

Research on the Impact of Accounting Firm Scale on Audit Quality from the Perspective of Corporate Strategy Deviation

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Abstract: Taking my country's Shanghai and Shenzhen A-share listed companies from 2003 to 2018 as a research sample, this paper empirically analyzes the influence of firm size on audit quality, and the moderating effect of corporate strategy deviation between the two. The research results show that: First, there is a significant positive correlation between the size of the firm and the quality of corporate auditing, that is, the larger the scale of the accounting firm, the lower the manipulability accrued profit of the audited entity, and the higher the audit quality; second, the strategy The degree of deviation will weaken the positive correlation between the size of the accounting firm and audit quality.

Keywords: Firm Size; Strategic Deviation Degree; Audit Quality

1. Introduction

As an independent third party, auditing plays an irreplaceable role in the modern economy and society. Auditing acts as a bridge connecting enterprises with creditors, shareholders and other stakeholders. Auditing plays an important role in the capital market and social economy. The quality of auditing has always attracted the attention of the government, the public and even academia. Since entering the 21st century, a large number of financial frauds have occurred at home and abroad, from the early financial frauds of Enron, WorldCom, and Yinguangxia to the recent occurrence of a series of financial frauds such as Kangmei Pharmaceutical, Kangdexin, Ruixing Coffee, etc. Not only has it brought huge losses to investors, but it has also caused strong dissatisfaction with the quality of audit services provided by auditors. In particular, whether the size of the firm will improve the audit quality has always been the focus of debate. A large number of foreign studies have shown that the larger the firm, the higher the quality of the audit provided. The expansion of the scale of our country's office is subject to the administrative intervention and policy guidance of the government supervision department, which is not entirely market behavior. Domestic scholars do not have consistent conclusions on the relationship between firm size and audit quality. Cai Chun, Huang Yijian and others used corporate maneuverability accruals instead of audit quality empirical tests and found that the audit quality provided by the "top ten" firms is significantly higher In the "non-top ten" firm. ^[1]Guo Zhaorui and Huang Jun's research found that compared with the "non-big four", the "big four" accounting firms provide higher quality audits. ^[2]Wu Min believes that there is no significant correlation between firm size and audit quality. ^[3-4]Therefore, the specific impact of the size of the accounting firm on audit quality is a

question worthy of verification. The degree of corporate strategy deviation from the conventional industry strategy is called strategic deviation.^[5] Corporate strategy is the concentrated expression of the overall planning and business model of the company.^[6] Corporate strategy is closely related to its daily business activities. Companies adopting different strategies often have large differences in characteristics such as business models and organizational structures. Therefore, it will have an impact on the management of the enterprise.

Based on the above analysis, using my country's Shanghai and Shenzhen A-share listed companies from 2003 to 2018 as a research sample, the relationship between firm size, corporate strategy deviation and audit quality is analyzed. Therefore, the following two hypotheses are proposed: (1) The quality of audit services provided by large-scale accounting firms is higher. The auditors of large-scale accounting firms have stronger professional competence, the firm and the auditors are more independent, and pay more attention to their own reputation, so the higher the quality of audit services provided. (2) The deviation degree of corporate strategy will weaken the positive impact of firm size on audit quality. In the following, the firm size, corporate strategy deviation degree and audit quality are included in the same research framework, and the moderating effect of corporate strategy deviation degree between the firm size and audit quality is examined to verify the hypothesis.

