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Audit Knowledge and Accounting Conservatism: A Case of Executives' Vocational Learning and Application

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ABSTRACT
This study examines the relation of audit knowledge and accounting conservatism based on the case of executives' vocational learning and application. The empirical results reveal the evidence of a negative relation between executives' audit knowledge and accounting conservatism. Further analysis indicates that the impact of executives' audit knowledge on accounting conservatism is only robust in companies without CEO duality. The results imply that companies with executives who have audit knowledge may adopt aggressive accounting policy and reduce the accounting conservatism of financial reports.

Keywords: audit knowledge, accounting conservatism, CEO duality

INTRODUCTION

Accounting conservatism means the asymmetry of recognizing loss and return in financial reporting (Basu, 1997). Accounting conservatism is not only an important index of accounting information quality (Ball et al. 2000), but also a kind of effective corporate governance mechanism (Ball et al. 2000; Watts, 2003). Audit knowledge is a kind of special professional knowledge. It is possible that companies' executives who get audit knowledge in former practical work will adopt different accounting policy and consequently lead to different accounting conservatism. Thus, we examine the relation of audit knowledge and accounting conservatism based on the case of executives' vocational learning and application.

Many previous studies focus on the impact of executives' characteristics like gender, background and shareholding on accounting conservatism (Ahmed and Duellman, 2007; Francis et al. 2015). Top managers will make choices and act based on their characteristics, thus giving rise to the phenomena that the organization is a reflection of its top managers (Hambrick and Mason, 1984). Therefore, negligence of executives' knowledge characteristics when researching in accounting conservatism will lead to the loss of validity and accuracy.

Managers with audit knowledge usually have sufficient accounting and auditing competence and professional experience that can make up investors' deficiency of knowledge in specific areas and promote the company management level. Especially, some of these executives once worked in the audit firms that their

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State of the literature

- Previous studies have not explored the impact of executives' audit knowledge on accounting conservatism from the perspective of knowledge management.
- The learning process does not stop with formal university education, and employees in the audit firms can get knowledge through vocational learning.
- Companies' executives who have audit knowledge may adopt different accounting policy and consequently lead to different accounting conservatism.

Contribution of this paper to the literature

- This study inspects the impact of executives' audit knowledge on accounting conservatism based on the case of executives' vocational learning and application.
- This study reveals the evidence of a negative relation between executives' audit knowledge and accounting conservatism and extends the research about the impact of executives' knowledge characteristic.
- This study indicates that the impact of executives' audit knowledge on accounting conservatism is only robust in companies without CEO duality and further enriches relevant documents about company governance.

companies cooperate with now. Their industry relationship network can effectively help the companies cope with external supervision. Therefore, more and more companies tend to employ executives with audit knowledge.

The existing literature mainly focuses on the impact of executives with audit firm connections on companies, a special case of executives' audit knowledge. Lennox (2005) researches the correlation between audit firm connections and audit quality and finds that companies with audit firm connections have a smaller probability of receiving non-standard audit opinions. Dowdell and Krishnan (2004) find companies with audit firm connections have higher level of accrual earnings management, which supports relevant clauses of SOX Act. However, there is also some research not finding significant impact of audit firm connections on accrual earnings (Geiger et.al. 2005; Geiger and North, 2006). Geiger et al. (2008) even find that former auditor is holding the post of executive, not only has no effect on accounting information quality, but also has positive market reaction about the declaration day. Naiker and Sharma (2009) find employing a former auditor onto the board of auditors can enhance internal controls and financial reporting supervision.

We can conclude that previous studies have not reached a consensus on the impact of executives' audit knowledge on companies. Moreover, few studies pay attention to the correlation between executives' audit knowledge and company accounting conservatism. Especially, although executives' vocational learning and application has some distinct characteristics of knowledge management, previous studies have not explore the impact of executives' audit knowledge on accounting conservatism from the perspective of knowledge management.

Therefore, based on the case of executives' vocational learning and application, this study explores whether the financial reporting is less conservative when companies employ executives with audit knowledge, and examines whether the correlation will vary when the chairmen of the board are also the Chief Executive Officers (CEOs) in many companies, which is called CEO duality.

