The Determinants of Audit Fees: An Empirical Study of China’s listed companies

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Abstract

Title: The determinants of audit fees: an empirical study of China’s listed companies

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Five key words: Audit Fees, Determinants, A-Share market, listed companies, Empirical study.

Purpose: The purpose of this study is to find the factors which determine the audit fees.

Methodology: In order to formulate my hypotheses, I have used a quantitative approach and deductive research according to prior research.

Theoretical perspectives: I used agency theory and information asymmetry theory, at the same time I take the influence factors of audit fees as theoretical framework, which have been used in prior studies.

Empirical foundation: The empirical data have been collected from 2010 annual report of 191 sample listed companies in China. I set up the multiple linear regression models of audit fees and relevant influence factor to test my hypotheses.

Conclusions: I found that total assets of listed companies, the number of subsidiaries and auditor firm size are the main affecting factors of audit fees. But the indicators which reflect the audit risk or audit tenure have no significant impact.
Acknowledgement

Firstly, I would like to express my thanks to our supervisor Torbjörn Tagesson, he gave us some useful feedback and suggestions throughout our work, which helped us to improve our thesis.

Additionally, I would like to thank my family and friends. They gave us a lot of encouragement and useful suggestions.

Thank you!

Lund University, August, 2011

Yidi Xu
## Abbreviation

<table>
<thead>
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<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AICPA</td>
<td>American Institute of CPAs</td>
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<tr>
<td>CPAs</td>
<td>Certified Public Accountants</td>
</tr>
<tr>
<td>CSRC</td>
<td>China Securities Regulatory Commission</td>
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<tr>
<td>CICPA</td>
<td>Chinese Institute of Certified Public Accountants</td>
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<tr>
<td>ROE</td>
<td>Return on equity</td>
</tr>
<tr>
<td>SEC</td>
<td>Securities and Exchange Commission</td>
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1 Introduction

1.1 Background

1.1.1 Audit environment in China

Because of the accounting scandals of Enron in 2001, the audit independence of CPA (Certified Public Accountants) attract the world attention again. Chinese CPA system was restored in the 1980s and with the establishment and development of capital markets in China, it not only makes people pay more attention to audit independence of CPA, but also provides another broad perspective to audit theory. Accompany the integration process of world economic, Chinese CPA industry is facing unprecedented opportunities and challenges. In recent years, audit failures occurred frequently in China's securities market. Therefore the CPA profession is subjected to some criticism, such as "low price to attract customers", "accomplices of listed companies", "make great fortune overnight ", etc.

Independent audit improves the credibility of corporate financial information, allowing audited companies can be easier to get the recognition of capital markets than unaudited corporate. Therefore, independent audit ensure that social resources can be really put into efficient enterprises. However, whether an independent audit can play that role depends on the level of audit quality to some extent. Meanwhile, the high knowledge content and expertise of audit services led to the difficult observation of audit quality. So in order to examine the quality of audit services, we need some other phenomena which can be observed, audit fee is one of them. Audit fee is the economic link between auditee and CPAs. As independent agencies, CPAs and accounting firms must accept social supervision when they pursuit their own economic interests, and then they can maintain professional independence and establish a good image of this industry. When audit firms providing audit services to listed companies, they signed the audit agreement with each other, the supply-side and demand-side are bound to bargain for the service price. Because of the intense competition in the audit market, some CPAs often take unfair pricing strategies, such as "price cutting" or succumb to customers in order to obtain higher audit fees. All
these kinds of behaviors reduced audit independence and make them provide low-quality services. Meanwhile, when the accounting firms and listed companies can’t reach agreement on the audit fees, the listed companies are likely to replace the accounting firms.

In western countries, both government regulators and academia were all giving considerable attention to audit fees and carried out extensive research. In 1980, Simunic established a model and used empirical methods to investigate whether the Big8 accounting firms charged higher audit fees than other firms. After Simunic many scholars have used that model to research audit fees in different countries, mainly concentrated in the following areas: such as which factors primarily influence audit fees in different country, whether “low-balling” strategy damage audit independence, whether non-audit services affect the independence of audit services and so on. Western literatures about audit fees have achieved fruitful results, while their conclusion is obviously not fully suitable for China's economy market. Based on the Western literature, this paper made full use of disclosure of annual audit fees and launched empirical studies to find which factors affect audit fees of Chinese listed companies.

In 2001, China Securities Regulatory Commission (CSRC) began to require all listed companies to disclose the remuneration of the auditors in their annual report, Chinese accounting firms’ income was the first time from the “secret” to the public. This also provided an opportunity for us to research China's audit market by analyzing the data of audit fees.

1.1.2 Some knowledge about audit fees
As the price of other products, audit fee reflects the market value of audit service. However, the products of modern audit services are significantly different from other products; this difference can be showed in the special relationship between supply-side and demand-side of the audit products. The Supply-side of audit products are the CPAs who can provide audit; the demand side is company owners, creditors,
regulators, and company managers who require an external audit, while the main
demander is the external owner of a company. For a company’s internal managers,
receive the audit service is just to complete a fiduciary duty to external owners, which
means that the audit engagement is not decided by the main demander. Thus, the
formation of the price for audit services is not the final balanced result of both
supply-side and demand-side, but the result discussed by supply-side and secondary
demanders. This caused the situation like this: the main demanders of the audit
products can not directly determine the quality of audit services.
This price formation mechanism can easily lead to the formation of extra
"rent" (abnormal audit prices) between supply-side and secondary demanders. On the
other hand, for the suppliers of the audit product (CPAs), the cost-effective rule of the
audit service is the "invisible hand" (Zhang, 1995), and CPAs will be influenced by
this mechanism whether in considering the audit contents, audit-scale, or audit
techniques. When the standard of audit fees is declining, the marginal revenue of audit
is also reducing; in order to maximize the profit, CPAs are bound to reduce the size
and standard of the audit which will definitely bringing the decline in audit quality.
The decline of audit quality makes the CPAs always in the litigation risk and because
of this, CPAs always facing a dilemma.