2. Theoretical analysis and research hypothesis

2.1 Firm size and audit quality

Audit quality refers to the joint probability of the auditor discovering and reporting misstatements or omissions in the financial report of the audited entity.^[7] Therefore, audit quality mainly depends on the auditor's professional competence and independence. The stronger the auditor's professional competence, the more likely it is to discover misstatements, omissions and fraud in the audited unit's financial reports. Large-scale accounting firms can attract and recruit more professionally competent auditors, and are more capable of organizing professional training to improve the professional competence and professional qualities of auditors, thereby improving the quality of audit services. Compared with small-scale accounting firms, large-scale firms will set up special quality inspection departments and have stricter internal quality control. The probability of auditors' major negligence and collusion with corporate management is less. The independence of a firm is also related to the size of the audited entity. Ye Fan, Fang Hui and others believe that the larger the firm, the lower the economic dependence on specific clients, and the higher the independence of facing a single client.^[8] The higher the independence of the firm, the lower the possibility of compromising a single client and providing low-quality audit services. High-quality auditing services are actually a good reputation, which can enhance the trust of investors or potential investors that corporate financial statements meet the requirements of generally accepted accounting standards. Based on reputation theory, once an auditing firm fails, the firm's reputation will be damaged. Investors or potential investors may be skeptical of the audit report issued by it, which will have a negative impact on the stock price and financing of the audited unit. This reduces the firm's ability to attract new clients and retain existing clients. Based on the perspective of reputation, De Angelo's empirical test found that the larger the scale of the firm, the more time and effort will be spent on audit project team members to improve the quality of audit services, thereby maintaining the firm's reputation. In summary, the size of the firm will improve the professional competence and independence of auditors, and large-scale firms will pay more attention to their own reputation, thereby improving the quality of audit services. Based on this, hypothesis H₁ is proposed.

Hypothesis H₁: The larger the firm, the higher the quality of audit services provided

2.2 Firm scale, corporate strategy deviation and audit quality

Generally speaking, the stronger the professional competence of the auditor, the higher the quality of the audit service provided, the more independent the auditor, the higher the quality of the audit service provided. For companies whose strategies deviate from the industry's conventional strategies, the distribution of corporate resources, asset structure, business methods, corporate profits and cash flow distribution, and the complexity of accounting measurement will be different from those of companies that adopt conventional strategies. This difference will make auditors The application of industry expertise and accumulated audit experience will be limited to a certain extent. Auditors may need to spend more time and energy when performing audit procedures. Because the audit resources of the firm are limited, they need to rely on within the specified time. A certain amount of manpower completes the audit work.^[9-10] Therefore, it is more difficult for auditors to obtain sufficient and reliable audit evidence when auditing companies with large deviations from the audit strategy. At the same time, the risk of audit failure will increase. For companies with a high degree of strategic deviation, their business is more specific and complex^[11], and it is more difficult for certified public accountants to make accurate judgments using previous audit experience. Therefore, the audit experience and industry expertise of the auditors of the larger accounting firms cannot be fully utilized, which will increase the probability of auditors making mistakes. Based on this, hypothesis H₂ is proposed.

Hypothesis H₂: The degree of strategic deviation will weaken the positive correlation between the size of the accounting firm and audit quality

3. Research design

3.1 Sample selection

Select the A-share listed companies in Shanghai and Shenzhen stock exchanges from 2003 to 2018 as the research sample. Since the Cathay Pacific database only disclosed the original value of fixed assets data in 2003, and used the original value data of fixed assets when calculating the strategic deviation, therefore, 2003 is the starting year of the research sample. Since the Chinese Institute of Certified Public Accountants has not yet announced the comprehensive ranking of accounting firms in 2019, 2018 is the deadline for the study. After excluding financial industry samples, missing data samples, and ST and *ST sample companies, a total of 26,649 research samples were obtained. In order to make the research conclusions more reliable, the main continuous variables were double-sided 1% tailing treatment, and regression analysis was performed through Stata14.0 software.

3.2 Variable meaning

At present, the alternative indicators to measure audit quality mainly include earnings management, financial restatement, audit opinions and audit fees, etc., drawing on the research of Wu Haomin, Wu Chunxian, etc.^[12], Yuan Deli, Xu Weibin, etc.^[13], selecting corporate earnings management and audit opinions as Substitute variables for audit quality. The revised Jones model is used to measure the degree of earnings management of the company. The calculation process is shown in formula (1):

$$\frac{TA_{i,t}}{A_{i,t}} = \alpha_1 \frac{1}{A_{i,t-1}} + \alpha_2 \frac{\Delta REV_{i,t}}{A_{i,t}} + \alpha_3 \frac{PPE_{i,t}}{A_{i,t}} + \varepsilon_{i,t} \quad (1)$$