LITERATURE REVIEW AND HYPOTHESES

Executives' Audit Knowledge and Accounting Conservatism

In the era of information explosion, everyone faces various information. However, information is not equivalent to knowledge. Knowledge comes from the value-added process of organizing, analyzing and integrating information (Nonaka, 1994; Nonaka and Takeuchi, 1995). Knowledge management is also defined as the continuous process of providing the right knowledge at the right time to members who need it to help them take the right action and consequently improve the organizational performance (Wang, 2013; Wu et al., 2016; Li et al., 2017).

The learning process does not stop with formal university education (Chen, Jones, and Moreland, 2014). People can get knowledge from many channels including workplaces. Employees' knowledge can be enhanced through professional practice and communication with each other. In the context vocational learning setting, Hannes et al. (2013) propose to stimulate communication, boundary crossing and knowledge sharing and establish an enabling learning environment that triggers positive factors for team learning.

In the accounting (audit) firms, managers decide upon the appropriate way to train promising individuals for the next level (Chen, Jones, and Moreland, 2014). KPMG, one of the biggest four audit firms in the world, implement an innovative workplace learning culture to reduce communication barriers within the chain of command, between employees and top management, and to encourage employees to construct group identity and transform themselves (Phornprapha, 2015). Employees' competence is a result of collaborative learning (Różewski et al., 2015). Once completing the process of vocational learning in auditing work, the employees in audit firms can put the knowledge into application skillfully in the future.

From the company owners' point of view, their desires to achieve more profit are sometimes in conflict with the restrictive supervision from outside. Then the demand for executives with audit knowledge arises as a result. Executives with audit knowledge have sufficient accounting and auditing competence and better understanding of the company accounting system. They can arrange accounting operations that fit the company (Dowdell and Krishnan, 2004) and have the ability to obtain more benefits for investors without violating accounting standards. This may cause accounting conservatism to fall. Meanwhile, executives with audit knowledge usually have rich auditing experience and better acknowledge of common auditing processes and methods. They can cope with auditors easily. This may result in executives' over-confidence in their work and underestimate the impact of negative events on cash flow or overestimate future return from the current projects. Ahmed and Duellman (2013) found that executives' overconfidence has negative relationship with company accounting conservatism.

From the managers' point of view, they exercise management rights as the agent of company owners. The company owners usually use accounting reports as a standard to evaluate managers' performance. As a result, managers' remuneration is usually, directly or indirectly corresponding with financial reporting. Based on the assumption of rational economic people, executives always have the intention to maximize their own interest. Thus, executives with audit knowledge may take more aggressive accounting policy or choose opportunistic reporting practices. Both of them will lower the company accounting conservatism.

In addition, it is possible that executives with audit knowledge also have audit firm connections. Except for professional audit ability, these executives are familiar with common audit plans and methods that audit firms use and can easily bypass it (Dowdell and Krishnan, 2004; Lennox, 2005). In addition, compared with other countries' legal principles, in Chinese bureaucracy, administrators' decisions are under great influence of "relationship" (Hsiung, 2013). The companies with audit firm connections have more intense motivation to adopt aggressive accounting policy and to intervene in financial reporting. In such cases, generally speaking, auditors will increase audit procedures to guarantee audit quality and reduce audit risk. However, with presence of audit firm connections, external auditors may be too friendly to question their former colleague's judgment and cause audit quality to descend (Dowdell and Krishnan, 2004; Lennox, 2005). Overall, the first hypothesis is described as follows:

H1: Compared with other companies, the companies that employ executives with audit knowledge have lower accounting conservatism.

CEO Duality and Accounting Conservatism

The agency relationship between managers and shareholders arises from the separation of ownership and control rights of companies, that is, when the identity of managers is distinct from that of shareholders (Jensen and

Table 1. Sampling procedure

Sampling Procedure	Number
All observations from 2007 to 2014	17828
Less observations of B share companies	(859)
Less observations in financial industries	(333)
Less observations of ST companies*	(1010)
Less observations with missing data to compute accounting conservatism	(1223)
Less observations with missing data of executive characteristics	(472)
Number of observations in the final sample	13931

* ST is the abbreviation of Special Treatment, which means a listed company has abnormal financial position or other abnormalities.

