



# 温州肯恩大学

WENZHOU-KEAN UNIVERSITY

## Audit committee size and financial reporting quality

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by

ZHANG Yuqing

1025996

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## **Audit Committee Size and Financial Reporting Quality**

### **ABSTRACT**

This paper explores the relationship between audit committee size and financial reporting quality in China. The empirical study uses a sample of 829 Chinese listed companies and 1822 year-observations from the period of 2015-2017. Panel regression is conducted to test the hypothesis, and it finds that the large size of the audit committee has a negative and significant relationship with the quality of financial reports. Although the normal belief is corporate governance can facilitate the resource allocation and efficiency of decision-making, the result of the study suggests that there is a need for companies not to have too big audit committee as it may cause problems of increasing number of free-riders as well as delayed decisions, which results in a low financial reporting quality. As a new practice in China, audit committee formation is not mature enough for it to function effectively.

**Keywords:** audit committee size, discretionary accruals, financial reporting quality,

**JEL Classification:** G10 G30 M41

## I. INTRODUCTION

The aim of this study is to explore the impact of the audit committee size on financial reporting quality. Financial reports are very crucial as they are the most important financial information that investors, creditors, and analysts can use to evaluate the performance of the corporation. Outside users utilize the information to make their investment decisions, and the recent theory suggests investors can make more appropriate investment decisions with the hold of transparent financial information. As a consequence, the financial reports are expected to improve resource allocation efficiency (Hope and Thomas, 2008). However, the detected frauds in the financial reports have raised a great concern on the quality of financial reports. The disclosed information has a great difference from the real financial situation of the corporation in the financial scandals, such as Enron, WorldCom and Lehman Brothers.

Compared to western countries, the situation seems to be more serious in China, the frequent restatement of previous financial reports shows at least a quarter of Chinese listed companies have a poor quality of financial information. They manipulate earnings with the goal of avoiding loss and promoting survival instead of supporting the refinance. These companies are usually in slow growth or have great debt. All these findings demonstrate the low credibility of accounting information in China (Wang et al., 2011).

In order to solve the dilemma, corporate governance contributes to discovering fraud and misstatement. The significance of corporate governance arises from the agency problem, which is the conflict between the decision-maker and shareholders due to the separation of ownership and control. In facing such a problem, both external and internal governance mechanisms are conducted. While the external mechanism includes the external auditing and market competition, the board of directors is seen as the primary internal way of ensuring financial reporting quality. In fact, the demand for external auditing is weak in China because of the dominant state ownership and limited contracting role for accounting (Jun Lin et al.,

2008). Therefore, internal supervision turns out to bear a heavy burden on controlling and managing corporations. The audit committee as a committee of the board of directors also has the responsibility of monitoring the process of financial reporting. The dominance of state control distinguishes China from many western countries and makes principle to agent theory no longer suitable in analyzing the corporation fraudulent problems. Therefore, the effectiveness of audit committees in China is questionable with the consideration of the special economic and institutional background (Habib and Jiang, 2015).

Topics related to the factors influencing financial reporting quality have attracted a great number of researchers, in which the audit committees' characteristics concerning independence, experts are under careful examination. Based on most of the prior researches, financial reporting quality increases when the proportion of experts in the audit committee increases, and the same situation happens to the independence of the audit committee. (Abbott et al., 2000; Carcello & Neal, 2000; Pucheta-Martínez & De Fuentes, 2007). Therefore, the New York Stock Exchange has detailed requirements toward list companies' audit committees in the USA, and Cadbury Code published in the UK strongly recommends the establishment of the audit committee in corporations (Dobija, 2013). China is one of the countries involved in the process of corporation reform as it implements the standard of corporate governance which leads the audit committee establishment to be much more popular in Chinese corporations than ever before (Jun Lin et al., 2008).

Despite enormous researches conducted in western countries, there is a lack of studies on the effect of the audit committee in Chinese corporations. Meanwhile, audit committee size is less examined by researchers compared to other characteristics, but questions on the optimal size of the committee have been raised. This paper is designed to contribute to this area by using Majiyebo et al. (2018)'s model. A large sample of Chinese firms during the period 2015-2017 is used to test the hypothesis, and quality of financial reports is measured using the

residual of the modified Jones model. The empirical evidence shows that both positive and absolute value of discretionary accruals has a positive and significant relationship with the audit committee size. Since high discretionary accruals represent low earnings quality. The results indicate large audit committees will lead to low quality of financial reports given other variables controlled like firm size, leverage and return on asset. Although some of the previous researches claim an increasing number of audit members promote the transparency and flow of information (Lin et al.,2006), this study provides another perspective on viewing its effect in a specified condition. With the audit committee getting larger, it is also possible to have more free-riders, which inhibit corporation governance from functioning well. The redundancy and complexity of structure can be detrimental to the communication and decisions made within the audit committee when arguments and debates occur frequently, which can eventually cause the low quality of financial reports (Anderson et al, 2004). The study makes a great contribution to the literature due to its difference. On the one hand, it is conducted in China where there are unique economic backgounding and regulations. The concept of the audit committee in China is not as mature as it is in some western countries, thus it provides a special case for study. On the other hand, the empirical results that show that the large size of the audit committee reduces the quality of financial reports are contradictory to many previous researches. Special reasons are raised to account for the phenomenon.