(1) In the formula, $TA_{i,t}$ is the total accrued profit of enterprise i in the current period, $A_{i,t-1}$ is the total assets of enterprise i at the end of the previous period, and $REV_{i,t}$ is the difference between enterprise i 's main business income in the current period and the previous period's main business income, $PPE_{i,t}$ is the book value of firm i 's fixed assets at the end of the period, and ε is the residual. See formula (2):

$$NDA_{i,t} = \hat{\alpha}_1 \frac{1}{A_{o,t-1}} + \hat{\alpha}_2 \frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}} + \hat{\alpha}_3 \frac{PPE_{i,t}}{A_{i,t-1}} \quad (2)$$

(2) In the formula, $\Delta REC_{i,t}$ is the difference between the accounts receivable at the end of the current period of enterprise i and the accounts receivable at the end of the previous period, and $\hat{\alpha}_1$, $\hat{\alpha}_2$, and $\hat{\alpha}_3$ are regressions of the model (1) by industry, Thereby, the estimated coefficient of the sub-industry model is obtained. The meaning of other variables is consistent with model (1).

Calculate the accrued profit of the enterprise maneuverability as follows: $DA_{i,t} = TA_{i,t} / A_{i,t-1} - NDA_{i,t}$. In the empirical test, the absolute value of manipulability accrued profits ($|DA|$) is used for regression. The greater the absolute value of manipulability accrued profits, the higher the degree of corporate earnings management.

In the robustness test, the audit opinion is used as a substitute variable for audit quality, and the non-standard audit opinion issued by the firm indicates that the audit quality is high.

About the measurement of firm size. The indicators to measure the size of a firm include firm income, the number of certified public accountants, the number of clients, and the size of clients' assets. Every year, the Chinese Institute of Certified Public Accountants conducts a comprehensive evaluation of accounting firms based on the business income of the firm, the number of certified public accountants, the per capita business income of the firm's employees, the per capita business income of the certified public accountants, the internal governance of the firm, social responsibility, penalties and penalties and other indicators. According to the annual ranking information of firms published by the Chinese Institute of Certified Public Accountants, the firms are divided into "top ten" firms and "non-top ten" firms as substitute variables for firm size. In the robustness test, the firms are divided into "four major" firms and "non-four major" firms as substitute variables of firm size.

A measure of the degree of strategic deviation. Strategy determines the company's asset structure and resource allocation methods. Therefore, the corporate strategy can be measured through the company's asset structure and resource allocation. Drawing lessons from Tang JY, Crossan Mary RG^[5], Ye Kangtao, Dong Xueyan, etc.^[11], the strategy implemented by the company is measured from the following six dimensions: (1) Advertising and publicity expenses (sales expenses/operating income); (2) R&D investment (intangible assets/operating income); (3) Management expense investment (management expenses/operating income); (4) Capital intensity (fixed assets/total number of employees); (5) Fixed asset update Degree (net value of fixed assets/original value of fixed assets); (6) corporate financial leverage ((short-term loans + long-term loans + bonds payable) / net assets). Since my country's listed companies rarely disclose advertising and publicity expenses and R&D expenses separately, when calculating advertising and publicity expenses and R&D investment, sales expenses and intangible assets are used instead. Among them, financial leverage reflects the enterprise's capital operation mode, management expense investment reflects the enterprise's expense structure, and the other four dimensional indicators reflect the enterprise's behavior in marketing, research and development and production capabilities^[14]. The calculation steps for the deviation of corporate strategy are as follows: subtract the average value of

the indicators in the six dimensions by industry and year, take the absolute value and divide by the standard deviation of each indicator calculated by year and industry to standardize. In this way, the difference between the enterprise in each strategic dimension and the industry average level is obtained. Finally, the average value of the six indicators after standardization is calculated to obtain the strategic deviation degree. The larger the value, the greater the deviation of corporate strategy from industry conventional strategy.

In order to control the impact of other related factors on the audit quality and ensure the reliability of the research results, the nature of property rights (Soe), audit opinion (Opn), loss (Loss), independent director ratio (Indep), audit fees (Lnfee), internal control quality (ICQ), inventory and accounts receivable (Rec), asset-liability ratio (Lev), company size (Size), the largest shareholder's shareholding ratio (Large) and other control variables. The meaning of the variables is shown in Table 1.

