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Internal Control Quality, Related Party Transactions and Accounting Information Comparability

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Abstract

In recent years, the financial fraud cases of Chinese listed companies happen frequently, which has been widely concerned by society. Most financial fraud incidents occur in ways that the disclosure of financial statements is not true, and accounting information is not comparable. As the key to the success or failure of corporate governance, internal control quality can restrain the occurrence of related party transactions, especially abnormal related party transactions, and effectively affect the authenticity of financial statements disclosure and the accounting information comparability. However, the existing researches have not yet combined the internal control quality, abnormal related party transactions, and accounting information comparability. Therefore, we explore the influence of internal control quality on the accounting information comparability and related party transactions. Through an empirical study of A-share listed companies in Shanghai and Shenzhen stock exchanges from 2015 to 2019, we find that the scale of related party transactions, especially the scale of abnormal related party transactions, hurts the accounting information comparability, while internal control quality has a positive influence on accounting information comparability. The better the internal control quality, the stronger the restraining effect the abnormal related party transactions is negatively related to the accounting information comparability. Compared with private enterprises, the internal control quality of state-owned enterprises has a stronger inhibiting effect on the abnormal related party transactions and accounting information comparability.

Keywords: Abnormal related-party transactions; Internal control quality; Accounting information comparability; Ownership property; Inhibiting effect

1. Introduction

In recent years, the financial fraud cases of Listed Companies in China occur frequently, from Zhangzidao scallop fleeing event to Hainan Airlines's bankruptcy reorganization, from Luckin Coffee's sales fraud to Fosun

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and other pharmaceutical companies being punished for illegally using cash. Most of the financial fraud cases occur in the form of untrue disclosure of financial statements, which is mostly due to the mutual agreement about a false related party transaction or change the normal and fair price of the transaction, resulting in the transfer of profits and risks among related parties [1], and the heterogeneous disclosure of accounting statements leads to the incompatibility or low accounting information comparability.

The management of enterprises who implement abnormal related party transactions will make use of their information advantages to choose accounting policies and information disclosure methods that are conducive to their revenue maximization, implement accounting information systems that are different from the industry standards, or manipulate the process of accounting information disclosure, which will reduce the accounting information comparability with other enterprises in the industry. Compared with external supervision, internal control, as the key to the success of corporate governance, can identify different types of related party transactions and inhibit the scale, frequency and proportion of related party transactions, especially abnormal related party transactions [2], and effectively affect the authenticity of financial statement disclosure and the accounting information comparability.

From the previous literature, we can look for proxies from financial statements [3, and comparable accounting information is a prerequisite for information transmission [4], which can not only improve the quality of accounting information and achieve the objectives of financial reporting, but also reduce the cost of information processing and the cost of capital [5], to facilitate investors to compare investment opportunities, to improve decision-making efficiency and confidence, then guide the optimal allocation of resources to improve the efficiency of the capital market [3,6]. Related party transactions are the most common relational transaction mode in the daily business activities of Chinese enterprises. Jian and Wong divide them into normal related party transactions that promote efficiency, and abnormal related party transactions that damage value based on the principle of a fair transaction [2]. Abnormal related party transactions play the role of opportunism to subjectively occupying the economic interests of listed companies [7]. Therefore, enterprise managements are more likely to use their information advantage to favor private income maximized accounting policy and information disclosure, to perform different accounting information system from standard system, which will weaken the accounting information comparability with other companies. Internal control is an important procedure for Chinese listed companies to standardize internal processes and prevent risks, which core goal is to improve the quality of accounting information, the good quality of internal control often has good supervision. It can limit management implementation of related party transactions, can help enterprises regularly evaluate the effectiveness of internal control, can supervise the establishment and implementation of internal control, which is helpful to improve accounting information comparability and reduce financial fraud [8].

Through combing literature reviews, we find that there is no literature on the inhibition effect of internal control on the negative correlation between abnormal related party transactions and accounting information comparability. However, as the key to corporate governance, internal control not only has a positive impact on the accounting information comparability but also has a negative impact on abnormal related party transactions. Therefore, studying the interaction will help to find the inhibitory effect of internal control.