In terms of the remaining part of the paper, it consists of 5 parts. Section 2 discusses previous researches findings of the impact of the audit committee's characteristics on financial statements. Section 3 describes specific study measurements. Section 4 shows s data election and empirical results. Section 5 conducts a sensitivity test by using another measurement of financial reporting quality. The final section summarizes the main finding.

## **II. LITERATURE REVIEW & HYPOTHESIS**

Chinese authorities introduce the audit committee to corporations far behind western countries. When the audit committee starts to exist in UK and US in the late nineteenth century, China adopts it just in recent years when ‘The code of corporate governance for listed companies’ was issued by China Securities Supervisory Commission in 2002(Yang et al., 2011). In the document, it requires firms to set up strategy, nomination, remuneration and audit committee under the board of director, and also set rules toward the composition of the committees as the majority of committee members should be independent. Meanwhile, the standard also claims the responsibility of audit committee as follows: (1) recommend appointing or changing external auditors; (2) monitor internal auditing system; (3) coordinate communication between internal and external auditor; (4) supervise the financial disclosure and statements (Article 54, CSRC, 2002). The role of the audit committee as defined in the code is consistent with many western countries. For instance, Financial Reporting Council revised guidance on audit committees in 2016, which indicates the responsibilities of the audit committee are “oversight,” “assessment” and “review” of company issues (FRC, Financial Reporting Council 2016).

The formation of an audit committee relies heavily on agency theory which is regarded as the cornerstone of researches about corporate governance. The agent problem is caused by the “separation of ownership and control,” which means the agent may not always act in the best interest of shareholders (Jensen and Meckling, 1998). On the contrary, managers have strong motivations to manipulate the financial statements and earnings for the sake of their future career and prospect. Optimal incentives are lacked for facilitating managers to prioritize shareholder’s long-term benefits when asymmetry information further causes their misbehavior (Grossman and Hart, 1983). Therefore, audit committees are adopted to mitigate the pressure of agent problems and to increase the transparency of information (Cai et al., 2011).

While agency problem is defined as the conflicts between agent and principle, Habib and Jiang (2015) find the nature of agency problem in China can be seen as the principle to principle. Instead of having independent individuals, the Chinese government as the controlling shareholder decides appointment and management. In fact, a majority of Chinese corporations have the minimum number of independent directors, which eventually restrain the effect of the audit committee (Jiang and Kim, 2015). Meanwhile, since the government can retrieve information from private channels, there is a lower demand for disclosure about firm performance in China, which turns out to be completely different from many other countries (Habib and Jiang, 2015).

The roles of the audit committee evolve over time. When it contains a board definition of responsibility, more emphasis is put on its duty of examining and reviewing financial reports. In fact, the rapid growth of audit committees in China and the UK both appear in early 2000 when there is a great number of corporate scandals. In order to rebuild the investors' trust in the financial information in the stock market, the audit committee serves as a regulation of improving financial reporting quality and reducing the fraud and misstatement. (Jun Lin et al, 2008). The previous study indicates high-quality financial reports also have significant economic consequences in terms of resource allocation and investment efficiency. With reliable and accurate information available to capital suppliers, more investors will be attracted (Houcine, 2017).

Although many countries have aware of the importance of the audit committee and force corporations to establish it, the effectiveness of the audit committee on the quality of financial reports varies. Some researchers claim the audit committee improves the financial statements while others find an insignificant relationship between the audit committee and earnings management or corporate fraud. Therefore, it remains to be a controversial problem in terms of its effectiveness, and ample researches continuously contributed to explore it. Since

audit committees are diversified in size, competencies and independence, plenty of researchers are working on these topics.

The independence of the audit committee is regarded as an important factor in determining its effectiveness. As written on the ‘Provision for Internal Auditing Management in SOEs owned by the central government,’ state-owned enterprise is required to have an independent committee (Yang et al., 2011). In other words, it should be composed of non-executive directors. Most of the researchers conclude highly independent audit committee brings benefits to the corporation. Carcello and Neal (2000) find out there is an inverse relationship between the possibility of receiving on-going financial reports in corporations and audit committees which are composed of a large proportion of affiliated directors including both inside directors and gray directors. The result is explained with the pressure from management. When affiliated members dominate the committee, managers can always force auditors to issue unqualified reports. Meanwhile, the empirical result of Abbott et al. (2000) reveals the same finding that the increasing number of independent audit committee members is beneficial for reducing the misstatement on financial reports. They claim independent directors view the audit committee serves as a way of enhancing their reputation, thus, they are more alert to financial fraud in case it happens and destroys their reputation. However, Abbott et al. (2000) admit in their research that the audit committee should meet a certain level of independence and activity in order to function well as the corporation supervision, rather than the mere presence of audit committee, which is further proved by Pucheta-Martínez and De Fuentes (2007). However, 67.4% of Chinese firms in Hong Kong had at least one government officer in the audit committee even though they are classified as independent members in the committee (Yang et al., 2011).