1.1.3 Audit pricing
Audit fees are a reflection of the external audit quality to some extent. Demski and
Swieringn (1974) argued that the external audit is one part of the entire financial
reporting system; the same as other commodities, auditing services can be replaced by
similar services and alternative complement. Simunic (1980) was a scholar who used
empirical method to analysis the audit fees earlier, he thought that the use of external
audit can reduce the liability of auditee and auditors to the users of the financial
reports (shareholders, creditors, etc.), and audit fees are the special cost that auditee
willing to pay for the audit service. From the view of quantitative point, the audit fees
depend on the amount of auditor's work and the unit price (unit price of working
hours). The different audit fees of different companies are due to different workload
of audit work and unit prices, the unit price of audit work should be decided by the competition of audit services market. On the other hand, the audit fees must cover the cost of the auditor's own input costs and the required profit (audit compensation). In Simunie (1980), Firth (1985), Palmrose (1986) and other studies, the auditor's audit costs and the required profit (audit compensation) consists of three parts: the inherent cost of the audit (including to perform the necessary audit procedures, the costs of issue required audit report and all opportunity cost), expected loss costs (including litigation losses and potential costs for rehabilitation) and the normal profits of accounting firms. The auditee hopes to minimize the cost of financial reporting systems, auditors also hopes to obtain the best profits of the audit, audit pricing is the result of maximize the interests of both sides.

In the actual work of various accounting firms, the audit fee is basically charged in accordance with local price standard which enacted by local financial departments and commodity price departments, or in accordance with the agreement with customers. Audit pricing is usually based on the size of assets, registered capital and revenues of the auditee. In 1981, China's first accounting firm was established; then in 1988, CICPA (Chinese Institute of Certified Public Accountants) was established; in 1993, "China Certified Public Accountants Law" issued, China's CPA audit entered the comprehensive development stage. In the late of 1980s and the early of n1990s, Shanghai Stock Exchange and Shenzhen Stock Exchanges were established respectively. CPAs played an important role in ensuring the effective functioning of securities markets. In the end of 2000, the Chinese government required that financial statements of the state-owned enterprises must be audited by CPAs, thus accounting firm's business has penetrated into the macro and micro economic fields of Chinese society.

1.2 Problem discussion

Because of the importance of audit services and the difficulty of observing audit quality, we have to seek an effective way to control audit quality. Meanwhile, the
research which focuses on audit fees is a very important aspect to control and manage audit quality. Firstly, the audit service fee is a necessary condition to ensure the audit quality. Although higher audit fee don’t represent a higher audit quality, but in order to have a good audit quality, accounting firms always invest a certain standard cost for the audit, so they will naturally charge higher audit fees than the audit cost.

In addition, the pricing model of audit fee will affect the CPA’s independence. If the accounting firms have fierce competition on audit pricing, in order to pay a lower audit fee auditee may threat the accounting firm that it will be dismissed. And for those accounting firms who charged much more audit fees than the cost they spent in their audit, people will also suspect that whether the accounting firm "sold audit opinion." to the listed companies who hired them. Therefore, we can see that empirical research on the audit fees of Chinese listed companies will provide investors a good interpretation of the audit fees, which will help the investors to get more useful information from the annual reports of listed companies when they made an investment decisions. Expect that, the empirical research can also provide evidence for securities regulatory authorities to make regulatory measures.

1.3. Research purpose and question

Audit fees affect both audit independence and audit quality, even may lead to the failure of supervisory effect of audit to the capital market. Therefore, the purpose of this paper is: use empirical methods, from the perspective of audit fees to analysis the supply and demand relationship in China's audit market and search the answers for the following questions: what are the determine factors of audit fees in China's current economic conditions?

Through this research, I expect the relevant participators could have a better view to understand the nature and process of audit fees and reducing the conflict of interest between the supply side and demand side of audit service. What’s more, I want to provide empirical evidence and some recommendations for China’s audit market
according to the current intense competition.

1.4. Outline

Introduction: This thesis begins with chapter 1 which provides some background and the problem discussion. What’s more it provides research purpose and question.

Research Method: In chapter 2 describes the methodology which I thought appropriate for my research.

Theory: In chapter 3, some hypotheses developed from several theories of influence factors and the model will be shown which constitute by the relevant variables.

Empirical method: In Chapter 4, it includes descriptions of the execution of the empirical research method, the sample selection and data sources.

Results and Analysis: In chapter 5, I test the hypothesis and present the statistical analysis of the results of sample.

Conclusion and suggestions: In chapter 6, I conduct conclusions and give some suggestions for the implementation of China’s audit.

Thereafter, in chapter 7 several limitations as well as some suggestions for future studies will also be shown.

2 Research approach

Research method is some tools and instruments to reveal the inherent law of things, to discover new phenomena or new theories during the process of the study. In order to find the determination of the audit fees, I use empirical study and adopt quantitative analysis. Qualitative and quantitative analysis are unified, they complement each other. A number of authors (Cavaye, 1996; Darke et al., 1998; Hussey and Hussey, 1997; Leedy and Ormrod, 2001; Miles and Huberman, 1994; Myers, 1997) have commented on the choice between
qualitative and quantitative methods in empirical research. Quantitative analysis is based on statistical data, it use mathematical models to analysis the indicators and calculate their numerical. However, qualitative analysis is mainly depend on the analyst's intuition, experience, through analysis a continuation of past and present situation of objects and the latest information, to make judgments of the nature, characteristics, development and changes in the law of the object. In this thesis, I take 191 listed companies in China as a sample and establish a model to find the relationship between the audit fees and relevant variables.

When we mention the qualitative and quantitative analysis, it will easily connect to the deductive and inductive approach. Deductive research always starting with theory, then formulate the testable hypotheses and identify the relevant variables, finally through the analysis of certain sample to make a confirmation. In the contrary, inductive research starting with data and observations and there is no prior theory to identify relevant variables. The aim of this kind of research is try to generalize a theory. For the topic of my thesis, there exist lots of previous studies. I have no need to invest time in developing a theory but only need to apply it, because previous studies give strong support. So naturally I prefer a more formal structure and the deductive research is a better choice.

3 Determinants of audit fees

The pricing of audit services is the result of bargaining between audit supply side and audit demand side. Both sides want to maximize their own interests. So, what factors specifically determine the audit fees?