Table 1 Variable meaning

Variable Type	Variable Name	Variable Symbol	Variable Meaning
Explained variable	Manipulable accruals	DA	Calculation based on the revised Jones model
Explanatory variables	Firm size	Big10	The top ten in the comprehensive ranking is 1, otherwise it is 0
	Strategic deviation	DCS	Calculate from the six dimensions of the enterprise
	Property right	Soe	State-owned enterprise is 1, otherwise 0
	audit opinions	Opn	The standard unqualified opinion is 1, otherwise it is 0
	financial loss	Loss	The current loss of the enterprise is 1, otherwise it is 0
	Proportion of independent directors	Indep	Number of independent directors/number of directors
Control variable	Audit fees	Lnfee	Natural logarithm of audit fees
	Internal control quality	ICQ	Natural logarithm of internal control index
	Proportion of inventory to accounts receivable	Rec	(Inventory + accounts receivable)/total assets
	Assets and liabilities	Lev	Liabilities/Assets
	Company Size	Size	Natural logarithm of assets at the end of the period
	Proportion of the largest shareholder	Large	Number of shares held by the largest shareholder/total number of shares of the company

3.3 Model design

In order to test the two hypotheses mentioned above, using the research methods of Yang Shuhuai^[15], Zhou Zejiang and Wang Shuai^[16], the following multiple regression models were determined, as shown in equations (3) and (4).

$$\begin{aligned}
|DA| = & \beta_0 + \beta_1 Big10 + \beta_2 Soe + \beta_3 Opn + \beta_4 Loss \\
& + \beta_5 Indep + \beta_6 Lnfee + \beta_7 ICQ + \beta_8 Rec + \beta_9 Lev \\
& + \beta_{10} Size + \beta_{11} Large + \varepsilon
\end{aligned}
\tag{3}$$

$$\begin{aligned}
|DA| = & \beta_0 + \beta_1 Big10 + \beta_2 DCS + \beta_3 Big10 \times DCS \\
& + \beta_4 Soe + \beta_5 Opn + \beta_6 Loss + \beta_7 Indep + \beta_8 Lnfee \\
& + \beta_9 ICQ + \beta_{10} Rec + \beta_{11} Lev + \beta_{12} Size + \beta_{13} Large + \varepsilon
\end{aligned}
\tag{4}$$

(4) In the formula, model (1) is used to test the hypothesis H₁. In this model, the coefficient β₁ of the firm size (Big10) is the focus of attention, and β₁ measures the influence of the firm size on the manipulability accrued profit. The lower the manipulability accrued profit of the audited unit, the higher the audit quality. According to the hypothesis H₁, the expected β₁ is significantly negative. Model (2) is used to test hypothesis H₂. In this model, the coefficient β₃ of the interaction term (Big10×DCS) of the firm size (Big10) and strategic deviation (DCS) is the focus of attention. According to the hypothesis H₂, it can be seen that β₃ is significant and positive.

4. Empirical results and analysis

4.1 Descriptive statistics

It can be seen from Table 2 that the standard deviation of the absolute value of the manipulable accrued profits of the sample companies is 0.0657, the minimum is 0.0007, and the maximum is 0.3794, indicating that the manipulable accrued profits of Chinese companies are relatively large. Differences, the quality of audit services provided by firms also differ greatly. The standard deviation, minimum and maximum values of the degree of deviation from corporate strategy (DCS) are 0.3249, 0.1422 and 2.0173, respectively, indicating that the strategies of the sample companies are quite different. The average firm size (Big10) is 0.4750, which means that nearly half of the listed companies in China have chosen the "top ten" accounting firms in China. The average value of the nature of property rights (Soe) is 0.4750, indicating that state-owned enterprises occupy a large proportion in my country. The standard deviation, minimum and maximum values of the internal control quality (ICQ) of the enterprises are 0.8777, 0, and 6.8258, respectively, indicating that there are large differences in the internal control quality of the sample enterprises. The standard deviation of the asset-liability ratio (Lev) is 0.4469, close to the international optimal asset-liability ratio of 0.5, and the maximum value is 0.8911, indicating that there are enterprises with excessively high asset-liability ratios among the sample companies.