The number of experts in the audit committee is also taken as an important characteristic. Studies hold a mixed view toward its influence. The finding of Krishnan et al.

(2011) demonstrate that legal experts contribute positively to financial reporting quality due to their notice of litigation risk. Members with enough knowledge of finance and accounting can investigate and realize the problem quickly. Therefore, the audit committee with a great proportion of experts is expected to have a high quality of financial reports. Ghafran and O'Sullivan (2017) agree with the benefits of experts in the audit committee, but they separate experts into accounting and non-accounting expertise and highlight the value of the latter as non-accounting expertise can encourage an extensive audit resulted in improving quality of financial reports.

Researchers also explore whether the size of the audit committee affects the financial reporting quality, however, the literature provides a mixed result in regard to the impact of the audit committee size. Felo et al. (2003) use a sample of 130 firms for the period 1992-1993 and 1995-1996 in the US. Instead of using accrual models to measure financial reporting quality, they directly adopt the financial reporting score in AIMR Review of Corporate Reporting. The results show that increasing the size of the audit committee can help to enhance the reporting quality, which is consistent with the finding of Yang and Krishman (2005). Yang and Krishman (2005) select 896 US firms randomly for the year 1996-2000 and use both the Jones model and TWR model to measure total and current accruals. They find the size has a negative and significant impact on earning management in both methods. Bala and Yahaya (2014) work on the same topic in Nigeria with the modified Jones model and they have the same conclusion as Felo et al. (2013) and Yang and Krishman (2005). These studies support the idea that a large audit committee is beneficial to the quality of financial reports.

Kalbers and Fogarty (1993) explain the positive effect of the large audit committee with the reason of increasing auditing power. Large audit committees are legitimized by a meaningful designation from the board of directors and are thus more likely to be acknowledged as an authoritative body by the external internal audit function. As a result, the

increased status and power of the audit committee enhance its effectiveness in detecting financial frauds. Meanwhile, managers are less likely to control large audit committee and take it for personal use. Therefore, some researchers claim the increased knowledge, status combined with the decreased management pressure enhance the effectiveness of the audit committee. Vafeas (2005) also claims a large audit committee has the advantage of having various experts who can contribute their knowledge and experience in detecting the financial conjuring trick.

On the contrary, Kuang and Sharma (2013) use a sample of 194 companies in the New Zealand stock market in the period for 2004 and adopted the modified Jones model to measure discretionary accrual. The results show a positive and significant relationship between the audit committee size and earnings management. Likewise, Nelson and Jamil (2011) conduct research in Malaysia with a sample of 20 firms for the period of 2003 to 2009, and Dechow and Dichev's (2002) model is used in their study to measure the earnings quality. They reach the same conclusion that the audit committee size is positively and significantly related to earnings management. All of these studies find that the increasing size of the audit committee is detrimental to financial reporting quality. Anderson et al. (2004) argue the larger size of the audit committee will make members more reluctant to talk about their own opinions but they follow others. The lack of discussion does great harm to the quality of decision and make it difficult for members to detect the financial error. The concept is proved by Pucheta-Martínez and De Fuentes (2007) who find a downsizing audit committee reduces the likelihood of receiving a fraudulent financial statement. The evidence demonstrates the advantage of having a small audit committee since it can facilitate the process of decision making and speed up the flow of information.

The result of Baxter and Cotter (2009) even refuses both the negative and positive impact of the audit committee but reaches the conclusion that the audit committee size is not

significantly related to the financial reporting quality. Furthermore, limitations exist in previous researches where there is a lack of strong evidence to prove the relationship between the audit committee and financial reporting quality. For instance, the firm-year observation is not sufficient in Nelson and Jamil's (2011) research with only 20 firms, and Felo et al. (2003) only use two short periods, which creates a great doubt on the reliability and objectivity of their results. Currently, the requirement in most countries including China recommends at least three members in the committee, but the effect of audit committee size remains unclear in Chinese corporation, and there is no clear guidance on the specific numbers which cause great uncertainty to corporations (Jun Lin et al, 2008).