3.1 The policy basis for the audit fee of accounting firm in China

In China's CPA law, there is no clear regulation which is corresponding to the audit fee of accounting firm. In the "Basic norms of professional ethics of Certified Public Accountants", which is implemented in January 1997, the NO.21 has explicitly requirement to the customer's responsibility: "Unless relevant laws and regulations
permit, the accounting firm cannot charge contingent fee by providing assurance services for the clients,” and contingent fee is prohibited all over the world.

Article 27 to Article 33 of the “China Certified Public Accountants Professional Ethics Guidance ”(launched In July of 2002) shows the regulatory measures for audit fees and Chinese CPAs’ commissions. Except emphasis that accounting firms can’t determine the audit fees to achieve the specific purpose for the companies, these regulatory measures also include that: in order to reflect the value of professional services provided to customers, when accounting firms determining the audit fees, they should consider some factors. Such like the knowledge and skills required by professional services, level and experience requirements for professionals, the workloads for different services and the responsibility in providing professional services. When accounting firms reduce audit fees, they can’t take reducing audit independence as a precondition. Accounting firms should charge in accordance with business charge standards which enacted by local financial departments and the Commodity price departments. Most audit fees are charged depend on total assets, registered capital or revenue of the auditee.

As China’s immature economy environment and the unique institutional setting, there are still many problems existing in China's audit market. Combined with previous research literatures, China’s current audit market has the following characteristics:

1. Lack of voluntary demand for audit services

According to the agency theory, audit exists because of two reasons: first, for investors, they want to prevent moral hazard of the company's management, so they have to spend a certain audit and supervision costs to maximize shareholders’ value; for the company's manager, only through the audit attestation, they can prove that there is no deviation from the expectation of investors, then they can gain greater currency and non-currency benefits. In other words, audit services should be a voluntary demand of the managers. However, China’s current audit demand is not the voluntary
demand. This situation is rooted in the special capital structure of Chinese listed companies which is that non-circulation shares have absolute dominance in the company’s capital. As the main shareholders of state-owned company have the control right, the interests of public shareholders can’t be real protected. It’s difficult for managers of listed companies to provide high-quality financial information voluntarily to the public shareholders.

2 The audit environments is too loose and audit quality is not high

The practice risks faced by Chinese CPAs are relatively low. The so-called practice risk refers to that CPA should bear the risk of legal liability when they issued unreasonable audit opinion. This is the external motivation for CPAs to ensure the audit quality. As the existence of audit practice risk, accounting firms generally consider the expected loss of issued unreasonable audit opinion in the audit fee pricing process. In the more mature securities markets, there are more severe punishments to CPAs. But in China's securities market, there isn’t enough deterrence or punishments for the violations of CPAs.

3 Audit pricing depend on government guidance and audit fees are relatively low.

Charge standards of China's accounting firms are depending on the government guidance which issued by the provincial finance department or the provincial price management department. In China, audit pricing is generally based on two criteria, one is the total assets of the audited company, and another is the CPAs’ workload. However, due to the working hours is difficult to measure, most accounting firms set an initial audit fee based on total assets of listed companies, then make some appropriate adjustments. Therefore, the level of audit fees is relatively low. What’s more, over the past few years, due to the small number of listed companies in China, the Chinese accounting firms have to gain customers as much as possible to survive in the fierce competition and achieve scale merit. All these result in the low price competition in audit service market.
3.2 Theoretical framework

At the late 1970s, the U.S. Securities and Exchange Commission (SEC) and the American Institute of CPAs (AICPA) called accounting theorists to do the research on "low-balling strategy for Audit". After that, the Western scholars got a lot of useful results from the empirical research focus on external audit fees. These studies involved the securities markets or the stock markets of U.S., UK, Australia, New Zealand, Singapore and other countries. These researches mainly focused on the effect factors of audit fees, and include two aspects: one is basic affecting factors which based on supply and demand relationship of audit, including the size of audited clients, complexity of audit business, audit risks and other factors; the other one is the other effecting factors of audit fees, mainly refers to the factors which can affect the bargaining power of both supply and demand sides in the pricing of audit services, including the size of audit firms, the ownership structure of audited clients and the provision of non-audit services, etc.

3.2.1 Agency theory

Agency theory, which is the theory content of positive accounting theory, it states that, a company consists of a nexus of contracts between the owners of economic resources (the principals) and managers (the agents) who are charged with using and controlling those resources (Jensen and Meckling, 1976). Particularly, as mentioned in agency theory, in a public corporation, top management does not always act to maximize shareholders’ return on investment, therefore, it becomes the central problem with regard to shareholders’ interests. In the perspective of corporate executive, “agency costs will be generated by the divergence between his interest and those of outside shareholders” (Jensen and Meckling, 1976). The emergence of the audit is to ask managers to pursue their legitimate interests in accordance with the provisions of the contract and inhibit biased motives of managers. Audit presented as a result of the investors’ needs to control managers’ behavior, the nature of the audit is to promote the interests of principal and agents are maximized.
Audit fees are an important part of monitoring costs, since auditors have a duty to ensure that the managers are behaving according to the owners’ interest while they also have a duty to inspect the company’s accounts. Based on this, it can be expected that when compared with regular inspection of accounts, if the agency problem is greater, the auditors will use spent more time and energy to inspect managers’ activities.

### 3.2.2 Information asymmetry theory

According to information asymmetry theory, the existence of audit is because of the information asymmetry between managers and principals. Because of principals do not have access to all available information at the time a decision is made by an agent, it is impossible for them to determine whether the agent’s actions are in the best interest of the firm. In order to make efficient allocation of resources in capital market, the managers need to gain reliable financial information in decision-making, while the nature of the audit is to improve the quality of financial information. As the investors, creditors and other stakeholders are always lack of sufficient information, but they must rely on financial information when they make a decision, this situation resulting in a high-quality financial information demands. The managers need to pay the cost if they want to obtain the information, but as long as they obtained benefits from high-quality information can be higher than the cost, the action will be implemented to obtain high-quality financial information, and this action is the audit. Information asymmetry theory states that the information is not only contain value itself, but also is one kind of good which have public nature. The quality of financial information can’t be decided by individual or companies themselves, but must be carried out by independent auditors.