Table 2

Variable symbol	Sample size	Mean	ST.D	Mini	Max
DA	26649	0.0608	0.0657	0.0007	0.3794
DCS	26649	0.5537	0.3249	0.1422	2.0173
Big10	26649	0.4750	0.4994	0.0000	1.0000
Soe	26649	0.4617	0.4985	0.0000	1.0000
Opn	26649	0.9681	0.1757	0.0000	1.0000
Loss	26649	0.0975	0.2966	0.0000	1.0000
Indep	26649	0.3684	0.0525	0.2727	0.5714
Lnfee	26649	13.5968	0.7376	12.2061	16.2134
ICQ	26649	6.3810	0.8777	0.0000	6.8258
Rec	26649	0.2731	0.1694	0.0070	0.7550

Lev	266 49	0.446 9	0.202 7	0.054 8	0.891 1
Size	266 49	22.020 7	1.249 8	19.735 1	25.939 7
Large	266 49	35.944 2	15.335 7	8.990 0	75.000 0

4.2 Correlation analysis

It can be seen from Table 3 that the absolute value ($|DA|$) of the firm's manipulability accrued profit is significantly negatively correlated with the firm size (Big10) at the 1% level, and the correlation coefficient is -0.046, indicating There is a significant negative correlation between firm size and corporate maneuverability accrued profit, and the higher the corporate maneuverability accrued profit, the lower the audit quality. Preliminarily verified the hypothesis H_1 , that is, the larger the scale of the firm, the higher the audit quality provided. The absolute value of corporate maneuverability accrued profits ($|DA|$) and corporate strategic deviation (DCS) are significantly positively correlated at the 1% level, and the correlation coefficient is 0.086, indicating that the greater the corporate strategic deviation, The greater the value of corporate maneuverability accrued profits. It preliminarily shows that the greater the deviation of corporate strategy, the more inclined companies are to carry out earnings management. That is, the greater the deviation of corporate strategy, the lower the quality of audit services provided by auditors. Property rights (Soe), audit opinion (Opn), whether the company is losing money (Loss), the proportion of independent directors (Indep), audit fees (Lnfee), internal control quality (ICQ), asset-liability ratio (Lev), and the largest There is a significant correlation between the shareholder's shareholding ratio (Large) and audit quality. Except for the correlation coefficient between the size of the enterprise (Size) and the audit fee (Lnfee) is greater than 0.5, the correlation coefficients between the other variables are less than 0.5, indicating that the model does not have serious multicollinearity problems.

4.3 Regression analysis

Table 4 Regression analysis of firm size, strategic deviation and audit quality

Variable Symbol	(1)	(2)	(3)
Big10	-0.026***		-0.028*
	(-2.91)		(-1.69)
DCS		0.109***	0.108***
		-8.12	-6.1
Big10× DCS			0.034*
			-1.12
Soe	-0.089***	-0.085**	-0.088***
	(-8.09)	(-7.87)	(-8.05)
Opn	-0.263***	-0.256***	-0.254***
	(-10.67)	(-10.37)	(-10.32)
Loss	0.178***	0.162***	0.162***
	-12.48	-11.25	-11.28
indep	0.177**	0.147*	0.154*
	-2.12	-1.78	-1.86
Lnfee	-0.044***	-0.049***	-0.043***
	(-4.41)	(-5.01)	(-4.38)
ICQ	-0.024***	-0.023***	-0.023***
	(-5.03)	(-4.80)	(-4.83)
Rec	0.449***	0.493***	0.493***
	-14.99	-16.43	-16.42
Lev	0.392***	0.376***	0.370***
	-13.99	-13.51	-13.25
Size	-0.018***	-0.016**	-0.016**
	(-2.77)	(-2.56)	(-2.49)
Large	0.001	0.001*	0.001*
	-1.58	-1.77	-1.84
_cons	1.667***	1.613***	1.544***
	-16.05	-15.93	-14.8

Year	Control	Control	Control
Industry	Control	Control	Control
N	26649	26649	26649
Adj_R ²	0.026	0.026	0.026