Financial reporting quality is considered to be high when it represents a true and fair view of a firm's financial position. Conversely, financial fraud occurs when managers manipulate their earnings. One strong motivation for managers conducting such behavior is to pursue their personal interests. Since the bonus that managers received is closely connected with the firm performance, great earnings bring direct financial benefits to the managers (Liu & Lu, 2007). As pointed by DuCharme et al. (2000), the methods of managing the manipulation fall into three categories, change accounting methods, estimates and accelerate the recognition of the revenue. However, it is a challenge to measure the financial reporting quality. In prior studies, it is a common practice to use discretionary accruals to proxy financial reporting quality. When non-discretionary accruals reflect normal accruals due to natural business operation, discretionary accruals identify the abnormal accruals which are caused by earnings management. Therefore, researchers argue that higher discretionary accruals indicate low financial reporting quality.

In most cases, the absolute value of discretionary accruals is used regardless of its signs, but Ines (2017) argue the positive and negative accruals trace different accounting policies in the corporations. Companies with positive accruals adopt aggressive accounting strategies with

the purpose of displaying a greater profit. Conversely, the negative discretionary accruals indicate companies choose the conservative accounting strategies, and the goal is to avoid tax payment by reducing income. Thus, the signed discretionary accruals provide a more comprehensive view of earnings management. Furthermore, the finding of Garcia-Meca and Sanchez-Ballesta (2009) serves as evidence that the different accrual models can affect the empirical results considerably, which also accounts for the difference in the literature. Meanwhile, their findings also show accruals models that do not consider long-term discretionary accruals choices may lead to a misleading result. The most popular model in recent research is the Modified Jones model because it reduces the error of measuring the discretionary accruals by adjusting the changes in sales for the changes in account receivable. The model also considers the long-term discretionary accruals as it measures the level of plant, property, and equipment, thus it provides an accurate proxy of the financial reporting quality.

Previous researches are mainly conducted in the UK and US where sophisticated audit committee systems are built. Conversely, China just imported the concept of the audit committee in 2001 and 2002 and is now working on adjusting it to the Chinese context. As a centrally planned economy with a great number of state-control enterprises, China can serve as a special case in examining the role as well as the effect of audit committee formation in corporations (Wu et al., 2015). Besides, previous researches focus on the proportion of independent members or experts and other aspects concerned with the composition of audit committees in western countries, and they show the effectiveness of the audit committee on the quality of financial records varies from countries. After considering the immature regulation of audit committee in China, the ineffectiveness of its function is expected under such a consideration. Therefore, the large audit committee is expected to have a negative and significant relationship with the financial reporting quality.

**H: Chinese firms with large size of audit committees are expected to have a low quality of financial reports.**

### **III. RESEARCH METHODOLOGY**

This study adopts a correlational research design to measure whether audit committee size can influence the financial reporting quality. Below is the model specification:

$$DACC_{i,t} = \beta_0 + \beta_1 ACSZ_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 MVBV_{i,t} + \beta_4 LEVG_{i,t} + \beta_5 ROA_{i,t} + \beta_6 GROW + \varepsilon_{i,t} \quad (1)$$

Where DACC is the absolute and signed value of discretionary accruals; ACSZ is the percentage of audit committee size on the board. Since the hypothesis predicts that audit committees in large sizes have worse performance on the financial statements,  $\beta_1$  is expected to be positive. The rests are control variables that display nature attributes of the corporation itself: firm size, market value to book value, leverage, return on asset and growth. This model is used by Majiyebo et al. (2018) doctors in the Department of Accounting and Management faculty of Arts and Social Science Nigerian Defense Academy Kaduna

Based on the previous literature, the residuals of accrual models are used to represent financial reporting quality as they measure the distortion and manipulation of earnings (Duréndez & Madrid-Guijarro, 2018; Hope et al., 2012; Kipkoech et al., 2016; Krishnan et al., 2011). Therefore, modified Jones 1995 as one of the most important discretionary accrual models is adopted in the study (Dechow et al., 1995). It is described in the following equation:

$$\frac{TA_{i,t}}{A_{i,t-1}} = \alpha_1 \left( \frac{1}{A_{i,t-1}} \right) + \alpha_2 \left( \frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}} \right) + \alpha_3 \left( \frac{\Delta PPE_t}{A_{i,t-1}} \right) + \varepsilon_{i,t} \quad (2)$$

Where  $TA_{it}$  is the total accrual;  $\Delta REV_{i,t}$  is the change in operating revenue of firm i in year t;  $\Delta REC_{i,t}$  is the change in account receivable;  $\Delta PPE_t$  is the change of gross plant, property, and equipment; All of the above is scaled by  $A_{i,t-1}$ , which is the total asset of firm i at the beginning of the year t (Alareeni et al., 2014). DACC is the Discretionary accruals with different signs which indicate different accounting policies. In order to make a more informative analysis, I

explore the effect of audit committee size on both positive, negative and absolute value of discretionary accrual.