### 3.2.3 Factors and hypothesis

Previous research use different models to examine the determination of audit fee, but almost all models have mentioned these factors such as auditee size, auditee
complexity, audit risk, audit competition, auditor size and auditor tenure. All these independent variables include different measures.

**Auditee size**

The main part of financial auditor’s work involves the review of the accounting and financial transactions of the companies. Larger client will usually have more transactions, so they usually need more detailed audit procedures to analyze data, because of the client’s larger balance sheet assets and liabilities. Thereby, Auditors in large-sized companies are required more audit work and they have to pay more attention and effort to reviewing their clients’ operations. Thus, it is usually assumed that larger companies will generally be related to larger audit fees.

Audit workload and audit unit price cannot be easily observed, Audit workload is a function of the size of the audited entity. There are lots of different ways to measure the auditee size. Previous research commonly used total assets as the measure of size (e.g., Simunie, 1980; Taylor and Baker, 1981; Brinnetal, 1994; Chan et al., 1993; Firth, 1997), which is usually shown in natural logarithmic form. If the auditee size is larger, the auditor will make more effort to verify material balances, therefore they will expect more return and the auditee need to pay higher audit fee. Meanwhile, in some articles auditee size is also measured by turnover and number of employees. The likelihood of economies of scale in the auditors’ costs and more sophisticated internal control procedures exist in larger companies, which lead to the decrease of audit work, suggest that the relationship between auditee size and audit fee is unlikely to be linear (Sandra and Patrick, 1996). So, as has been suggested in previous literature, I assume natural logarithmic of total assets as the proxy of auditee size.

H1. Audit fee is positively associated with total assets at year-end.

**Auditee complexity**

Complexity is usually relevant to the verifiability of financial statement items by an auditor. The more complexity of auditee, the more audit work is required so that leads to the audit fees to be higher. In Prior research there were a numbers of variables to
measured auditee complexity, such as number of subsidiaries, proportion of foreign subsidiaries, receivables to total assets, inventories to total assets, both of them to total assets and number of industries in which the client operates and so on (Simunic. 1980; Chan et al. 1993). As pointed out by Chan et al. (1993), the ratios such as inventory and debtors to total assets ratio to be insignificant.

Many studies conclude that complexity in terms of number of subsidiaries has a significant impact on the level of the audit fee. However, the results of Firth (1985) study shows that the number of subsidiaries is not significantly related to audit fee. The reason is that the company which has many subsidiaries always has their own internal accounting systems, so audit different subsidiaries would certainly increase the complexity. Even the auditee has the same number of subsidiaries, the complexity of the audit is not necessarily the same.

In view of the limited disclosures by companies in China, sufficient published data are not available and the nature of business in China decides the companies do not have the complexity found in developed countries. So in the regression model, I will use the number of subsidiary and the ratio of the sum of accounts receivable and inventory to total assets as the measurement of the auditee complexity.

H2. Audit fee is positively associated with the number of principal subsidiaries.
H3. Audit fee is positively associated with the ratio of the sum of accounts receivable and inventory to total assets.

**Auditee risk**

Audit risk means that if the auditor issued an unreasonable audit opinion he must bear the litigation loss and potential reputation loss. Therefore, auditors consider audit risk an important element in determining the level of audit fees.

Some researches saw the non-standard unqualified audit report which was issued by CPA as the indicator to determine the independence of audit, but it also can be used as an alternative indicator to audit risk. Audit opinions are usually the auditors’ expression about the authenticity and reliability of auditee’s financial report, which also take audit risk into account. According to the previous research, non-standard
audit opinion report reflects high risk to some extent. At the same time, whether or not suffer loss in the last three years in listed companies and return on equity (ROE) are also often used as proxies of audit risk.

Simunic (1980) verified audit opinions have a significant effect on the audit fees, but there is no significant impact from loss (the last three years). Firth (1985) also found that the loss (the last three years) to be insignificant, but he did not examine the impact of the type of audit opinion, because the samples he used issued very little qualified audit report. In the research, I will use the audit opinion, loss and ROE as the measurement to test the association with audit fee.

H4. Audit fee is positively associated with non-standard audit opinion.

H5. Audit fee is positively associated with the loss in the last three years.

**Audit competition**

Auditee want to get good quality audit services and they usually believe that larger companies always have higher credibility. Over recent decades, the competition in the audit market has become more and more fiercely. Researchers evidenced that as competition in the audit market heightened, audit fees declined at the same time (Maher et al., 1992 and Sanders et al., 1995). The Big Four audit firms currently dominate the market for audit services, as a result, smaller firms facing large barriers to entry into the market of large companies. Due to their very size, large firm may be more able to provide better audits. From the learning differentiation across Big5 and Non-Big5 (Chi and Huang, 2004), they revealed that compared with Non-Big5 auditors, Big5 auditors can quickly construct their learning experience and have greater expertise in acquiring the requisite knowledge at the beginning of an audit engagement. Carcello and Nagy (2004) suggest that fraud was thought to be less likely to happen in the case of Big6 auditors. Watts and Zimmerman (1986) believe large audit firms have greater monitoring ability, so that they have more capacity to generate quality audits.

Because of the reputation effect and advantage of big audit firm, the fee they charged may be higher than non-Big. Pong and Whittington (1994) explained that on the one
hand the higher fees are reasonable to consistent with the higher quality of work and high reputation of Big Eight firms; on the other hand higher fees match up with the additional costs of establishing the firm's brand name. Thus, here I will use audit firm size (let Big4 as a dummy variable) to measure the audit competition, then to find the relationship with audit fee.

H6. Audit fee is positively associated with auditor firm size.

Auditor tenure
Auditor tenure is also an important determinant factor of audit fee. A lot of previous studies’ results indicated that early tenure audit and financial reporting problems were induced from a lack of client-specific knowledge and/or due to the auditor’s incentive to maintain new client relationships by charge low audit fees on new audit engagements (e.g., Geiger and Raghunandan, (2002); John-son et al., (2002); Myers et al. (2003); Mansi et al., (2004); Carcello and Nagy,(2004); Ghosh and Moon, (2005)). See from the previous research (DeAngelo, 1981; Simon and Francis, 1987; Pong and Whittington, 1994), as a consequence of low-balling, newly appointed auditors may be charge lower audit fees from auditee. The reason is that in order to compete for new audits, the audit firm need to cut fees in the initial year. In China’s audit market, the competition is very intense and low-balling is a well-known practice in China. Therefore, I expect low-balling to dominate high start up costs and I assume that the longer of the auditor tenure the higher charged of the audit fee. Meanwhile, some previous studies mentioned the impact from the change of the audit firm, so auditor tenure (in natural log form) and the auditor change will include in the regression model as the determination of audit fee.