From the column (1) of Table 4, it can be seen that after controlling for other variables, the firm size (Big10) and the enterprise maneuverability accrued profit (|DA|) are significantly negatively correlated at the 1% level, and the estimated coefficient is -0.026, It shows that the larger the size of the firm, the smaller the manipulability accrued profit of the audited entity, the lower the degree of corporate earnings management, and the higher the audit quality. Therefore, the hypothesis H₁ has been verified. Taking corporate strategy deviation as a moderating variable, the regression results of firm size, corporate strategy deviation and audit quality are shown in Table 4 (3). Column (3) of Table 4 shows: after controlling for other variables, the cross-term (Big10×DCS) of firm size (Big10) and corporate strategy deviation (DCS) and corporate maneuverability accrued profit (|DA|) is significantly positively correlated at the 10% level. It can be seen that there is a significant negative correlation between the cross term of firm size and corporate strategic deviation and audit quality, indicating that corporate strategic deviation (DCS) will weaken The positive impact of firm size (Big10) on audit quality, hypothesis H₂ has been verified.

5. Robustness test

In order to ensure the accuracy of the research results, for this reason, whether the accounting firm is an international “Big4” (Big4) is used as a substitute variable for the firm size, and the audit opinion (Opn) is used as a substitute variable for audit quality. Other control variables The previous is the same, here, the regression analysis is performed. See Table 5 for the audit results of firm size, strategic deviation and audit quality robustness.

Table 5 Firm scale, strategic deviation degree and audit quality robustness test

Variable Symbol	(1)	(2)	(3)
Big4	-0.011**		-0.022**
	(-2.12)		(-2.48)
DCS		-0.029***	-0.030***
		(-8.58)	(-8.66)
Big4×			0.021*
DCS			-1.73
Soe	0.010***	0.010***	0.010***
	-3.8	-3.56	-3.7
Loss	-0.084***	-0.079***	-0.079***
	(-23.89)	(-22.41)	(-22.39)
indep	-0.002	0.004	0.004
	(-0.12)	-0.2	-0.17
Lnfee	-0.011***	-0.012***	-0.011***
	(-4.21)	(-4.95)	(-4.31)
ICQ	0.060***	0.060***	0.060***
	-52.5	-52.12	-52.14
Rec	0.044***	0.033***	0.033***
	-5.84	-4.45	-4.41
Lev	-0.139***	-0.133***	-0.133***
	(-20.16)	(-19.27)	(-19.27)
Size	0.022***	0.022***	0.022***
	-13.75	-13.49	-13.41
Large	0.001***	0.001**	0.001**
	-2.46	-2.01	-2.15
_cons	0.287***	0.335***	0.322***

	-10.91	-13.29	-12.18
Year	control	control	control
Industry	control	control	control
N	26649	26649	26649
Adj_R ²	0.154	0.153	0.153

From the columns (1) and (3) of Table 5, it can be seen that the influence coefficient of the firm size (Big4) on the audit quality (Opn) is -0.011, and it is significant at the 5% level, which verifies the firm size and audit. There is a positive correlation between quality. The joint impact coefficient of firm size (Big4) and corporate strategy deviation (DCS) on audit quality (Opn) is 0.021, and it is significant at the 10% level, indicating that corporate strategy deviation weakens the relationship between firm size and audit quality. The positive correlation.

6. Analysis conclusion

Although the Chinese government and regulatory agencies have been committed to improving the quality of auditing and trying to reduce the huge losses caused by false financial reports to investors, there are still many financial fraud incidents exposed. To this end, taking my country's Shanghai and Shenzhen A-share listed companies as a research sample, it conducts theoretical analysis and empirical testing around firm size, corporate strategy deviation and audit quality. The study found that: firm size and audit quality are significantly positively correlated, that is, the larger the accounting firm, the lower the manipulability accrued profit of the audited entity; the deviation of corporate strategy will weaken the relationship between the firm size and audit quality. The positive correlation. When allocating audit resources, auditors will consider the impact of corporate strategy deviations from industry conventional strategies. When companies make strategic choices and adjustments, they need to comprehensively consider the impact on their own economic interests and external audits to prevent the negative impact of adverse audit opinions on the company.

