

# Research on the Influence of Enterprise Tax Avoidance on Value Creation

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**Abstract.** This paper studies the relationship between corporate tax avoidance and value creation by using the data samples of A-share listed companies in China from 2014 to 2018. It is found that within a certain range, tax avoidance can enhance enterprise value, while beyond this range, it will reduce enterprise value. The research conclusion enriches the existing research results of tax avoidance behavior and enterprise value.

**Keywords-**Tax avoidance; Enterprise value; EVA

## 1. INTRODUCTION

With the continuous development of market economy, the business objectives of enterprises have gradually changed from early profit maximization to value maximization and shareholder wealth maximization. In the early days, the indicators of enterprise value evaluation focused on the traditional indicators such as after-tax profit and return on assets, ignoring the consideration of capital cost. Traditional value evaluation indicators have strong dependence on enterprise accounting information. There may be deviations in reflecting the true performance of the company. Scholars pay attention to the evaluation indicators related to shareholder value. Since the 1980s, EVA has been widely recognized in the selection of indicators. EVA is the abbreviation of Economic Value Added, which was first introduced and used by Stern Stewart Management Consulting Company in America, as an index to measure the increase of shareholders' wealth. EVA is calculated on the basis of the net profit of the enterprise, and a number of accounting subjects are added, subtracted and adjusted, so that the opportunity cost and value creation ability of the enterprise capital are fully reflected, and more attention is paid to the enterprise value and development potential.

From the point of view of cost and expense, tax expenditure is an inevitable and important capital outflow in the process of business operation. In order to increase retained capital and shareholder wealth and enhance enterprise value, enterprises will take reasonable and legal tax avoidance measures to reduce tax expenditure. However, information asymmetry and principal-agent problems in the capital market hinder the pursuit of maximizing shareholder value. Tax avoidance behavior increases the complexity of normal business transactions,

leaving a certain space for managers' self-interest behavior, and making it possible for managers to harm the interests of enterprises. Tax avoidance aggravates the internal agency problem of enterprises, The comprehensive effect of agency cost and tax avoidance income on enterprise value is uncertain, which is worthy of further study.

## **2. THE DEGREE OF TAX AVOIDANCE AND ENTERPRISE VALUE THEORY ANALYSIS**

From the perspective of enterprises, tax avoidance will reduce the outflow of enterprises' funds and increase the retained earnings, thus improving the enterprise value (Dyreg, 2008) <sup>[1]</sup>. However, from the national point of view, the tax avoidance behavior of enterprises will affect the national fiscal revenue and the rational and effective allocation of resources. However, the theoretical circles have not reached a consensus on the discussion of the relationship between tax avoidance and enterprise value.

According to the traditional view, tax avoidance reduces the outflow of corporate funds, reduces the transfer of corporate wealth to national resources, increases shareholder value and promotes the improvement of corporate value (Phillips, 2003) . Using the hypothesis of "Economic man" for reference, a completely rational person can always make a decision to maximize his own interests when faced with choices. Enterprises, as economic agents, can fully realize that tax avoidance is conducive to reducing the outflow of enterprise funds, and will make corresponding positive market responses accordingly. From the perspective of tax avoidance efficiency, taxes and fees are the actual cash expenditure of enterprises, which restrict the cash flow of enterprises. Tax avoidance can reduce the outflow of funds, reduce the financing constraints of enterprises to a certain extent, and help enterprises create value (Edwards, 2013) <sup>[2]</sup>. Graham J R (2010), Chyz J A (2013), Donohoe (2014) and Zeume S (2015) and other scholars have used a large number of empirical research results to prove that corporate tax avoidance can enhance corporate value; Chinese scholars also study the relationship between tax avoidance and enterprise value. Scholars such as Wang Yuetang (2009) <sup>[3]</sup>, Lv Wei (2011) <sup>[4]</sup>, Liu Xing (2012) <sup>[5]</sup>, Li Shujin (2012) <sup>[6]</sup>, Wei Zhu (2012) and Chen Dong (2012) <sup>[7]</sup> have studied and analyzed the promotion of tax avoidance to enterprise value from different angles.