H7. Audit fee is positively associated with audit tenure.

H8. Audit fee is positively associated with auditor change
3.3 Modeling of the Audit Fee Determinants

The model will be
\[
\ln(\text{AudFee}) = b_0 + b_1 \ln(\text{Totass}) + b_2 \text{SubsNumber} + b_3 \text{Ratio} + b_4 \text{OpiType} + b_5 \text{LOSS} + b_6 \text{AUDITOR} + b_7 \ln(\text{Tenure}) + b_8 \text{Change} + \varepsilon
\]

\(\varepsilon\) is a residual error term.

Where,

Table 1 Summary of Explanatory Variables

<table>
<thead>
<tr>
<th>Dependent variable:</th>
<th>Natural log of audit fee</th>
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<tbody>
<tr>
<td>Ln(AudFee)</td>
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<table>
<thead>
<tr>
<th>Independent variable:</th>
<th>Description</th>
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<tbody>
<tr>
<td>Ln(Totass)</td>
<td>Natural log of total asset at year-end as proxy for the auditee size.</td>
</tr>
<tr>
<td>SubsNumber</td>
<td>Square root of the number of subsidiary.</td>
</tr>
<tr>
<td>Ratio</td>
<td>The ratio of the sum of accounts receivable and inventory to total assets.</td>
</tr>
<tr>
<td>OpiType</td>
<td>Type of audit opinion from the annual report of listed companies.</td>
</tr>
<tr>
<td></td>
<td>*When the type of auditor advice is non-standard unqualified opinion in the listed company 2010 annual report, OpiType = 1; Otherwise, OpiType = 0.</td>
</tr>
<tr>
<td>LOSS</td>
<td>Whether loss or not in the last three years.</td>
</tr>
<tr>
<td></td>
<td>*When the companies have one year loss incurred in the last three years, LOSS = 1; Loss does not appear in recent years, LOSS = 0</td>
</tr>
<tr>
<td>AUDITOR</td>
<td>Whether or not the &quot;Big Four&quot; accounting firms.</td>
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<tr>
<td></td>
<td>*When the accounting firms belong to &quot;Big four&quot;, AUDITOR = 1; otherwise, AUDITOR = 0.</td>
</tr>
<tr>
<td>Ln(Tenure)</td>
<td>Natural log of auditor' tenure</td>
</tr>
<tr>
<td>Change</td>
<td>Whether the auditor change in the last three years.</td>
</tr>
<tr>
<td></td>
<td>*If the listed company changed the auditor in the last three years, Change = 1; if it didn’t change, Change = 0.</td>
</tr>
</tbody>
</table>
4 Empirical Method

4.1 Sample selections
The data collection process and sample selection procedures are discussed in this section. The analyses are based on consolidated data from the 2010 financial statements of 300 listed companies stocks listed on Market A of the Shanghai and Shenzhen Stock Exchange.

Taking research needs and the comparability of data into account, I select the sample data according to the following criteria: 1. excluding listed companies without disclosure annual audit fee in their annual report; 2. considering the difference between the financial listed companies and listed companies in other industries whether in term of the applicable accounting system or the nature of business may impact the audit fees, so the sample does not include financial companies; 3. audit fee paid for annual financial report not for interim financial report; 4. auditor’s travel expenses and others not included in audit fee; 5. audit fee paid for subsidiaries, controlling companies and joint venture companies not included; 6. if any required indicator is not available in the disclosure of company, this company will be removed from the sample. At last, a total of 191 companies satisfy the selection criteria and have the relevant financial data available.

4.2 Data sources
In this sample, all the data and information of audit fees, audit opinion, audit tenure and change of audit firm are from Chinese CSMAR database. The other financial data of sample companies are from Chinese RESSET Financial database and checked with various issues of the Annual Report of the sample companies. All variables were expressed in 2004 constant Yuan.

All statistical analysis were done by using statistical software SPSS17.0
5 Results and Analysis

My study uses SPSS software to analyze the data of the 191 sample companies and the final test results are shown in from Table 2 to Table 8.

5.1. Descriptive statistics

Table 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AudFee</td>
<td>191</td>
<td>186000</td>
<td>7850000</td>
<td>863460.73</td>
<td>988231.968</td>
</tr>
<tr>
<td>Totass(000)</td>
<td>191</td>
<td>213276</td>
<td>215637552</td>
<td>9202655.52</td>
<td>2.023E7</td>
</tr>
<tr>
<td>Big4</td>
<td>191</td>
<td>0</td>
<td>1</td>
<td>.12</td>
<td>.326</td>
</tr>
<tr>
<td>OpiType</td>
<td>191</td>
<td>0</td>
<td>1</td>
<td>.95</td>
<td>.223</td>
</tr>
<tr>
<td>Ratio</td>
<td>191</td>
<td>.0017</td>
<td>.9033</td>
<td>.278154</td>
<td>.1959569</td>
</tr>
<tr>
<td>Tenure</td>
<td>191</td>
<td>1</td>
<td>19</td>
<td>8.25</td>
<td>5.690</td>
</tr>
<tr>
<td>SubsNumber</td>
<td>191</td>
<td>1</td>
<td>248</td>
<td>18.25</td>
<td>26.257</td>
</tr>
<tr>
<td>Loss</td>
<td>191</td>
<td>0</td>
<td>1</td>
<td>.19</td>
<td>.396</td>
</tr>
<tr>
<td>Change</td>
<td>191</td>
<td>0</td>
<td>1</td>
<td>.24</td>
<td>.425</td>
</tr>
</tbody>
</table>

Table 1 presents descriptive statistics on the variables used in this study. As can be seen from the table, the maximum of audit fees in annual report is 7.85 million, and the standard deviation of audit fee is greater than the mean. The Big 4, auditor opinion (OpiType), Loss and Change are dichotomous dummy variables. The average value of Big 4 variable indicates that only 12% of the audits of listed companies in Chinese Mainland are performed by Big 4 auditors. One reason is that I choose the Chinese A-share listed companies as sample, and on the other hand, there is a large number of accounting firm in China, so the A-share listed companies usually choose well-known domestic accounting firms.
The table also reveals that of the 191 companies in the sample, 181 (95 percent) received a standard audit opinion and 19 percent of these listed companies with losses. The maximum ratio of the sum of accounts receivable and inventory to total assets is 0.9033, with an average ratio of 0.278. There is a significant difference between the minimum and maximum of tenure and subsidiary number, they respectively range from 1 to 19 and 1 to 248.

