

Can Big 4 Auditors Increase Accounting Quality

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Abstract. This study investigates the relationship between the big Four auditors and accounting quality. We tested this prediction by examining a sample of A-share listed companies. The results show that the big four auditors can significantly improve the accounting quality of listed companies, while corporate leverage ratio and board size also affect the accounting quality of listed companies. The analysis also found that lower accounting quality will increase the attention of securities analysts. Listed companies should timely disclose relevant information to improve accounting quality.

Keywords: Audit quality; Big 4 accounting firm; Legal risk.

1. Introduction

With the prosperity and development of China's economy, the scope of corporate stakeholders has expanded, and corporate accounting information has received extensive attention. The practical significance of paying attention to the quality of accounting information lies in deepening the theoretical circle's understanding of the financial accounting framework, perfecting the construction of accounting laws and regulations, maintaining the order of the capital market, protecting the rights and interests of stakeholders and strengthening the improvement of the internal control of enterprises. According to the development of capital market, system environment and accounting theory, China should further study the quality of accounting information from the aspects of basic theory and practical application.

Audit information quality plays an important role in accounting theory and practice. Theoretical circles mainly focus on the effectiveness of internal control, political relevance, the nature of senior management and accounting standards on audit information quality. Accounting information is an important basis for enterprise operation and financial decision-making, and its quality directly affects and determines the efficiency of enterprise investment and financing decision-making. High-quality accounting information helps to enhance investor confidence and reduce the degree of information asymmetry between investors and enterprises.

However, accounting information fraud occurred from time to time, such as kangmei Pharmaceutical case and Luckin coffee case in 2020. Financial fraud has seriously damaged the reputation and image of enterprises and reduced the efficiency of capital allocation. It can be seen that low quality accounting information will not only lead to damage to the company's reputation, value dissipation, stock price collapse, so that investors suffer huge economic losses, but also disrupt the orderly operation of the capital market and economy, hinder high-quality economic development. Therefore, high quality accounting information and its efficiency are important decision-making resources to ensure high quality economic development. Most existing scholars study the impact of accounting information quality from the perspective of internal control and earnings management, but few scholars explore the impact of the international Big Four accounting firms on the quality of accounting information. Moreover, with the further opening of China's capital market, especially in the context of China, there are few literatures on the influence of the Big Four accountants on audit information quality.

2. Background and hypothesis development

Audit subjects refer to audit institutions and auditors who take the initiative to conduct audit activities and exercise the power of audit supervision. Audit subject runs through the production process of audit information and plays a decisive role in the quality of audit information. As the auditing subject, the big four accounting firms play an important role in disclosing the information

quality of listed companies, especially in the quality audit of accounting information plays an absolute role. An audit institution is a systematic arrangement of auditors to complete the mission of reviewing and supervising economic activities. An audit institution is a collection of auditors with a common goal and achieves the goal through different division of responsibilities and coordination. The formation of audit information is a collective process. Through the active participation and effective cooperation of auditors, the messy and disordered information is sorted out and integrated, so as to obtain standardized and orderly audit information. As the production organization of information "product", the efficiency of personnel division and coordination directly restricts the quality of audit information.

This paper studies from the perspective of audit quality, further improves the financial theory of relevant companies by discussing whether the entry of the international big Four accounting firms into China will improve the audit information quality of listed companies, and draws corresponding conclusions on this basis, providing corresponding reference opinions for different market economy subjects.

The structure of the paper is as follows: The first part is the introduction and literature review, the second part is the research hypothesis, the third part is the research design, the fourth part is the demonstration of the empirical results of the research design, and finally, the fifth part will summarize the conclusions.

There are now two very different views of the big Four.

In most cases, there are several factors that make the audit quality of the big Four accounting firms better than the non-Big Four. Which explains mainly the traditional management science can explain, one of the most important reason is that the big four high barriers to entry, the entry of the big four to be higher than the general public accounting firms, especially on the academic requirements of personnel, hired four graduate schools are also on the white list of the big four, The higher education gives the employees of the Big Four more business skills, which makes them more professional in the process of dealing with accounting information and auditing, and more quickly correct mistakes when dealing with some accounting information errors.

In addition, from the perspective of reputation theory, maintaining one's own brand reputation is also a major factor of high audit quality of the big Four accounting firms. Reputation is about the business of an accounting firm. Arthur Andersen, once the world's largest accounting firm, was forced out of its audit practice in 2002 because of the Enron debacle. So now the "Big Five" has become the "Big Four", which shows that reputation matters for accounting firms' future profits. From the perspective of reputation, the big Four accounting firms will try their best to maintain and improve audit quality, ensure that reputation is not damaged, and rank among the big four accounting firms in order to obtain better profits. After all, people prefer to find businessmen with a good reputation to do business with.