However, some scholars have studied the impact of tax avoidance activities to increase the effectiveness of corporate value in a more perfect governance structure (Desai, Dharmapala, 2006 <sup>[8]</sup>; Wang Jing, Zhang Tianxi, 2015 <sup>[9]</sup>). The reason is that enterprise tax avoidance behavior is usually carried out through a large number of complex, cumbersome, opaque economic activities, created opportunities to enterprise agents, increasing the agency cost of enterprises (Ye Kang Tao, Liu Xing, 2013) <sup>[10]</sup>. This is consistent with the view of the information asymmetry theory. The inconsistency of enterprise owners and operators has inconsistencies to make operators may damage shareholders' equity for the maximization of their own interests. The tax avoidance behavior will aggravate the company's entrustment agent and the information asymmetry problem, providing operators with the opportunity to seek interest (CHEN, CHU, 2005 <sup>[11]</sup>; Desai et al., 2007). The more tax avoidance activities of enterprises, the more complex transaction, the greater the profitability of management, affect the value of the company (Yan Shuji, 2015).

In addition to the entrusted agent issues between enterprise owners and operators, the relationship between tax avoidance and corporate value is also affected by proxy issues between shareholders. The major shareholders manipulate the management of corporate management with their own equity advantages, using internal information asymmetry and complicated tax avoidance activities to meet private points, transfer resources to themselves, harm the interests of small and medium shareholders (Chen Xudong, Wang Xue, 2011), leading to Small shareholders have a trust crisis to enterprises, and will also damage the company (Lv Wei et al, 2011). Wu Xuehui (2013) took state-owned enterprises as the research object and found that corporate tax avoidance provided opportunities and channels for major shareholders and management to damage corporate value.

In summary, the study of tax avoidance behavior and corporate value cannot be judged from the forward or negative linear related relationships, and it is necessary to fully consider the trade-off relationship between tax returns and tax avoidance costs. Combined with other scholars' research results, enterprise tax avoidance behavior will increase corporate value within a certain range, and the excess range will reduce the value of corporate values. That is, the degree of enterprise tax avoidance is pouring "U" relationship with its value.

Therefore, this paper puts forward the hypothesis that the enterprise tax avoidance behavior will increase the enterprise value within a certain range, and will decrease the enterprise value beyond this range. That is to say, the tax avoidance degree of enterprises has an inverted "U" relationship with their value.

### **3. THE DEGREE OF TAX AVOIDANCE AND ENTERPRISE VALUE EMPIRICAL RESEARCH DESIGN**

#### **3.1 sample selection and data sources**

In this paper, A shares of listed companies in China from 2014 to 2018 are selected as research samples, and the data indicators come from CSMAR. In order to enhance the accuracy and reliability of the research results, the following companies are excluded from the sample selection: (1) Insurance and financial enterprises; (2) Being ST and \*ST enterprises; (3) Enterprises with incomplete data. The final number of samples was 12512. STATA 11.0 was used to process and analyze the study samples.

#### **3.2 variable definition and measurement methods**

##### *1) enterprise value*

Traditional enterprise value evaluation indicators, such as return on net assets (ROE) and net profit after tax, lack accurate judgment on the cost of equity capital and value creation ability of enterprises. Therefore, economic added value (EVA) is chosen as the index to measure the enterprise value. In order to weaken the influence of enterprise scale on value creation ability, this paper uses EVA ratio of total assets= $EVA/\text{total assets}$  at the end of the period to measure enterprise value. The calculation of economic value added (EVA) index needs to adjust each adjustment item. Because the adjustment items involve specific industries and enterprises and are not generally representative, in order to unify the data samples, this paper directly uses EVA calculation caliber 2 in CSMAR as the EVA value in the total assets EVA rate.