Meckling, 1976). Managers have direct power to choose accounting policy and stockholders achieve the goal of indirectly manipulating accounting policy by exerting influence on them (Watts and Zimmerman, 1990). In general, the agency relationship between managers and shareholders is beneficial to improving the operation efficiency in modern companies.

However, with the separation of ownership and control rights, managers have incentives to transfer wealth to themselves from shareholders (LaFond and Roychowdhury, 2008). Imposing restrictions on executives' opportunistic actions can limit the ability of executives to overestimate earnings and net assets and lower the degree of information asymmetry (LaFond and Watts, 2008). Conservative financial reporting could facilitate efficient contracting between managers and shareholders in the presence of agency problems (Ball, 2001; Watts, 2003).

CEO duality is a common phenomenon in China, which reduces the information asymmetry and consequent knowledge difference between managers and shareholders to a great degree. CEO duality can reconcile the conflict of interest between CEOs and shareholders, which is the main reason for agency conflicts. Thus, CEO duality can relieve the agency problem between owners and managers to some degree (Anderson and Reeb, 2003; Villalonga and Amit, 2006). In contrast, in the companies without CEO duality, due to the knowledge advantage, executives have more intention and chance to maneuver financial reporting for their own benefits, and consequently lead to a lower accounting conservatism.

All of the above leads to the second hypothesis:

H2: Compared with companies with CEO duality, executives' audit knowledge has more robust negative impact on accounting conservatism in the companies without CEO duality.

METHODOLOGY

Data Sources

All of the data come from the Chinese Stock Market and Accounting Research (CSMAR) database and the data of executives' audit knowledge are supplemented by manual work. CSMAR database provides public financial data or stock price and is widely used in research in China like the COMPUSTAT/CRSP of US (Lennox, Wu, and Zhang, 2016). For China, has gone through twice great accounting reforms separately in 2006 and 2014, we select the data from 2007 to 2014 to ensure the comparability of data to some degree. In addition, to maintain the consistency of accounting policy environment, the sample does not contain the data of Chinese listed companies before 2007 or after 2014. To decrease the data error and bias, we specially set two groups, one to select the data and another one to check the work. We process the data through SPSS20 and Stata12.0. **Table 1** outlines the sampling procedure.

The initial sample has 17828 company-year observations. The final sample includes 13,931 observations after excluding B share companies (859), financial services and insurance companies (333), special treatment (ST) companies (1010) and observations with missing information to compute accounting conservatism (1223) or confirm executives' characteristics (472).

Table 2. Accounting conservatism test

Variable	Coef.	t	P>| t |
D_{it}	-0.00140	-0.98	0.328
R_{it}	0.00275***	3.63	0.000
D_{it}*R_{it}	0.05231***	10.88	0.000
Year controls		Yes	
Industry controls		Yes	
N		13931	
F		56.13	
Adj R-squared		0.0417	

In the table 2, R_{it} is the annual buy and hold return in year t and its positive or negative sign represent "good news" or "bad news". D_{it} is an indicator variable set equal to 1 if R_{it} is negative, 0 otherwise. The coefficient of D_{it}*R_{it} represents how loss recognition faster than return recognition. If the coefficient of D_{it}*R_{it} is positive, we can conclude that the accounting policy in the company is conservative.

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 level, respectively.

Accounting Conservatism Test

Basu (1997) makes a series of groundbreaking research on accounting conservatism. He uses positive stock return and negative stock return as measurements of "good news" and "bad news" and puts forward the asymmetric timeliness measure model (Basu, 1997). As a classic model in calculating accounting conservatism, Basu's model provides thoughts and basis for latter scholars to examine accounting conservatism in many papers. Therefore, we firstly use Basu's basic method to test accounting conservatism based on the final sample including 13931 company-year observations during the period of 2007 to 2014 in China. The results in **Table 2** significantly show that Chinese listed companies have financial reporting conservatism in this period.