#### **IV. SAMPLE AND RESULTS**

All data used in this study are obtained from CSMAR. The sample contains 1822 firm-year observations and spans 3 years, t=2015-2017. Even though the audit research database in CSMAR starts from 2012, there are too many missing data in the first two years, thus the sample period begins from 2015. Since the modified Jones model uses the cross-sectional data, table 1 and table 2 provide the breakdown of the sample according to industry and year. As can be seen from table1, the industry is the largest sector in our sample and finance companies are excluded because their revenue and accrual are different from other industries, which may influence the accuracy of the results (Stubben, 2010).

**Table 1: Industry statistics**

	#	%
Utilities	266	14.6
Properties	123	6.75
Conglomerates	78	4.28
Industry	1221	67.01
Commerce	134	7.35
Total	1822	100.00

**Table 2: Year statistics**

	#	%
2015	534	29.3
2016	569	31.2
2017	719	39.5
Total	1822	100.00

Table 3 shows that the average value of discretionary accruals is 0.008 and its standard deviation is 0.202. It has a minimum of -2.432 and a maximum value of 4.027. Similarly, the average value of the audit committee size is 0.395 with a standard deviation of 0.097, a minimum of 0.111 and a maximum of 1. The mean value of market value to book value is 3.019, with a standard deviation of 5.625. The minimum and maximum values are 0.825 and 126.951. Also, the mean statistic value of growth is 0.466 with a standard deviation of 2.809. the maximum value is 74.55 and the minimum value is -0.787. The average statistic value of ROA is 0.787 with a standard deviation of 1.724. The maximum value of it is 62.204 and 0.004

is its minimum value. Likewise, the mean statistic value of leverage is 1.240 with a standard deviation of 2.155. -4.576 and 45.619 are minimum and maximum values of leverage. The mean value of firm size is 22.118, with a standard deviation of 1.207. The min and max values are 17.602 and 26.469.

**Table 3: Descriptive Statistics**

Variable	Obs	Mean	Std.Dev.	Min	Max	p50	p75
DACC	1822	0.008	0.202	-2.432	4.027	0.008	0.055
ACSZ	1822	0.395	0.097	0.111	1	0.333	0.429
GROW	1822	0.466	2.809	-0.787	74.557	0.125	0.310
MVBV	1822	3.019	5.625	0.825	126.951	2.001	2.964
ROA	1822	0.787	1.724	0.004	62.204	0.579	0.900
LEVG	1822	1.240	2.155	-4.576	45.619	0.676	1.364
SIZE	1822	22.118	1.207	17.602	26.469	22.073	22.847

Note: DACC is the value of discretionary accrual measured as residual of the modified Jones model. ACSZ is an audit committee size that is measured as a percentage of audit committee members on the board. MVBV is the market value to book value and ROA is the return on asset. Leverage is measured as the ratio of debt to equity. Size is measured by the natural logarithm of total assets.

As shown in table 4 the correlation coefficients are calculated to demonstrate how the dependent variable is related to the explanatory variables and identify both the direction and quantum of the relationship. Since no independent variable is highly correlated with other independent variables, greater than 0.8, the multicollinearity problem does not exist in the regression equation (Allen, 2007). From the result, there is a weak negative correlation between DACC and ACSZ (-0.034). Meanwhile, there is a negative correlation between DACC and MVBV (-0.126), DACC and ROA (-0.077), DACC and GROW (-0.019).

The correlation between ACSZ and firm size is -0.031, indicating that large Chinese companies have a relatively small number of the audit committee members on the board. The correlation between the company's LEVG and SIZE is 0.028, which indicates the proportion of debts increases when the size of companies increases.

**Table 4: Matrix of correlations**

Variables	DACC	ACSZ	MVBV	SIZE	LEVG	ROA	GROW
DACC	1.000						
ACSZ	-0.034	1.000					
MVBV	-0.126	0.022	1.000				
SIZE	0.093	-0.031	-0.403	1.000			
LEVG	0.008	0.039	-0.001	0.237	1.000		
ROA	-0.077	-0.020	0.047	0.028	0.013	1.000	
GROW	-0.019	-0.028	-0.033	0.057	0.023	0.644	1.000

Note: DACC is the value of discretionary accrual measured as residual of the modified Jones model. ACSZ is an audit committee size that is measured as a percentage of audit committee members on the board. MVBV is the market value to book value and ROA is the return on asset. Leverage is measured as the ratio of debt to equity. Size is measured by the natural logarithm of total assets.