Therefore, we cite the measurement model of accounting information comparability of De Franco et al. [9] and calculates the accounting information comparability as a dependent variable. We calculate the related party transactions, and the abnormal related transactions, eg. returns the scale of related transactions to the enterprise-scale, financial leverage, market value, and industry fixed effect in different years, and the residual is abnormal related party transaction, which is regarded as an independent variable. The internal control index is used as the adjusting variable. Furthermore, we analyze the effect of interaction items under different ownership properties. This is the innovation point of this paper.

This study takes the data of A-share Mainboard-listed companies in Shanghai and Shenzhen Stock Exchange from 2015 to 2019. It shows that the scale of related party transactions, especially the scale of abnormal related party transactions, harms the accounting information comparability. The internal control quality has a positive

correlation with the accounting information comparability. The better the internal control quality, the stronger the inhibiting effect on the negative correlation between abnormal related party transactions and the accounting information comparability. Compared with private enterprises, the internal control quality of state-owned enterprises has a stronger inhibiting effect on the abnormal related transactions and accounting information comparability.

The remainder of this paper is organized as follows. Section 2 reviews develop hypotheses, respectively. Section 3 describes our sampling criteria, data, and variable definition and section 4 presents empirical results. The conclusion is presented in Section 5.

2. Hypothesis development

Accounting information comparability focuses on the similarity of financial reporting items among multiple companies in the same industry in a given period [10]. The most important factor of accounting information comparability is the choice of transaction mode. In Chinese emerging markets, the "opportunistic" motive of the management may be a more common phenomenon accounting for the majority of the total scale of related party transactions [11]. At this point, the negative impact of abnormal related party transactions will play a leading role for accounting information comparability. Based on this, we put forward the hypothesis:

H1: The larger the scale of related party transactions, the worse the accounting information comparability.

H1a: There is no significant negative correlation between the scale of normal related party transactions and the accounting information comparability.

H1b: There is a significantly negative correlation between the scale of abnormal related party transactions and the accounting information comparability.

An accounting information system is an important part of the internal control system, and the accounting information generation process and results are affected by the internal control. Weak internal control can reduce the earnings quality of a company [12], while high-quality internal control can help improve the quality of accounting information and further reduce the level of information asymmetry between financial information users and enterprises [13]. At this point, the internal control quality becomes an important factor affecting the accounting information comparability, and the two show a positive relationship. Based on this, we put forward the hypothesis:

H2: The better the internal control quality, the better the accounting information comparability.

Abnormal related party transactions hurt accounting information comparability, while internal control quality had a positive impact on accounting information comparability. In addition to outside investors and other stakeholders are unable to effectively observe the behavior, their supervision of the company's related party transactions will be weakened, related party transactions may be popular within the company, and it will have probability and larger scale [14]. Based on this, we put forward the hypothesis:

H3: Internal control can inhibit the negative impact on abnormal related party transactions and the accounting information comparability.

The inhibiting effect of internal control on the abnormal related party transactions and accounting information comparability may be different for enterprises with different ownership property. However, whether the internal control quality of state-owned enterprises is higher, which has a stronger inhibiting effect on the negative effects, or the risk awareness of private enterprises is stronger, which has a stronger inhibition effect on the negative effects. These have not been studied. Based on this, we propose two competing hypotheses:

H4a: Compared with private enterprises, the internal control of state-owned enterprises has a stronger

inhibiting effect.

H4b: Compared with state-owned enterprises, the internal control of private enterprises has a stronger inhibiting effect.

3. Research design

3.1. Sample selection and data sources

This study takes the data of A-share Mainboard-listed companies in Shanghai and Shenzhen Stock Exchange from 2015 to 2019 (the reason for choosing the data from 2015 to 2019 is that the data are not missing and representative) as the initial sample and excludes the companies with missing values such as financial category, ST, *ST, internal control index and accounting information comparability, and finally obtains a total sample observation value of 3145. The data come from the China Stock Market & Accounting Research (CSMAR) Database and Wind database, and the internal control data come from DIB internal control and risk management database.