According to the reputation theory proposed by CrayBalmer (1998), reputation influences corporate behavior. In order to maintain a good reputation and gain advantages in the industry, enterprises will control the quality of employees and improve the quality of accounting. Second, the entry requirements are higher due to the global reputation and greater internal competition of the big four companies. In 2017, the company announced plans to hire 1,400 full-time graduates and 600 interns in 2017, but it has received 39,000 applications for these 2,000 positions, a recruitment rate of 5 per cent. This means that top accountancy firms such as PWC hire too few people, but the best.

Then there is the deep pocket theory, which holds that anyone who appears to have financial wealth can be prosecuted, regardless of the extent to which they deserve to be punished. To effectively constrain and motivate agents, principals need independent third-party audits to reconcile their conflicts of interest. Due to information asymmetry, the principal cannot observe the behavior of the agent, so it is possible to misunderstand the efforts of the agent. The agent also needs an independent third-party audit for its business performance. Therefore, audit plays a role in coordinating the interests of the principal and agent, and its essence is to promote the maximization of the balance of their interests. In reality, auditors are expected to act as information risk reducers and insurers. On

the one hand, auditors are employed to confirm the fair presentation of financial statements and to uncover errors so as to reduce hidden errors and information asymmetry in financial statements. On the other hand, the client and the agent transfer the risk to the auditor through the payment of audit fees. If the auditor neglects his duty and fails to detect fraud, the court will judge the auditor to provide compensation, thus realizing the risk sharing. On this basis, the big Four accounting firms will try to improve the quality of accounting information in the audit process, so as to ensure minimal risks.

However, when referring to the previous studies conducted by scholars, this paper found some phenomena that violate the above theories, that is to say, the audit quality of China's four largest companies is not better than that of China's non-four largest companies, which is contrary to the relevant management theories. This paper believes that it can be explained from the following points.

First of all, the big four international firms are imported products. They entered the Chinese market after the reform and opening up. Compared with local firms, they do not know much about China's business environment and market atmosphere, and they do not deal with such information as quickly as in their own countries. In addition, the international big four have low legal risk in China's capital market. China's capital market laws are relatively incomplete, which means that the cost of some lies is low, and accordingly, the law is relatively low for accounting firms. On this basis, they may have greater motivation to be lazy, that is, to deal with the relevant accounting information negatively, so that the quality of accounting information is not high.

Therefore, based on relevant theories, this paper proposes the following hypotheses:

H1: There is no correlation between the big Four auditors and accounting quality.

The above assumptions will be tested below.

3. Research design

3.1 Sample

This paper selects A-share listed companies in China's stock market as the initial sample. The sampling period is from 2007 to 2020. The database is a CSMAR database.

Sample selection procedures are as follows :

(1) delete financial enterprises according to previous research habits; Then exclude ST enterprises, ST enterprises are generally abnormal will be warned, so;

(2) Based on the samples obtained in the above steps, match the samples of four international and four non-international customers. Criteria for matching include industry, asset size and rate of return.

3.2 Model

Combined with the existing literature on the above issues and considering various factors, this paper uses the following model to test this relationship.

$AQ = a + b\text{Big4} + c\text{Controls} + \text{Industry FE} + \text{Year Fixed Effect} +$

In the selection of dependent variables, there are many indicators for the quality of accounting information, audit quality refers to the level of audit work. Its concrete performance is the quality of audit effect. Audit quality directly affects the realization of audit objectives, the development and stability of social economy, as well as indirectly or directly. In audit research, we do not have a suitable numerical standard to measure audit quality, so we need to investigate from a variety of factors. Combined with the previous work done by scholars, in order to highlight the quantitative requirements of accounting information quality, we use Jonesmodel to measure accrued earnings management and real earnings management, so as to reflect the quality of accounting information of listed companies. In the actual modeling process, for convenience, we took the audit quality as the logarithm of the value calculated by Jones model.

The independent variable is mainly the participation of the big Four accounting firms, mainly PWC, Deloitte (DTT), KPMG and EY, in listed companies. This is mainly a dummy variable. When the audit business of an enterprise is completed by the Big Four accounting firms, the value of the

independent variable is 1; when it is in the opposite situation, the value is 0. This makes modeling easier.

In the selection of control variables.

Referring to the previous literature on related issues, including the size of the company, the leverage ratio of the company will affect the quality of accounting information. Therefore, this paper controls the company's size, leverage ratio, ROA, PPE and other factors as control variables.

Size refers to the Size of the company, which is marked by the total assets of the company. The total assets of the listed company are selected as the indicator to measure the Size of the company.

In the actual calculation, for the beauty of the model, logarithmic processing is still adopted.

PPE refers to the mortgage capability of a company. The PPE ranges from 0 to 1 based on the proportion of fixed assets in total assets.

Cfo is taking cash flow from operating activities as a percentage of total assets, which is still between 0 and 1.

Lev refers to a company's leverage ratio, which includes operating leverage and financial leverage. Operating leverage reflects the leverage relationship between sales and earnings before interest and tax.

It refers to the law that the profit change rate is greater than the production and sales change rate due to the existence of fixed costs in the production and operation of enterprises.

Financial leverage refers to the effect that the fluctuation of profit per share of common stock is greater than that of eBIT due to the existence of fixed debt interest and preferred stock dividends.