Table 5 displays a summary of multiple regression results obtained from Majiyebo's model. Positive DACC indicates an aggressive accounting policy is adopted in the corporation, and higher residuals represent greater earnings management which is always regarded as opportunistic behavior of the manager in the pursuit of personal benefits (Ines, 2017). Therefore, it may cause more fraud in financial reports. The hypothesis is accepted as there is a positive and significant relationship between audit committee size and discretionary accruals (coeff= 0.053, *p*-value<0.1). Since R-square is the proportion of variance in the dependent variable which be explained by the independent variables, the R-square implies the 54% of variance in the positive discretionary accruals can be explained by independent variables as listed in the model, the size of audit committee, growth, market value to book value, return on asset, leverage and firm size.

A common practice in many previous researches is to take the absolute accruals as the proxy of financial reporting quality (Dabor & Adeyemi, 2009; Mohammed Al-Shetwi, 2011; Wu et al., 2007). The result of absolute value of residual is similar to the positive accruals with a relatively low R square 38.1%. This is consistent with the finding of Kuang and Sharma (2013), Nelson and Jamil (2011), Pucheta-Martínez and De Fuentes (2007) who conclude there is a positive relationship between audit committee and earnings management., but it contradict with the finding of Felo et al. (2013), Yang and Krishman (2005) and Bala and Yahaya (2014).

On the contrary, the negative discretionary accruals have an insignificant relationship with the audit committee size ( $p$ -value>0.1). It is mainly because corporations adopt conservative accounting strategies for the purpose of adjusting tax, which has a less serious impact on the quality of financial reports as well as investors (Ines, 2017). Meanwhile, the explanatory power of the model is weak with 34.7% R square.

As for the leverage, it has a significant and positive relationship with both the positive and absolute discretionary accrual. It can be easily understood because firms with a great amount of debt are more likely to adopt aggressive strategies. In order to meet the expectation of shareholders and to attract more investments, managers have a strong motivation to conduct earnings management to shift the future interest to the current (Lazzem et al., 2017). The result of the growth has the same relationship with positive and absolute discretionary accruals as the leverage, and it is consistent with the finding of Dong et al. (2016) who conduct an empirical study on exploring the relationship between firm growth and earnings management in China. They point out that the company will have a great need for funds when they have many growth opportunities, earnings management enables them to transfer positive information to investors and helps to attract more investments.

**Table 5: Regression results**

VARIABLES	DACC>0	DACC<0	ABS-DACC
ACSZ	0.053* (1.814)	-0.219 (-1.404)	0.130* (1.787)
MVBV	0.004* (1.903)	-0.008*** (-6.574)	0.006*** (4.472)
SIZE	0.002 (0.714)	0.011* (1.950)	-0.005 (-1.463)
LEVG	0.006*** (2.911)	-0.003 (-1.129)	0.004** (2.006)
ROA	0.013 (0.613)	0.026*** (3.022)	-0.030** (-2.189)
GROW	0.063*** (3.260)	-0.039*** (-5.294)	0.048*** (4.142)
Constant	-0.044 (-0.568)	-0.201* (-1.906)	0.127* (1.735)
Observations	1,004	818	1,822
R-squared	0.540	0.347	0.383
Year FE	YES	YES	YES
Industry FE	YES	YES	YES
Adjusted R-sq	0.537	0.342	0.381

Note: DACC is the value of discretionary accrual measured as residual of the modified Jones model. ACSZ is an audit committee size that is measured as a percentage of audit committee members on the board. MVBV is the market value to book value and ROA is the return on asset. Leverage is measured as the ratio of debt to equity. Size is measured by the natural logarithm of total assets. Significance: \*\*\* p<0.01, \*\*p<0.05, \* p<0. Robust t-statistics in parentheses

## V. SENSITIVITY TEST

In the test, the measurement of the financial reporting quality is replaced from the Modified Jones Model to the discretionary estimation error model, which is proposed by Dechow and Dichev (2002) with the modification introduced by McNichols (2002). With the modified Jones model focusing on the manipulation of credit sales, the second model captures the relationship between current accruals and cash flow. Using different proxies of financial reporting quality provides a more comprehensive view of its relationship. Discretionary estimation errors model is described in the following equation:

$$\Delta WC_{i,t} = \alpha_0 + \beta_1 CFO_{i,t} + \beta_2 CFO_{i,t-1} + \beta_3 CFO_{i,t+1} + \beta_4 \Delta REV_{i,t} + \beta_5 \Delta PPE_{i,t} + \varepsilon_{i,t} \quad (3)$$

Where  $\Delta WC_{i,t}$  is the working capital of firm  $i$  at year  $t$ ;  $CFO_{i,t-1}$ ,  $CFO_{i,t}$  and  $CFO_{i,t+1}$  are the operating cash flow of firm  $i$  in the preceding year, current year and following year;  $\Delta REV_{i,t}$  is the change in revenues of firm  $i$  in year  $t$ ;  $\Delta PPE$  is the change in gross plant, property, and equipment. All variables listed above are scaled by the average total asset.