3.2. Variable measurement

3.2.1 Comparability of accounting information ($Compa$).

In this study, the comparability model of De Franco et al. [9] is used for measurement, which used data of four consecutive years. Model (1) is

$$Compa_{ijt} = -1/4 \times \sum_{t-3}^{t} \left| E(Earnings_{iit}) - E(Earnings_{ijt}) \right| \tag{1}$$

where $Compa_{ijt}$ is the accounting information comparability. $E(Earnings_{iit})$ is the expected operating profit of company i, which is calculated by model (2).

$$E(Earnings_{iit}) = \hat{\alpha}_i + \hat{\beta}_i \times return_{it} \tag{2}$$

where $return_{it}$ is the stock report of company i in the year t. $\hat{\alpha}_i$ and $\hat{\beta}_j$ are OLS estimation of four years' data from T-4 to T for the $Earnings_{it}$ and $return_{it}$ of Company i by regression model (2).

$$Earnings_{it} = \alpha_i + \beta_i \times return_{it} + \varepsilon_{it} \tag{3}$$

Similarly, $\hat{\alpha}_j$ and $\hat{\beta}_j$ is calculated by the $Earnings_{jt}$ and $return_{jt}$ of Company j using OLS estimated values of the four annual data from T-4 to T through regression model (3), and then the expected operating profit of Company j is calculated by model (2).

To calculate the accounting information comparability at the company level, we carry out the following processing: firstly, we calculate the accounting information comparability of all combinations of company i and company j in the same industry. Secondly, based on firm i, all pairs paired with firm i were sorted in order from largest to smallest. Finally, two accounting information comparability variables $Compa$ are set, whose value is the mean of all portfolio accounting information comparability in the industry. The higher the value of $Compa$, the stronger the accounting information comparability of listed companies.

3.2.2 Related party transactions (RPT).

Referring to the research of Jian and Wong [2], we choose the amount of commodity transaction and service

provided or received by an enterprise as the measurement index of related party transactions. Specifically, the scale of related party transactions (RPT) is equal to the annual amount of related party transactions of goods and services divided by the operating income. The scale of related party transactions is regression for enterprise size, leverage ratio, market-to-book value and, industry fixed effect by year, and the residual is abnormal related transactions ($UNRPT$). Normal related transactions ($NRPT$) are the difference value between them.

3.2.3 Internal control quality (ICQ).

This study adopts the natural logarithm (ICQ) of the DIB internal control and risk management database "Dibo · Internal Control Index of Chinese Listed Companies". The value range of the index is 0-1000 points, and the higher the score, the better the internal control quality.

3.2.4 Ownership property (State)

Based on the ownership property, the enterprises are divided into state-owned enterprises and private enterprises. If the listed company is state-owned, the value is 1. Otherwise, the value is 0.

3.2.5 Control variable (Controls).

Referring to Myung-Gun Leea et al. [15], who argued that the correction between related party transactions and financial statement comparability. We include $Size$, BM , $Growth$, ROA , LEV and $Share$l as control variables, which represent the basic characteristics, growth, profit, and risk of the listed companies respectively.

3.3 Model specification

Model (4-6) is constructed in this study to test hypotheses H1, H1a, and H1b.

$$Compa_{ijt} = \alpha + \beta \times RPT_t + \sum \lambda_i \times Controls_i + \varepsilon \tag{4}$$

$$Compa_{ijt} = \alpha + \beta \times NRPT_t + \sum \lambda_i \times Controls_i + \varepsilon \tag{5}$$

$$Compa_{ijt} = \alpha + \beta \times UNRPT_t + \sum \lambda_i \times Controls_i + \varepsilon \tag{6}$$

where $Compa_{ijt}$ is the accounting information comparability in the year t , RPT_t is the total scale of related party transactions in the year t , $UNRPT_t$ is the scale of abnormal related party transactions in the year t , and $NRPT_t$ is the scale of normal related party transactions in the year t .

Model (7) is built in this study to test hypotheses H2.

$$Compa_{ijt} = \beta_0 + \beta_1 \times ICQ_t + \sum \beta_k \times Controls_t + \varepsilon \tag{7}$$

where $Compa_{ijt}$ is the accounting information comparability in year t , and ICQ_t is the natural logarithm of the internal control index.