Empirical Proxies and Variable Definitions

However, Dietrich et al. (2007), Givoly et al. (2007) and some other scholars question Basu's asymmetric timeliness measure model for its validity. Therefore, in this study, we mainly use a negative accruals model brought out by Givoly and Hayn (2000) to examine accounting conservatism.

Based on the assumption that usually accruals and operating cash flows have negative relationship, Givoly and Hayn (2000) propose that persistent negative accruals can be used to measure accounting conservatism. That is because, in the long term, normal companies adopt unbiased accounting policy, and their cumulative net profit before depreciation and amortization should be in accordance with the net cash flow from operating activities. Namely, accruals should trend to be zero. However, because accounting conservatism means the asymmetry of recognizing loss and return, the accruals of a company would constantly be negative. Therefore, persistent negative accruals mean accounting earnings are steady in the company. The more negative cumulative accruals are, the stronger company accounting conservatism is.

Ryan (2006) considers negative accrual model as the most natural method to measure accounting conservatism. Many studies use this model to examine accounting conservatism (Ahmed and Duellman 2007; Zhang, 2008; Francis et al. 2015). The basic model is as follows:

$$CON\_ACCRUAL = -TACCR_{it}/A_{it-1} = -(NI_{it} + DEPR_{it} - CFO_{it})/A_{it-1} \tag{1}$$

where $TACCR_{it}$ is total accruals in year t for company i, $TACCR_{it} = NI_{it} + DEPR_{it} - CFO_{it}$; NI_{it} is net margin in year t for company i; $DEPR_{it}$ is depreciation cost in year t for company i; CFO_{it} is operating cash flow in year t for company i; A_{it-1} is total asset at the beginning of year t for company i.

To examine hypothesis H1, we build the following model based on negative accrual model:

Table 3. Variable definition

Variable	Description
Dependent Variable	
CON_ACCRUAL	The level of accounting conservatism every company-year.
Independent Variable	
AWB	A dummy variable, which equals to 1 if the executives in the company have audit knowledge, 0 otherwise.
Control Variables	
Size	The natural logarithm of total assets of the company.
Lev	The liability-asset ratio of the company.
MTB	The market-value to book-value of equity of the company.
ROA	The return on total asset of the company.
OC	The ownership concentration measured by Herfindahl-Hirschman Index 5 (the sum of squares of the percentage of share held by the top five shareholders)
Own	A dummy variable, which equals to 1 if the company is state-owned, 0 otherwise.
CEOD	A dummy variable, which equals to 1 if the company has CEO duality, 0 otherwise.
CEOG	A dummy variable, which equals to 1 if the CEO of the company is female, 0 otherwise.
CEOE	A variable, which equals to 1, 2, 3, 4, 5 if the CEO's education level is polytechnic school and below polytechnic school, junior college, bachelor degree, master degree and doctorate degree respectively.
CEOF	A dummy variable, which equals to 1 if the CEO has accounting experience, 0 otherwise.
industry	A variable that is controlled, which indicates the effect of industry
year	A variable that is controlled, which indicates the effect of year

$$\begin{aligned} &CON\_ACCRUAL = \alpha_0 + \alpha_1 AWB + \alpha_2 Size + \alpha_3 Lev + \alpha_4 MTB + \alpha_5 ROA \\ &+\alpha_6 OC + \alpha_7 Own + \alpha_8 CEOD + \alpha_9 CEOG + \alpha_{10} CEOE \\ &+\alpha_{11} CEOF + year + industry + \varepsilon \end{aligned} \tag{2}$$

where, $CON\_ACCRUAL$ is the dependent variable to measure accounting conservatism every company-year. AWB is the independent variable, which is an indicator variable equal to 1 if the company has executives with audit knowledge, 0 otherwise. The executives defined in this study includes CEO, Chief Financial Officer (CFO), deputy general manager and the board secretary. We define executives with audit knowledge as executives who have audit work experience in audit firms.