Table 6 shows audit committee size is insignificantly related to the financial reporting quality, which is consistent with the finding of Madawaki and Amran (2013) who use the same model to test 202 listed companies on the Nigerian Stock Exchange. The adjusted R-square is 14.3% with regards to the positive residual, which is much lower compared to the modified Jones model, but it is similar to Nelson and Jamil (2011) who conduct Dechow and Dichew' (2002) model and have the R-square at 12.8%. The difference between the two models can be explained as different models are required in different circumstances. The McNichols' model appears to be more effective when the cash performance is extreme, but in this situation, the modified Jones model turns out to be more powerful at detecting the revenue and debt manipulation (Stubben, 2009).

The relationship between the leverage and absolute residual of McNichols' model is consistent with the result of the modified Jones model, which further proves that companies are more likely to manage earnings when they have a large proportion of debt.

**Table 6: Regression results**

VARIABLES	WC>0	WC<0	ABS-WC
ACSZ	-0.010 (-0.266)	0.042 (1.067)	-0.015 (-0.499)
MVBV	0.001 (0.401)	-0.002* (-1.921)	0.000 (0.350)
SIZE	-0.031*** (-7.615)	0.005 (0.889)	-0.026*** (-7.453)
LEVG	-0.016*** (-4.069)	-0.013*** (-4.903)	0.008*** (3.828)
ROA	-0.019*** (-3.346)	0.002 (0.445)	-0.001 (-0.381)
GROW	0.000 (0.382)	-0.002 (-0.620)	0.001 (0.658)
Constant	0.919*** (9.435)	-0.342** (-2.452)	0.783*** (9.399)
Observations	1,027	795	1,822
R-squared	0.153	0.104	0.065
Year FE	YES	YES	YES
Industry FE	YES	YES	YES
Adjusted R-sq	0.143	0.090	0.059

Note: WC is the value of discretionary accrual measured as residual of discretionary estimation error model. ACSZ is an audit committee size that is measured as a percentage of audit committee members on the board. MVBV is the market value to book value and ROA is the return on asset. Leverage is measured as the ratio of debt to equity. Size is measured by the natural logarithm of total assets. Significance: \*\*\* p<0.01, \*\*p<0.05, \* p<0. Robust t-statistics in parentheses

## VI. CONCLUSION

The focus of the paper is to identify the effectiveness of audit committee size on the financial reports by using empirical testing. The empirical result suggests the large audit committee can cause negative impacts on the financial reporting quality after examining a sample of 829 companies in China. The finding is in contrast to prior studies done in US and UK that claim transparency and control of the corporation increases as audit committee member increases, which is beneficial to the quality of financial report (Kipkoech,2016) However, the study provides an alternative that large audit committees can also cause lots of arguments, inhibiting effective decision making. Meanwhile, an increasing number of free-rider in the committee can also prevent it to function well (Anderson et al, 2004).

The results can be explained by the ineffectiveness of the audit committee in China due to its special institutional and economic background. Wu et al. (2015) conduct a survey to exam the operation of the audit committee in China, and they argue the role of the audit committee is not really put into use although there are certain regulations. Companies establish the committees because of the pressure from the government instead of monitoring its business operation. Research conducted by Jun Lin et al. (2008) reach the same conclusion. Even though recent years witnessed the growing popularity of forming audit committees in corporations, the role of it remains unclear in China as many Chinese respondents perceive the audit committee's role in reducing financial statement fraud as less important. Compared to other countries, the non-standard formation and composition of the audit committee restrict its effectiveness as well. In other words, the audit committee is still a new practice in China, and it serves more like a good image of corporate governance than its real operation (Jun Lin et al., 2008). Meanwhile, as an imported concept, the organization should interpret it in the Chinese context in order to make audit committee work. However, the application of the audit committee encounters strong resistance in China due to the excessive involvement of the government and the culture of guanxi. Compared to western countries, the Chinese government maintains a close relationship and have great control over the corporations. When the government acts as a controlling shareholder, it has a great influence on determining the external auditors. As a consequence, audit committee members feel accountable to the controlling shareholders rather than the minority shareholders, which also restricts the effectiveness of the audit committees (Wu et al., 2015).

The study makes two main contributions to the literature. First, by using both absolute and signed value of discretionary accruals to measure the quality of financial reporting, the study expands the existing studies which are dominated by studies that measure only absolute accruals. Therefore, it provides a more comprehensive view of the relationship between audit

committee size and financial reporting quality. Meanwhile, researchers who are interested in the moderation of signed value can explore the effect of the study. Second, previous studies of audit committee characteristics are conducted in western countries where the corporation governance appeared early. On the contrary, the audit committee is introduced in China in recent years, which provides a special case in seeing its impact. In this study, the institutional effect is also taken into consideration in explaining the effectiveness of the audit committee in the country. The study has potential implications for relevant regulatory bodies in China and may find the results useful in accessing the impact of the size of audit committees and determining the structure and optimal size of it.