The leverage ratio of a company is calculated by dividing the liabilities in the company's financial statements by the total assets. The value of the leverage ratio of a company is between 0 and 1.

Indep refers to the number of seats occupied by independent directors on the board of directors. Independent directors play an important role in the company's financial and operational decisions. Therefore, this index will also affect the quality of audit information of listed companies, so this index is also included in the control variable.

Board refers to the size of the Board of directors, usually measured by the number of Board members.

HHI stands for the company's Herfindahl hirschmann Index, a composite measure of industrial concentration.

Table 1. Descriptive Statistics

Variable	N	Mean	SD	p25	p50	p75
Beta2	28350	0.122	0.241	0.000	0.061	0.196
BIG4	28350	0.063	0.243	0.000	0.000	0.000
Size	28350	22.164	1.300	21.220	21.984	22.909
PPE	28350	0.223	0.166	0.093	0.189	0.319
Cfo	28350	0.048	0.071	0.008	0.047	0.090
Lev	28350	0.438	0.206	0.274	0.436	0.595
Indep	28350	0.378	0.070	0.333	0.364	0.429
Board	28350	2.282	0.245	2.197	2.197	2.398
HHI	28350	0.283	0.113	0.222	0.253	0.296
SOE	28350	0.415	0.493	0.000	0.000	1.000
Analyst	28350	1.466	1.190	0.000	1.386	2.485

It refers to the square sum of the percentage of total revenue or total assets taken by each market competitor in an industry, which is used to measure the change of market share, namely the dispersion of company size in the market.

SOE is a dummy variable to measure whether it is a state-owned enterprise.

When a company is state-controlled, the VALUE of SOE is 1; when a non-state-owned enterprise is, the value of SOE is 0.

The information disclosure and audit treatment of state-owned enterprises may have special provisions, and this variable can be included in the explained variable to avoid confusion caused by the different nature of the company.

Analyst refers to the degree of concern that securities analysts pay to the stocks of listed companies. According to the principle of information asymmetry, when analysts pay more attention to the stocks, the listed company will be more inclined to disclose normal and actual financial statement data.

Therefore, this index is included in the control variable.

The figure below shows the descriptive statistical indicators of relevant variables and indicators, from which we can intuitively see the mean value, variance and loci of variables.

4. Empirical Results

With the support of the above data, regression analysis is carried out on the above models. Referring to scholars' studies on this issue, this paper uses the least square method to conduct regression analysis on the model, and the results are shown in the following table.

Table 2. Regression Results

	(1)	(2)
	Beta2	Beta2
BIG4	0.009** (2.07)	0.010** (2.19)
PPE		0.001 (0.13)
Cfo		-0.008 (-0.42)
Lev		0.026*** (4.03)
Indep		-0.006 (-0.34)
Board		0.011** (2.11)
HHI		-0.027 (-1.17)
SOE		-0.002 (-0.92)
Analyst		-0.003*** (-2.99)
Constant	0.063*** (4.67)	0.043** (2.07)
Industry	YES	YES
Year	YES	YES
Province	YES	YES
N	28350	28350
Adj R2	0.292	0.293

Model (1) only analyzes the relationship between explained variables and core explanatory variables, while Model (2) includes control variables. As can be seen from the above table, the four BIG4 coefficients in model (1) and model (2) are significantly positive at the significance level of 5%, indicating that the four BIG4 can significantly improve the audit quality of listed companies.

The coefficient of lever ratio Lev is significantly positive at the level of 1%, which proves that leverage ratio will also affect the accounting quality of listed companies. With the increase of leverage ratio, the quality of accounting information disclosed will be higher. The coefficient of Board size is significantly positive at the level of 5%, indicating that Board size will affect accounting quality. Specifically, the larger the Board size, the higher the quality of accounting information disclosed by

listed companies. Analysts pay more attention to the negative coefficient of Analyst at the significance level of 1%, which is contrary to our hypothesis. Securities analysts pay more attention to the lower accounting quality. Therefore, this paper believes that the causal relationship between analysts' attention and accounting information is as follows: due to the low quality of accounting information disclosed by the company, more analysts will pay attention to the listed company. The PPE coefficient of the company's mortgage capacity is positive. With the improvement of the company's mortgage capacity, the quality of accounting information of listed companies will improve. The coefficients of HHI and SOE are negative, and the weight of accounting information has an opposite relationship with them.

5. Conclusion

Therefore, this paper draws a conclusion: by establishing OLS least square regression model to test the above assumptions, this paper finds that the participation of the big Four accounting firms can significantly improve the audit quality of listed companies, and passes the test at the significance level. In addition, the paper also finds that in addition to the participation of auditors from the big Four accounting firms, leverage ratio, board size and analyst focus of listed companies are all related to the accounting quality of listed companies. In the conclusion of this paper, listed companies should timely disclose their own information, improve their accounting quality, regulatory authorities should timely pay attention to the accounting quality of listed companies, better serve investors.

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