Model (8) is built in this study to test hypotheses H3.

$$Compa_{ijt} = \beta_0 + \beta_1 ICQ_t + \beta_2 UNRPT_t + \beta_3 ICQ_t \times UNRPT_t + \sum \beta_k \times Controls_t + \varepsilon \tag{8}$$

where $ICQ_t \times UNRPT_t$ is the interaction between internal control quality and abnormal related party transactions, which embodies the inhibiting effect.

To verify Hypotheses H4, the influence of ownership property is added based on Model (8), and Model (9) is constructed in this paper.

$$Compa_{ijt} = \beta_0 + \beta_1 ICQ_t + \beta_2 UNRPT + \beta_3 \times ICQ_t \times UNRPT_t \times State_t + \sum \beta_k \times Controls_t + \varepsilon \tag{9}$$

where $State_t$ is the binary dummy variable of ownership property, the value is 1 for state-owned enterprises and 0 for private enterprises. $ICQ_t \times UNRPT_t \times State_t$ is the interaction of internal control quality and related party transactions, and the accounting information comparability in state-owned enterprises and private enterprises

respectively.

4. Empirical analysis

4.1 Descriptive statistics and correlation Analysis

Table 1 reports the descriptive statistical results of the major variables in the regression model. To eliminate the influence of extreme values, this study conducts a 1% winsorize treatment for all continuous variables. In Table 1, from 2015 to 2019, the proportion of the related party transactions amount of goods and services in the total operating income is 0.12, indicating that the related party transactions amount of goods and services accounts for more than 10% of the total operating income and plays an important role in the daily trading activities of enterprises. The mean of accounting information comparability is -0.011, which is highly consistent with previous studies. The mean of internal control quality is 6.501, and there is little difference between the maximum and minimum.

Table 1. Descriptive statistical of the variables

Variable	Definition	Number	Mean	Minimum	Maximum
Compa	accounting information comparability	3,145	-0.011	-0.035	-0.004
RPT	related party transactions	3,145	0.120	4.36e-05	1.057
UNRPT	abnormal related party transactions	3,145	-0.009	-0.163	0.917
NRPT	normal related party transactions	3,145	0.128	0.069	0.182
ICQ	internal control quality	3,145	6.501	6.124	6.729
UNICQ	interaction of abnormal related party transactions and internal control quality	3,145	-0.054	-1.051	6.011
UNICQState1	interaction of abnormal related party transactions and internal control quality and state-owned enterprise	1,821	0.292	-1.077	6.852
UNICQState0	interaction of abnormal related party transactions and internal control quality and private enterprise	1,324	-0.533	-1.031	2.381
Size	natural logarithm of total assets	3,145	23.220	20.610	27.290
LEV	leverage ratio	3,145	0.475	0.078	0.921
ROA	return on assets	3,145	0.045	-0.085	0.209
Growth	growth rate of sales	3,145	0.112	-0.445	1.235
BM	market-to-book value	3,145	1.612	0.140	9.070
Share1	the shareholding ratio of the largest shareholder	3,145	0.365	0.103	0.731

Table 2. The correlation coefficient of the variables

Variable	Compa	UNRPT	NRPT	ICQ	Size	LEV	ROA	Growth	BM	Share1
Compa	1									
UNRPT	-0.101	1								
NRPT	-0.028	-0.079	1							
ICQ	-0.136	0.024	-0.196	1						
Size	-0.496	0.051	-0.278	0.258	1					
LEV	-0.412	-0.027	0.612	0.054	0.580	1				
ROA	0.096	-0.038	-0.474	0.312	-0.076	-0.449	1			
Growth	0.010	-0.028	0.015	0.243	0.061	0.069	0.212	1		
BM	-0.489	0.001	0.197	0.077	0.683	0.656	-0.328	0.006	1	
Share1	-0.141	0.164	-0.143	0.092	0.196	0.042	0.075	-0.024	0.072	1

Table 2 shows that the accounting information comparability has a significant negative correlation with the related party transactions and the abnormal related party transactions, and has a significantly positive correlation with internal control quality. The correlation coefficients among the explanatory variables were all lower than

0.683. Therefore, there is no multicollinearity among these variables. The above results support hypotheses H1, H1a, and H1b preliminarily.