As many other researches, this study also has potential limitations which can be concluded into three items. First of all, the study initially wants to cover the whole period for 2012-2019 which is the existing period of the Audit Research database in CSMAR, then the filter is used to remove incomplete data. As a result, the final sample spans only three years due to lots of missing information in variables. However, the short period of the test sample may affect the reliability and accuracy of the results. Second, in the research, the modified Jones model and current accrual are adopted to measure the financial reporting quality, but the reliability of proxy is skeptical. Industries are not evenly distributed, and more Properties and Conglomerates industry should be covered in the sample. Meanwhile, accrual models measure different aspects of the accruals and have their own weakness, thus more models should be involved in the test, for example, the margin model. Besides, Shenzhen Stock Market reveals the financial reporting quality level of listed corporations which seems to be more reliable than the calculated proxy. Third, the last and the most important limitation lies in the control variables. Although the model includes several control variables, audit committee independence and expertise are not taken into consideration due to the lack of related data, which may influence the objectivity of the final results.

This research suggests that audit committee size is negatively and significantly related to the financial reporting quality and too large audit committee cannot function effectively on monitoring financial reports. Further researches can provide an insight into the optimal number of members in the audit committee for it to function well. Current regulation of audit committee formation only sets the minimum number of audit members which is at least three people in Chinese corporations, but it provides no direction on the maximum number that an audit committee can have. It leads confusion for firms when they are organizing committees. Therefore, there is a need for further research to provide a guide in determining an appropriate number of audit committee members. Moreover, much attention has always been paid to large listed companies, further researches can contribute to study changes in earnings management in small or medium private corporations related to the size of the audit committee. Listed companies are under greater regulatory pressure compared to private companies, and private firms have different rules and policies from listed corporations. After taking consideration of the great difference, audit committee size seems to have a different impact on private companies, and further researches can contribute to the area. Researches of listed companies together with those of private companies then provide a more comprehensive view on the effect of audit committee size.

## Appendices

### Variable Description

#### Variables

##### *DACC*

Discretionary accrual is the proxy measured using both the signed and the absolute value of residual of modified Jones model [1995] as following:

$$\frac{TA_{i,t}}{A_{i,t-1}} = \beta_1 \left( \frac{1}{A_{i,t-1}} \right) + \beta_2 \left( \frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}} \right) + \beta_3 \left( \frac{\Delta PPE_t}{A_{i,t-1}} \right) + \varepsilon_{i,t}$$

The cross-sectional regression for each industry is run for running the model. The formula  $TA = (\text{Net Income}-\text{Operating cash flow})$  is used to calculate the total accrual.  $\Delta REV$  is the change in revenue, adjusted by subtracting  $\Delta REC$  is the change in accounts receivable. PPE is the property, plant, and equipment. Discretionary estimation errors model proposed by Dechow and Dichev (2002) with the modification introduced by McNichols (2002) is also used to measure the proxy as following:

$\Delta WC_{i,t} = a_{0,t} + \beta_1 CFO_{i,t} + \beta_2 CFO_{i,t-1} + \beta_3 CFO_{i,t+1} + \beta_4 \Delta REV_{i,t} + \beta_5 \Delta PPE_{i,t} + \varepsilon_{i,t}$

$\Delta WC$  is the working capital measured as the difference between the current asset and the current liability.  $CFO_{i,t-1}$ ,  $CFO_{i,t}$  and  $CFO_{i,t+1}$  are the operating cash flow of firm  $i$  in the preceding year, current year and the following year;  $\Delta REV_{i,t}$  is the change in revenues of firm  $i$  in year  $t$ ;  $\Delta PPE$  is the change in the gross plant, property and equipment. All variables are scaled by the average asset of the year  $t$ .

##### *ACSZ*

is the percentage of the Audit committee size on board.

##### *ROA*

Return on assets is computed as operating income divided by total assets at the beginning of the year, which demonstrates the profitability of a company relative to its total assets.

##### *GROW*

Growth is measured as the relative change of total assets, which has a great impact on the firm's accounting choices.

##### *MVBV*

Market value to book value which is measured as the market value of equity divided by book value of equity.

##### *LEVG*

Leverage is measured as the ratio of debt to equity, an indicator of measures the amount of debt in a company's capital structure.

##### *SIZE*

Firm size is measured as the natural logarithm of total assets, which is considered to have an important role in measuring the quality of financial reporting as larger firms have a higher possibility to manipulate earnings (Bhushan, 1999).

##### *YEAR*

The dummy variable is used to control the year effect. The study period spans 3 years from 2015 to 2017.

##### *IND*

The dummy variable is used to control the industry effect. In the study, six industry is included as finance, Utilities, Properties, Conglomerates, industry, and commerce which is assigned a number based on the 2001 China Securities Regulatory Commission Code.

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