We also control some important variables that maybe affect the results of regression in the former studies by Watts and Zimmerman (1978), Lennox (2005), Duellman (2006), Roychowdhury and Watts (2007) and other people, such as $Size$, Lev, MTB, ROA, OC, Own and CEO characteristics ($CEOD$, $CEOG$, $CEOE$, $CEOF$). Besides control variables mentioned in the model, we also control the effects of *industry* and *year* in regression. **Table 3** presents the definitions of variables.

To examine hypothesis H2, we divide the sample into two parts according to CEO duality ($CEOD$) and regress the model (2) in two subsamples: $CEOD = 1$ and $CEOD = 0$. Where $CEOD$ is an indicator variable, which equals to 1 if there is CEO duality in the company, 0 otherwise.

Table 4. Regression results (whole sample)

Variable	Expected Sign	Coef.	t	P > | t |
AWB	-	-0.00722***	-2.65	0.008
Size	+	0.00225**	2.07	0.038
LEV	-	-0.04389***	-6.87	0.000
MTB	+	0.00009**	2.16	0.031
ROA	-	-0.24057***	-12.71	0.000
OC	-	-0.00374	-0.42	0.676
Own	-	-0.02482***	-10.29	0.000
CEOD	-	-0.01630***	-6.19	0.000
CEOG	-	-0.00622	-1.38	0.169
CEOE	+	0.00069	0.54	0.592
CEOF	+	0.01332***	2.95	0.003
Year controls			Yes	
Industry controls			Yes	
N			13931	
F			46.16	
Adj R-squared			0.0383	

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 level, respectively.
We use the fixed effects model here. All control variables defined in table 3.

RESULTS

Whole Sample Regression Results

Table 4 presents the regression results of the whole sample by using the fixed effects model[1]. According to the results shown in **Table 4**, we can find that the coefficient on AWB is negative and significant. Therefore, hypothesis H1 has been confirmed. This result indicates that companies employing executives with audit knowledge are apt to adopt aggressive accounting policy. The results in this study about executives' audit knowledge, including audit firm connections, are consistent with Dowdell and Krishnan (2004), Lennox (2005) and other scholars.

Subsample Regression Results

Table 5 presents the results for the relation between executives' audit knowledge and company accounting conservatism considering CEO duality. From the regression results in two subsamples, which are divided according to CEO duality, we can conclude that executives' audit knowledge has a robust negative impact on accounting conservatism only in companies without CEO duality. Moreover, in companies with CEO duality, the coefficient of the explanatory variable AWB is negative but not significant. Then hypothesis H2 has been confirmed. This result indicates that when a company lacks effective mechanisms to reduce the agency conflict, executives may use information and knowledge advantage to seek interest and boost the agency cost.

[1] The regression results show that the correlation coefficient between individual effects and explanatory variables isn't close to zero (0.0667) and result of F-test is significant (Prob > F = 0.000). Thus, we chose the fixed effects model here rather than random effects model or pooled OLS regression.

Table 5. Regression results (subsample)

Variable	Expected Sign	*CEOD* = 1			*CEOD* = 0		
		Coef.	t	P > | t |	Coef.	t	P > | t |
AWB	-	0.00219	0.35	0.726	-0.00864***	-2.95	0.003
Size	+	0.00030	0.10	0.923	0.00231**	2.10	0.036
LEV	-	-0.04486***	-2.68	0.007	-0.03713***	-5.65	0.000
MTB	+	0.00008	1.62	0.106	0.00004	0.40	0.686
ROA	-	-0.33075***	-6.73	0.000	-0.20433***	-10.39	0.000
OC	-	0.04502*	-1.83	0.068	0.00352	0.38	0.703
Own	-	-0.01813***	-2.65	0.008	-0.02829***	-11.61	0.000
CEOG	-	-0.01435	1.17	0.241	-0.00924**	-1.99	0.047
CEOE	+	0.00330	-1.10	0.273	0.00268*	1.94	0.053
CEOF	+	0.02119	1.64	0.101	0.01328*** 0.01355***	2.89	0.004
Year controls		Yes			Yes		
Industry controls		Yes			Yes		
N		3128			10803		
F		10.62			34.96		
Adj R-squared		0.0363			0.0345		

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 level, respectively.
We use the fixed effects model here. All control variables defined in table 3.