4.2 Regression analysis

Table 3. Regression results of internal control quality, related party transactions, ownership nature, and accounting information comparability

Variable	Model4	Model5	Model6	Model7	Model8	Model9	
State						1	0
RPT	-0.001***						
	(-2.65)						
UNRPT		-0.001***					
		(-2.65)					
NRPT			-				
ICQ				-0.002**			
				(-1.97)			
UNRPT*ICQ					-0.020***		
					(-3.60)		
UNRPT*ICQ*State						-0.000***	-0.000
						(-4.11)	(-0.94)
Size	-0.001***	-0.001***	-0.001***	-0.001***	-0.001	-0.001***	-0.001***
	(-8.80)	(-8.68)	(-8.71)	(-9.15)	(-0.56)	(-7.99)	(-4.02)
LEV	-0.004***	-0.004***	-0.004***	-0.004***	-0.006	-0.006***	-0.003***
	(-4.92)	(-5.07)	(-4.96)	(-5.63)	(-0.63)	(-5.94)	(-2.97)
ROA	-0.005	-0.005	-0.004	-0.008***	-0.011***	-0.010**	-0.011***
	(-1.44)	(-1.44)	(-1.27)	(-2.84)	(-3.78)	(-2.30)	(-2.87)
Growth	0.001	0.001	0.001	0.001***	0.001***	0.002***	0.001
	(1.16)	(1.16)	(1.09)	(2.95)	(2.65)	(2.85)	(1.10)
BM	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(-6.62)	(-6.64)	(-6.58)	(-8.80)	(-4.12)	(-5.79)	(-7.07)
Share1	-0.003***	-0.003***	-0.003***	-0.003***	-0.002***	-0.003***	-0.000
	(-3.96)	(-3.96)	(-4.38)	(-4.27)	(-3.24)	(-2.90)	(-0.15)
Constant	0.018***	0.018***	0.018***	0.031***	0.009	0.045***	0.004
	(6.77)	(6.61)	(6.66)	(3.95)	(0.26)	(4.38)	(0.37)
Observations	3,145	3,145	3,145	3,145	3,145	1,821	1,324
R-squared	0.279	0.279	0.276	0.304	0.315	0.308	0.276

*Note: ***, **,* and ** indicate significance at the 0.001, 0.005, and 0.1 levels, respectively.*

Table 3 is the regression analysis for models (4-9) and presents the regression results of related party transactions, internal control quality, ownership property, and accounting information comparability. As can be seen from columns 2-4, the related party transactions and the abnormal related party transactions are negatively correlated with the accounting information comparability, while the normal related party transactions are not significantly correlated with the accounting information comparability. From column 5, high-quality internal control and accounting information comparability have a significantly positive correlation. From column 6, the interaction of internal control quality and abnormal related party transactions have a very significantly inhibiting effect on the accounting information comparability. From column 7, in state-owned enterprises, the interaction of high-quality internal control and abnormal related party transactions has a very significant moderating effect on the accounting information comparability. From column 8, in private enterprises, the interaction has an insignificant effect on the accounting information comparability. The empirical results support hypotheses H2, H3, and H4a.

5. Conclusion

Based on the data of A-share Mainboard-Listed Companies in Shanghai and Shenzhen stock exchanges from 2015 to 2019, this study examines inhibiting effects on the negative relationship of internal control quality to abnormal related party transaction, and the impact on the different ownership property in the enterprises. It shows that the related party transactions, especially the abnormal related party transactions, harm the accounting information comparability. The internal control quality has a positive correlation with the accounting information comparability. The better the internal control quality, the stronger the moderating effect on the negative correlation between abnormal related party transactions and the accounting information comparability. Compared with the private enterprises, most of the state-owned listed companies are reformed from the original state-owned enterprises, the related party transactions are particularly prominent, and the internal control quality is higher. So, the internal control quality of state-owned enterprises has a stronger inhibiting effect on the abnormal related transactions and accounting information comparability. Therefore, enterprises should pay more attention to the abnormal related party transactions, focus on building an effective internal control system. Compared with state-owned enterprises, private enterprises should improve the internal control quality and strengthen internal control while reducing the scale of related party transactions, so as to further improve the accounting information comparability and reduce the risk of financial fraud, provide investors with high-quality financial reporting, and a fair and transparent investment environment.

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