## 2) Degree of tax avoidance

Summarizing the existing empirical research results related to enterprise tax avoidance, it is found that there are two methods to measure the degree of enterprise tax avoidance. One is the effective tax rate method (ETR), which is widely used in foreign studies, but it is rarely used in China due to the lack of horizontal comparability. Secondly, accounting-tax difference (BTG) and its variant (DBTG) are used to measure the degree of tax avoidance of enterprises. This method has been widely recognized and applied in empirical research. In order to remove the impact of accrued items on accrued profits and taxable profits, this paper uses the practices of scholars Desai and Dharmapala for reference, and uses the compound disturbance term DBTG after deducting accrued profits to measure the tax avoidance degree of enterprises.

Accounting-tax difference ( $BTG$ )=(total profit-current income tax expense/nominal income tax rate)/total assets at the end of the period.

Current income tax expense=income tax expense-deferred income tax expense)

$$BTG_{it} = \alpha TACC_{it} + \mu_i + \varepsilon_{it} \quad (1)$$

$TACC$  in the formula represents the total accrued profit of the enterprise,

$TACC$ =(net profit-net cash flow from operating activities)/total assets of the previous year;

$\mu_i$  is the average value obtained from the residuals of each company;

$\varepsilon_{it}$  is the deviation degree between the annual residual error of each enterprise and the average residual error of the enterprise.

$DBTG = \mu_i + \varepsilon_{it}$ , which is the part of accounting-tax difference after deducting the total accrued profit.

## 3.3 Model Building

Based on the previous theoretical analysis, using the models proposed by Desai and Dharmapala (2006), Li Lanyun and Hou Chunli (2019)<sup>[12]</sup> for reference, this paper constructs the following model to test the hypothesis of this paper.

$$\begin{aligned} EVA = & \beta_0 + \beta_1 DBTG + \beta_2 DBTG^2 + \beta_3 Size + \beta_4 SOE \\ & + \beta_5 LEV + \beta_6 Growth + \beta_7 ROA + \beta_8 Separation + \\ & \beta_9 MAGshr + \beta_{10} Year + \beta_{11} Ind \end{aligned} \quad (2)$$

Model (2) is used to study the relationship between the degree of tax avoidance and enterprise value, in which EVA is the explained variable enterprise value, and the explained variable DBTG is the degree of tax avoidance. In order to test the hypothesis, the square term of DBTG is added to the model (2). The model also includes control variables that may influence the enterprise value, The control variable definitions are shown in Table 1.

TABLE 1. CONTROL VARIABLE DEFINITION TABLE

Variable Name	Symbol	Variable Description
Company size	Size	The total assets of an enterprise take natural logarithm

Equity nature	SOE	Use 1 to indicate that the listed company is a state-owned enterprise; Non-state-owned enterprises are represented by 0
Asset-liability ratio	LEV	Total enterprise liabilities/total enterprise assets
Income growth rate	Growth	(Current operating income of the enterprise/previous operating income of the enterprise) -1
return on assets	ROA	Average value of current net profit/year-end assets and total assets at the beginning of the year
Separation rate of two weights	Seperation	Owned by the actual controller (control right-ownership)
Management shareholding ratio	MAGshr	Total shares held by management of listed companies/total shares of the company
age	Year	dummy variable
industry	Ind	dummy variable

#### 4. EMPIRICAL ANALYSIS OF TAX AVOIDANCE DEGREE AND ENTERPRISE VALUE

##### 4.1 descriptive statistics of variables

Table2 is descriptive statistical results of all variables, including maximum value, minimum value, average value and standard deviation.

**TABLE 2.** DESCRIPTIVE STATISTICAL RESULTS

	Mean	Std.Dev	Min	Max
<i>EVA</i>	.0081208	.0539281	-.8658549	1.429639
<i>DBTG</i>	-.0067953	.117482	-3.911512	8.139162
<i>Size</i>	22.27413	1.303801	18.37014	28.51997
<i>SOE</i>	.3564578	.4789718	0	1
<i>LEV</i>	.4257796	.2228805	.009063	8.009247
<i>Growth</i>	.4124609	6.072316	-.981757	429.0361
<i>ROA</i>	.0413009	.0980028	-1.859121	7.249306
<i>Seperation</i>	4.602071	7.598958	-.0116	53.3162
<i>MAGshr</i>	10.46513	16.77997	0	82.26808
Year	2016.182	1.418149	2014	2018
Ind	4.672874	3.240599	1	18