Table 3 to Table 7 divided the sample into different groups and made comparison of mean difference, among them the comparison of dummy variables need to use non-parametric test. The 191 samples were respectively divided into separate groups according to the specified variable features. Use the Mean comparison method to analysis how specified characteristics of the samples impact other variables. I hope that through the univariate analysis to initial determine the relationship between variables.

5.2. Testing hypotheses

Table 3

<table>
<thead>
<tr>
<th>Big4 Group Statistics (N=191)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big4</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Table 3 shows, not surprisingly, that large companies prefer Big Four auditors. Of 191 companies in the sample, only 23 are audited by Big4. In the sample, all the data were selected from the domestic A-share listed companies and in China there are a lot of local accounting firms, so compared with B shares and H shares listed company, the number of A-share listed companies which choose Big4 as their auditor are less.

According to the different size of accounting firms, the mean difference of annual audit fees is significant. Mean difference reached 0.22 million, this indicates that the larger the audit firms, the higher audit fees charged. I note that the auditees’ total assets and number of subsidiaries of Big4 and non Big4 are significant different, average assets per customer of big4 is much bigger than non big4’s. This shows that in the small customer market in China, non big4 are more popular. The auditees which have more total assets and subsidiaries are generally employ big4 as their auditor. Therefore there is fierce competition between big4 and non big4 in the large customer market.

Table 4
Table 4 is based on the type of audit opinion, it was divided into two groups according to whether the auditee received the standard unqualified opinion or non-standard unqualified opinion. There are 181 listed companies got standard unqualified opinion and 10 got non-standard unqualified opinion. As can be seen from the table, when the audit opinion is different, big4 or non big4 and whether appear loss in the last three years have significant differences, but like audit fee, audit tenure and other variables have no significant impact. This means that the listed companies which received non-standard unqualified audit opinion are mostly companies were running with loss and big4 are more likely to issue non-standard unqualified opinion to the listed companies, compared with non big4. However, the type of audit opinion doesn’t significantly affect the audit fees in annual report.
Table 5 presents whether the auditee has loss in the last three years. The companies with Loss appear at least once of the last three years are 37, without loss are 154. Opinion type of company with loss is significantly the non-standard unqualified opinion. Listed companies in the red reflect the company is likely to face financial risk and operational risk and it has possibility to manipulate profits, so it has a greater likelihood to be issued with non-standard unqualified opinion. Audit fees of companies are running with loss are little lower, but not significant, it proves that

<table>
<thead>
<tr>
<th>Loss Group Statistics (N=191)</th>
<th>Loss</th>
<th>N</th>
<th>Mean</th>
<th>Mean difference</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AudFee</td>
<td>0</td>
<td>154</td>
<td>897045.45</td>
<td>173369.784</td>
<td>1.176</td>
<td>.285</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>37</td>
<td>723675.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totass(‘000)</td>
<td>0</td>
<td>154</td>
<td>10044800.35</td>
<td>4347288.178</td>
<td>1.779</td>
<td>.166</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>37</td>
<td>5697512.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Big4</td>
<td>0</td>
<td>154</td>
<td>.13</td>
<td>.049</td>
<td>.921</td>
<td>.089</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>37</td>
<td>.08</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OpiType</td>
<td>0</td>
<td>154</td>
<td>1.00</td>
<td>.270</td>
<td>3.651</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>37</td>
<td>.73</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio</td>
<td>0</td>
<td>154</td>
<td>.284294</td>
<td>.0316952</td>
<td>.960</td>
<td>.224</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>37</td>
<td>.252599</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Tenure</td>
<td>0</td>
<td>154</td>
<td>8.40</td>
<td>.781</td>
<td>.763</td>
<td>.354</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>37</td>
<td>7.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SubsNumber</td>
<td>0</td>
<td>154</td>
<td>19.31</td>
<td>5.474</td>
<td>1.776</td>
<td>.260</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>37</td>
<td>13.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td>0</td>
<td>154</td>
<td>.22</td>
<td>-.077</td>
<td>-.919</td>
<td>.074</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>37</td>
<td>.30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
audit fees did not reflect the effect from loss to the audit risks. Meanwhile, the total assets and subsidiaries of auditee have no significant link with loss.