References

- [1] Cai Chun, Huang Yijian, Zhao Sha. *An Empirical Study on the Impact of Audit Quality on Earnings Management: Empirical Evidence from Manufacturing in Shanghai Stock Market* [J]. *Audit Research*, 2005(2).
- [2] Guo Zhaorui, Huang Jun. *The re-examination of the international "big four" and high-quality auditing: an analysis based on real activity earnings management*[J]. *Journal of Shanxi University of Finance and Economics*, 2015, 37(3).
- [3] Wu Min. *Firm scale, industry expertise and audit quality* [J]. *Finance and Accounting Newsletter*, 2017 (24).
- [4] Yuan Hongqi, Li Haijian. *Organizational form, scale and audit quality of accounting firms* [J]. *Audit Research*, 2003(1).
- [5] Tang J Y, Crossan Mary R G. *Dominant CEO, deviant strategy, and extreme performance: The moderating role of a power-ful board*[J].*Journal of Management Studies*,2011,48(7).
- [6] Yang Jinfeng, Sun Weizhang, Yang Yang. *CEO power, corporate strategy and audit fees* [J]. *Modern Finance (Journal of Tianjin University of Finance and Economics)*, 2019, 39(1).
- [7] De Angelo, Linda Elizabeth. *Auditor Size and Audit Quality*[J]. *Journal of Accounting and Economics*, 1981, 3(3).
- [8] Ye Fan, Fang Hui, Yu Dong, et al. *Auditor scale and audit quality: a reputation perspective* [J]. *Accounting Research*, 2017(3).
- [9] Liu Juanjuan. *Will the degree of customer strategic differences affect audit quality* [J]. *Finance and Accounting Newsletter*, 2017 (15).
- [10] Li Sha, Lin Dongjie, Wang Yanchao. *Corporate strategy changes and audit fees: Empirical evidence based on the similarity of annual report texts*[J]. *Audit Research*, 2019(6).
- [11] Ye Kangtao, Dong Xueyan, Cui Yijing. *Corporate Strategic Positioning and the Choice of Accounting Earnings Management Behavior* [J]. *Accounting Research*, 2015(10).
- [12] Wu Haomin, Wu Chunxian, Yang Xingquan. *Punishment risk, firm size and audit quality: empirical evidence from China's audit market* [J]. *Audit Research*, 2015(1).
- [13] Yuan Deli, Xu Weibin, Chen Xiaolin, et al. *Signing accountant-senior management relationship and audit quality* [J]. *Audit Research*, 2018(2).

[14] Ye Kangtao, Zhang Shanshan, Zhang Yixin. *Corporate strategic differences and the value relevance of accounting information*[J]. *Accounting Research*, 2014(5).

[15] Yang Shuhuai. *Fair value hierarchical measurement, environmental uncertainty and audit quality* [J]. *Audit Research*, 2018(2).

[16] Zhou Zejiang, Wang Shuai. *The authority of the board of directors, internal control and audit quality-empirical evidence of state-owned enterprises under the background of the new era* [J]. *Audit Research*, 2019(5).

Table 3 Correlation coefficients of main variables

	$ DA $	Big10	Soe	Opn	Loss	Indep	Lnfee	ICQ	Rec	Lev	Size	Large	DCS
$ DA $	1												
Big10	-0.046***	1											
Soe	-0.057***	-0.061***	1										
Opn	-0.137***	0.031***	0.037***	1									
Loss	0.141***	-0.026***	0.015**	-0.285***	1								
Indep	0.018***	0.065***	-0.114***	-0.009**	0.015**	1							
Lnfee	-0.057***	0.304***	0.082***	0.016**	-0.016***	0.101***	1						
ICQ	-0.102***	-0.002	0.045***	0.382***	-0.317***	-0.028***	-0.026***	1					
Rec	0.177***	-0.035***	-0.087***	-0.004	0.004	0.022***	-0.052***	0.016***	1				
Lev	0.133***	-0.029***	0.256***	-0.132***	0.184***	-0.022***	0.263***	-0.097***	0.276***	1			
Size	-0.053***	0.202***	0.249***	0.070***	-0.077***	0.056***	0.763***	0.034***	-0.044***	0.432***	1		
Large	-0.022***	0.038***	0.263***	0.064***	-0.075***	-0.002***	0.079***	0.075***	-0.027***	0.052***	0.187***	1	
DCS	0.086***	-0.018***	-0.009	-0.144***	0.212***	0.038***	-0.019***	-0.119***	-0.151***	0.049***	-0.043***	-0.045***	1