It can be seen from Table2 that the EVA of enterprise value is 1.429639 at the maximum and -0.8658549 at the minimum, indicating that the fluctuation of enterprise value is relatively large. The degree of tax avoidance DBTG varies greatly among different enterprises, with the maximum value and minimum value being 8.139162 and -3.911512 respectively, indicating

that different individuals have different degrees of tax avoidance, with an average value of 0.0371, indicating that enterprises have adopted certain tax avoidance measures and have certain tax avoidance ability. There is a big gap between the maximum value and the minimum value of income Growth rate, Separation rate of two rights and management shareholding ratio MAGshr, which shows that different enterprises have different growth and governance structures.

#### 4.2 multiple linear regression analysis

Table3 lists the regression results of tax avoidance degree and enterprise value. The test results show that the coefficient between DBTG<sup>2</sup>and enterprise value. EVA is significantly negative, while the coefficient between DBTG and EVA is significantly positive, indicating that for the whole sample, tax avoidance degree has a significant impact on enterprise value, which is closer to curve change, similar to parabola. It can be seen from UTEST calculations that the maximum value of the company is 5.809044 in the range of the maximum value 8.139162 and the minimum value of -3.911512, further demonstrates that the degree of enterprise tax avoidance is pouring "U" relationship with its value. That is, when the degree of tax avoidance of enterprises is on the left side of 5.809044, tax avoidance will increase the value of enterprises; When the degree of tax avoidance of enterprises is greater than 5.809044, tax avoidance will bring negative influence on enterprise value, Verify the hypothesis of the article.

**TABLE 3.**EMPIRICAL ANALYSIS OF TAX AVOIDANCE DEGREE AND ENTERPRISE VALUE

	<i>EVA</i>
DBTG	0.153*** (39.45)
DBTG <sup>2</sup>	-0.0137*** (-24.02)
Size	0.00339*** (13.15)
SOE	-0.00281*** (-4.25)
LEV	0.0272*** (17.39)
Growth	0.000105** (2.39)
ROA	0.592*** (85.00)
Separation	0.0000735** (1.97)
MAGshr	-0.0000625*** (-3.20)
Year	control
Ind	control

_cons	-7.593***
	(-19.80)
N	12512
adj. R-sq	0.692

Note: The value of T is in brackets, and \* \* \*, \* \* and \* indicate the significance at the level of 1%, 5% and 10% respectively

For the tax avoidance sample, the coefficient of SIZE is significantly positive, which may be because the stronger the value creation ability of large-scale enterprises, the greater the development potential; There is a significant positive correlation between ROA of profitability, Growth rate of income and enterprise value, which shows that enterprises with good profitability and high growth rate of income have higher market value. After multicollinearity test, the variance expansion factors are all less than 10, and there is no multicollinearity.

## 5. CONCLUSION

This paper discusses the impact of tax avoidance on the value creation of listed companies in China, selects the data of A-share listed companies from 2014 to 2018 as research samples, and finds that the relationship between tax avoidance and enterprise value is not a simple positive or negative correlation, but an inverted "U" curve relationship. To some extent, tax avoidance can enhance the enterprise value, However, with the increase of enterprise value, the agency cost also increases. The comprehensive effect of agency cost and tax avoidance income may reduce the enterprise value, and finally present an inverted "U" curve relationship. This paper combines theoretical research with empirical analysis to study the relationship between tax avoidance behavior and enterprise value of listed companies in China, which has practical application value. Enterprises cannot blindly pursue tax avoidance, but should fully understand the preferential tax policies of the country, reasonably use policies and regulations to avoid tax, and further improve enterprise value.

**Acknowledgement.** This work was supported by Social Science Foundation for Young Scientists of Tianjin, China (No. TJGLQN18-006).

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