Table 6

<table>
<thead>
<tr>
<th>Change Group Statistics (N=191)</th>
<th>Change</th>
<th>N</th>
<th>Mean</th>
<th>Mean Difference</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AudFee</td>
<td>0</td>
<td>146</td>
<td>834321.92</td>
<td>-123678.084</td>
<td>-.615</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>45</td>
<td>958000.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totass(000)</td>
<td>0</td>
<td>146</td>
<td>9763473.45</td>
<td>2380360.559</td>
<td>.957</td>
<td>.267</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>45</td>
<td>7383112.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Big4</td>
<td>0</td>
<td>146</td>
<td>.11</td>
<td>-.046</td>
<td>-.760</td>
<td>.110</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>45</td>
<td>.16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OpiType</td>
<td>0</td>
<td>146</td>
<td>.95</td>
<td>.019</td>
<td>.450</td>
<td>.332</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>45</td>
<td>.93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio</td>
<td>0</td>
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<td>.280065</td>
<td>.0081120</td>
<td>.236</td>
<td>.408</td>
</tr>
<tr>
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<td>1</td>
<td>45</td>
<td>.271953</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenure</td>
<td>0</td>
<td>146</td>
<td>10.35</td>
<td>8.905</td>
<td>21.801</td>
<td>.000</td>
</tr>
<tr>
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<td>45</td>
<td>1.44</td>
<td></td>
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</tr>
<tr>
<td>SubsNumber</td>
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<td>146</td>
<td>17.65</td>
<td>-2.549</td>
<td>-.679</td>
<td>.709</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>45</td>
<td>20.20</td>
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</tr>
<tr>
<td>Loss</td>
<td>0</td>
<td>146</td>
<td>.18</td>
<td>-.066</td>
<td>-.920</td>
<td>.064</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>45</td>
<td>.24</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6 shows the existence of the change of the audit firm in the last three years. In the Sample there are of 45 companies changed auditors within three years. As can be seen from the table, the auditor change didn’t significantly influence the audit fees, audit opinion and other indicators.
<table>
<thead>
<tr>
<th></th>
<th>LN(Audfee)</th>
<th>LN(TotAss)</th>
<th>LN(Tenure)</th>
<th>SQRT(SUBS)</th>
<th>Big4</th>
<th>OpiType</th>
<th>Loss</th>
<th>Ratio</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>LN(Audfee)</td>
<td>1</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.709** (.000)</td>
<td>-.055 (.453)</td>
<td>.577** (.000)</td>
<td>.747** (.000)</td>
<td>.113 (.119)</td>
<td>-.105 (.150)</td>
<td>-.002 (.983)</td>
<td>0.57 (.436)</td>
<td></td>
</tr>
<tr>
<td>LN(TotAss)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-.003 (.964)</td>
<td>-.003 (.964)</td>
<td>.508** (.000)</td>
<td>.493** (.000)</td>
<td>.078 (.287)</td>
<td>-.184* (.011)</td>
<td>.016 (.824)</td>
<td>-.015 (.834)</td>
<td></td>
</tr>
<tr>
<td>LN(Tenure)</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-.027 (.706)</td>
<td>-.087 (.706)</td>
<td>-.087 (.706)</td>
<td>.025 (.732)</td>
<td>-.051 (.487)</td>
<td>-.007 (.921)</td>
<td>-.843** (.000)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SQRT(SUBS)</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.398** (.000)</td>
<td>.043 (.554)</td>
<td>-.098 (.178)</td>
<td>.117 (.106)</td>
<td>.082 (.261)</td>
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</tr>
<tr>
<td>Big4</td>
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<td></td>
<td></td>
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<td>1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.087 (.232)</td>
<td>-.059 (.416)</td>
<td>-.061 (.403)</td>
<td>.060 (.410)</td>
<td></td>
</tr>
<tr>
<td>OpiType</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.480** (.000)</td>
<td>-.022 (.765)</td>
<td>-.036 (.624)</td>
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</tr>
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<td>Loss</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- .064 (.378)</td>
<td>0.071 (.327)</td>
<td></td>
</tr>
<tr>
<td>Ratio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>-.018 (.809)</td>
</tr>
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<td>change</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Brackets indicate significant

Table 7 presents a Pearson product moment correlation matrix for the explanatory
variables used in the regression. Compared with the comparison of Mean difference in previous text, we can find a simple correlation between variables. Annual audit fee is significantly (at the 0.01 level) positively correlated with total assets, number of subsidiaries of the auditee and whether the company audited by big4. The type of audit opinion is also found to be useful to explain audit fees, but not significant. At the same time, audit fee is negatively correlated with audit tenure, whether there was loss in the last three years and the ratio (sum of accounts receivable and inventory to total assets). All these negative correlation is not significant.

Total assets of auditee have a significant positive correlation with its subsidiaries and the size of audit firm. On the other hand, it is negatively correlated with the loss (only significant on 5%) and auditor change. It claims that auditee who has larger assets is able to operate in good condition and it usually owns more subsidiaries. These auditees are more willing to hire large accounting firms. The number of subsidiary firms has a significant positive correlation with the audit firm size, it indicates that the companies which contain a large number of subsidiaries always operate more complex, large-scale and prefer to employ larger audit firm. The type of audit opinion has significantly negative correlation with the loss happened in the company, because whether there is a loss in the past three years is a significant reason for the auditor to issue non-standard unqualified opinion. Meanwhile, if audit firm issued a non-standard unqualified opinion to the listed companies, it is indeed likely to be dismissed by listed companies, so audit opinion is negatively related with the auditor change.
Table 8

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Std.Error</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>8.327</td>
<td>.588</td>
<td>14.159</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>LN(TotAss)</td>
<td>.203</td>
<td>.026</td>
<td>.376</td>
<td>7.836</td>
<td>.000</td>
</tr>
<tr>
<td>LN(Tenure)</td>
<td>.022</td>
<td>.049</td>
<td>.032</td>
<td>.443</td>
<td>.658</td>
</tr>
<tr>
<td>SQRT(SUBS)</td>
<td>.063</td>
<td>.015</td>
<td>.191</td>
<td>4.182</td>
<td>.000</td>
</tr>
<tr>
<td>Big4</td>
<td>.971</td>
<td>.090</td>
<td>.483</td>
<td>10.748</td>
<td>.000</td>
</tr>
<tr>
<td>OpIType</td>
<td>.152</td>
<td>.127</td>
<td>.052</td>
<td>1.194</td>
<td>.234</td>
</tr>
<tr>
<td>Ratio</td>
<td>.012</td>
<td>.129</td>
<td>.004</td>
<td>.096</td>
<td>.924</td>
</tr>
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<td>Loss</td>
<td>.058</td>
<td>.073</td>
<td>.035</td>
<td>.803</td>
<td>.423</td>
</tr>
<tr>
<td>Change</td>
<td>.068</td>
<td>.110</td>
<td>.044</td>
<td>.614</td>
<td>.540</td>
</tr>
</tbody>
</table>

R Square=0.741; Adj R-Sq=0.729; F=64.927; Sig.=0.000

Table 8 presents the regression results. It shows that auditee size, number of subsidiaries of the company and the auditor size have positive relationship with audit fee. The values of R2 (=0.740) and F (=74.401) statistics are high, suggesting that it is a fairly good predictive model to audit fees across the sample of companies. Adjusted R2=0.730 means explanatory power of Independent variable on the dependent variable is more than 70%.

