, F. and Sardarli, S. (2018), "Corporate governance, tax avoidance, and financial constraints: corporate governance, tax avoidance, and financial constraints", *Financial Management*, Vol. 47 No. 3, pp. 651-677, doi: 10.1111/fima.12208.

Blaylock, B., Shevlin, T. and Wilson, R.J. (2012), "Tax avoidance, large positive book-tax differences and earnings persistence", *The Accounting Review*, Vol. 87 No. 1, pp. 91-120, doi: 10.2139/ssrn.1524298.

Cheng, X.K., HaoYang, Li and Gao, S.H. (2017), "Institutional investors' site visit and the method of management earnings guidance", *Journal of Management Science*, Vol. 30 No. 1, pp. 131-145.

Cheng, M.Y., Zheng, S.J. and Liu, J. (2019), "Supplier/customer concentration and the persistence of earnings: security or risk security or risk", *Journal of Audit and Economics*, Vol. 4, pp. 75-86.

Desai, M.A. and Dharmapala, D. (2009), "Corporate tax avoidance and firm value", *Review of Economics and Statistics*, Vol. 91 No. 3, pp. 537-546, doi: 10.1162/rest.91.3.537.

Fisman, R. and Svensson, J. (2007), "Are corruption and taxation really harmful to growth? Firm level evidence", *Journal of Development Economics*, Vol. 83 No. 1, pp. 63-75, doi: 10.1016/j.jdeveco.2005.09.009.

Frankel, R. and Litov, L. (2009), "Earnings persistence", *Journal of Accounting and Economics*, Vol. 47 Nos 1-2, pp. 182-190, doi: 10.1016/j.jacceco.2008.11.008.

Gallemore, J., Maydew, E.L. and Thornock, J.R. (2014), "The reputational costs of tax avoidance", *Contemporary Accounting Research*, Vol. 31 No. 4, pp. 1103-1133, doi: 10.1111/1911-3846.12055.

Guenther, D.A., Matsunaga, S.R. and Williams, B.M. (2017), "Is tax avoidance related to firm risk?", *The Accounting Review*, Vol. 92 No. 1, pp. 115-136, doi: 10.2308/accr-51408.

Ha, J. and Feng, M. (2020), "Tax avoidance and over-investment: the role of the information environment", *Journal of Corporate Accounting and Finance*, Vol. 32 No. 1, pp. 1-30, doi: 10.1002/jcaf.22477.

Halimatus Sa'diyah, S. and Dwi, S. (2022), "The effect of book-tax differences and operating cash flow on earnings persistence with good corporate governance as a moderating variable", *Jurnal Ilmiah Komputerisasi Akuntansi*, Vol. 15 No. 1, pp. 74-88, doi: 10.51903/kompak.v15i1.608.

Hanlon, M. (2005), "The persistence and pricing of earnings, accruals, and cash flows when firms have large book-tax differences", *The Accounting Review*, Vol. 80 No. 1, pp. 137-166, doi: 10.2308/accr.2005.80.1.137.

Hanlon, M., Maydew, E.L. and Saavedra, D. (2017), "The taxman cometh: does tax uncertainty affect corporate cash holdings?", *Review of Accounting Studies*, Vol. 22 No. 3, pp. 1198-1228, doi: 10.1007/s11142-017-9398-y.

Huang, R., Yang, Y. and Lin, S.S. (2013), "Tax rate differences, related party transactions and firm value", *Accounting Research*, Vol. 8, pp. 47-53.

Hui, K.W., Nelson, K.K. and Yeung, P.E. (2016), "On the persistence and pricing of industry-wide and firm-specific earnings, cash flows, and accruals", *Journal of Accounting and Economics*, Vol. 61 No. 1, pp. 185-202, doi: 10.1016/j.jacceco.2015.06.003.

Jiang, F.X., Ma, Y.B. and Wang, Y.T. (2015), "Can exit threats curb controlling shareholders' self-interested behavior?", *Journal of Management World*, Vol. 5, pp. 147-159, doi: 10.19744/j.cnki.11-1235/f.2015.05.013.

Karjalainen, J., Kasanen, E., Kinnunen, J. and Niskanen, J. (2023), "Dividends and tax avoidance as drivers of earnings management: evidence from dividend-paying private SMEs in Finland", *Journal of Small Business Management*, Vol. 61 No. 2, pp. 906-937, doi: 10.1080/00472778.2020.1824526.

Liao, X.X. and Liu, Y.G. (2016), "Corporate tax sheltering activities, information asymmetry and managerial perk consumption", *Nankai Business Review*, No. 2, pp. 87-99.

Lipe, R. (1990), "The relation between stock returns and accounting earnings given alternative information", *The Accounting Review*, Vol. 65 No. 1, pp. 49-71.

Mei, J. and Zhang, M. (2016), "Do funds lead the institutional investors to govern listed firms' earnings management: analysis based on the endogenous view", *Accounting Research*, Vol. 4, pp. 55-60.

Mia, O.L. and Yulius, K.S. (2022), "The determinant factors of earnings persistence", *Jambura Equilibrium Journal*, Vol. 4 No. 1, pp. 1-12, doi: 10.37479/jej.v4i1.13087.

Nguyen, V.K., Rahman, A.A.A., Pham, Q.T., Nguyen, T.L., Anh, L.H.T., Cao, T.M.T. and Ly, H.T.N. (2022), "Earnings management, board composition and earnings persistence in emerging market", *Sustainability*, Vol. 14, pp. 1-15, doi: 10.3390/su14031061.

Shevlin, T., Urcan, O. and Vasvari, F.P. (2019), "Corporate tax avoidance and debt costs", *Journal of the American Taxation Association*, Vol. 42 No. 2, pp. 117-143, doi: 10.2308/atax-52605.

Slemrod, J. (2004), "The economics of corporate tax selfishness", *National Tax Journal*, Vol. 57 No. 4, pp. 877-899, doi: 10.17310/ntj.2004.4.06.

Song, H., Zeng, C. and Chen, W.Y. (2019), "Corporate tax avoidance, tax risk and enterprise value", *Collected Essays on Finance and Economics*, Vol. 32 No. 6, pp. 21-31.

Tian, G.L., Yang, L. and Wang, L (2019), "Tax avoidance, earnings persistence and market anomaI", *Journal of Xian Jiaotong University(Social Sciences)*, Vol. 5, pp. 1-9.

Xu, G.Y. and Wang, J. (2020), "Degree of diversification and earnings persistence: opportunities or threats?", *Journal of Audit and Economics*, Vol. 4, pp. 105-115.

Yan, X. (2021), "Research on independent directors, tax aggressiveness and financing constrains", *Journal of Audit and Economics*, Vol. 36 No. 1, pp. 90-100.

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