Robustness Test Results

The existence of heteroscedasticity is also our major concern in the application of regression analysis, as it can invalidate significance of statistical test results, which usually assume the modeling errors are uncorrelated and uniform. Therefore, we apply a weighted least squares (WLS) estimation method to check the significance of explanatory variables. The **Table 6** presents the regression results of whole sample and the **Table 7** presents the regression results of subsample without CEO duality.

DISCUSSION

Empirical Findings

Executives' audit knowledge has a negative impact on company accounting conservatism. This can be explained as executives with audit knowledge implementing more aggressive accounting policy and lowering accounting conservatism by taking advantage of their special knowledge which includes professional experience and industry connection network.

Compared with other companies, in the companies without CEO duality where the information asymmetry and consequent knowledge difference between managers and shareholders is more serious, executives' audit knowledge has a more negative effect on accounting conservatism. This means the stockholders of these companies lack efficient ability to supervise the executives, which will give executives opportunities to manipulate the choice of accounting policy and financial reporting.

Table 6. WLS regression results (whole sample)

Variable	Expected Sign	Coef.	z	P>| z |
AWB	-	-0.00524***	-2.68	0.007
Size	+	0.00216	1.25	0.213
LEV	-	-0.04563***	-4.53	0.000
MTB	+	0.00009***	3.09	0.002
ROA	-	-0.23817***	-9.92	0.000
OC	-	-0.00171	-0.12	0.907
Own	-	-0.02521***	-5.57	0.000
CEOD	-	-0.01584***	-3.21	0.001
CEOG	-	-0.00634	-1.54	0.123
CEOE	+	-0.00008	-0.07	0.943
CEOF	+	0.01434**	2.33	0.020
Year controls			Yes	
Industry controls			Yes	
N			13931	
Adj R-squared			0.0335	

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 level, respectively.

Table 7. WLS regression results (subsample)

Variable	Expected Sign	Coef.	z	P>| z |
AWB	-	-0.00688***	-5.00	0.000
Size	+	0.00187	1.59	0.111
LEV	-	-0.04297***	-5.21	0.000
MTB	+	0.00004	0.14	0.889
ROA	-	-0.20618***	-7.79	0.000
OC	-	0.00508	0.38	0.704
Own	-	-0.02649***	-5.99	0.000
CEOG	-	-0.00979	-1.60	0.111
CEOE	+	0.00191	1.33	0.185
CEOF	+	0.01376**	1.98	0.048
Year controls			Yes	
Industry controls			Yes	
N			10803	
Adj R-squared			0.0315	

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 level, respectively.

Major Contributions

This study mainly contributes to the literature in two ways. Firstly, by inspecting the impact of executives' audit knowledge on accounting conservatism based on the case of executives' vocational learning and application, the study extends the research about the impact of executives' knowledge characteristic. Secondly, by considering CEO duality in China's listed companies, the study examines the variation of impact in the companies without CEO duality and further enriches relevant documents about company governance.

Potential Limitations

This study is subject to several certain limitations. First, although the empirical results are sound in the sample period from 2007 to 2014, we cannot claim that it is also robust before 2007 or after 2014. Second, because the study is completed based on Chinese data, the results may not generalize to other countries with different accounting policies and social conventions. Third, although the results are robust in robustness tests, we cannot say with certainty that model misspecifications or omitted variables have no influence on the conservatism measures.

CONCLUSION

Based on the case of executives' vocational learning and application, the empirical results reveal the evidence of a negative relation between executives' audit knowledge and accounting conservatism. Further analysis indicates that the impact of executives' audit knowledge on accounting conservatism is only robust in companies without CEO duality. Therefore, the companies with executives who have audit knowledge may adopt aggressive accounting policy and reduce the accounting conservatism.

This study provides evidence for supervision authorities to pay close attention to the risk of companies employing executives with audit knowledge and improve supervision system. It also implies that stockholders should intensify the supervision within the company on executives, especially on executives with audit knowledge.

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