5.3 Analysis of the results

Analysis of auditee size

The results for the auditee size are strong, Ln(TotAss) has a positive coefficient, it means that audit fee are positively associated with the size of the company measured by total assets, the larger the auditee size, the greater workload of audit. A higher volume of audit work means more audit fee would be charge. This result is consistent with the findings in most prior studies, auditee size is the major determinant of audit fees, and auditee size is normally surrogated by the natural log of total assets (Francis 1984; Palmrose 1986). However, regression coefficient of audit fees and auditee assets is not high, only 0.202.
**Analysis of audit complexity**

Consistent with previous research, I use the number of subsidiaries (SUBS) and ratio of the sum of accounts receivable and inventory to total assets (Ratio) as the measurement of complexity. With regard to the complexity variables, it appears that only the variable in relation to the verifiability of SUBS is statistically significant for the total sample, although the Ratio variable has the correct sign. The significant level between SUBS and audit fee is 0.000. In order to expand the business scale of company, or to extend to different industries, the listed companies often try to increase their subsidiary, which is bound to increase the complexity of the audit. More subsidiaries of listed companies, larger audit fees need to pay. Thus, we can know that the more subsidiaries are the more complex audit business is. The impact from Ratio to audit fees was not significant, this indicates that the CPA does not think accounts receivable and inventory is special when they audit. Perhaps both accounts receivable and inventory are likely to be used for earnings management by the management and without causing the auditor's attention.

**Analysis of auditee risk**

Both auditee risk variables, OpïType and Loss, were positively related to the dependent variable of audit fees, but their effects are not significant. Clearly, audit fee will be generally higher if the listed company was issued with Non-standard unqualified opinion. The auditor who issued the non-standard unqualified audit opinion usually implements more stringent audit procedures and made more effort, thereby the audit fees increasing at the same time. For the management of listed company, they always want the CPA issued standard unqualified audit report, if under the equal other conditions, management are clearly reluctant to pay higher audit fees for non-standard unqualified report. Therefore, I believe that issued non-standard unqualified opinion reflect the higher risk of audit to some extent. Loss variable is the indictor of auditee risk. Even in this study the results showed loss did not affect audit fees significant, the positive coefficient point that more losses exist in the company,
greater business risk and financial risk will appear and audit firm’s risk corresponding increase.

**Analysis of audit competition**

The sign of statistically significant coefficient on Big4 are positive, suggesting that a Big 4 auditor would charge a significantly higher fee than a non-Big 4 auditor. As mentioned before, all the sample are selected from A-share listed companies, among them the number of companies which employ big4 are relatively small. However, regression analysis showed that whether Bid 4 is still significantly associated with audit fees. In my opinion, the reason of significantly higher audit fees of Big4 is not only associated with its high audit quality, but large accounting firms establish a good reputation in the fierce market competition.

**Analysis of audit tenure**

Auditor changes did not induce significant changes in audit fees, this shows that the audit fees was not the reason for listed companies to change auditors. With extension of audit tenure, new auditor began to familiar with the client's business. In order to maintain the contractual relationship with the auditee, audit firm were possible to reduce audit fees, it affected audit independence to some extent. However, the result of this study doesn’t provide significant evidence.

**6 Conclusion and suggestions**

**6.1 Conclusion**

Based on this study, it is found that Total assets of listed companies, the number of consolidated subsidiaries and auditor firm size are the main affecting factors of audit fees. The indicators which reflect the audit risk or audit tenure have no significant impact. This shows that Chinese audit fees based on the workload of auditors to some extent. This situation has a close relationship with implementation of a unified price in different industry, which according to government guidance in China,
"Low-balling" behavior is not widespread in Chinese stock market. According to the existing evidences, accounting firms did not reduce audit fee because the change of listed companies. The audit tenure has no obvious relationship with audit price and what’s more, the longer audit tenure may lead lower audit fees. Empirical researchers found that the in the Chinese stock market, the companies which audited by Big Four accounting firms have significantly higher audit fees than the companies which audited by Chinese domestic accounting firms. This shows that Big Four accounting firms may have more customers in Chinese market; in addition, they have a clear advantage in Chinese additional audit market and non-audit business.

6.2 Some suggestions

First, China needs to strengthen the norms for information disclosure system of audit fees. On the one hand, it is better to punish the listed companies which didn’t disclose according to requirements, and order them to make additional announcements. On the other hand, aiming to effectively curb the illicit competition between accounting firms the regulatory authority should pay more attention and increase the quality of inspection efforts to these kinds of companies which took large scale and complex audit services but paid less for that, or the companies gave less paid after they changed their audit firms.

Second, China should develop unified national charge rules of audit fee, so that the entire industry will form healthy price competition system. As different Chinese regions developed their own price standards, it doesn’t facilitate to format a broader audit the regional competition. Because of the specific characteristic of audit industry, Chinese government should increase the existing charge standards, to make the auditor's marginal revenue increased. After Enron, the phenomenon of relatively low audit fee is attracted the attention of U.S. Securities and Exchange Commission, then the U.S SEC made a great reform. After they forced separated auditing and consulting business, the accounting firms were allowed to increase the charging standard of audit fees. To create a better environment for China's CPA industry, China should fully
learn the lessons from developed countries and appropriately increase the audit charge.

Third, China should strive to foster the large-scale and high-quality accounting firms. This will not only conducive to the improvement of audit quality, but also help to enhance the strength of China's accounting industries to compete with international well-known accounting firms. At the same time, Chinese accounting firms should establish awareness of good brand, because higher reputation means higher audit fee.

Fourth, China has to strengthen auditor regulation in non-audit services. From the end of 2001 to 2002, a series of financial fraud scandals happened in United States told us once again, the supervision of the audit independence can never be relaxed. One of the most important lessons is that the audit firm who provides audit services and non-audit services at same time will badly influence the independence of audit. Although in China non-audit services is not universal and in the paper I didn’t make a test about the influence of non-audit service to audit fees, but I think that non-audit services should accept strictly supervision since the beginning, preventive measures will be more conducive to the healthy and stable development of Chinese audit market.

7 Limitations and future studies

7.1 The limitations of this research

In my paper, there are still many shortcomings and deficiencies. Firstly, due to difficulties of data collection, this object of study is limited to the companies listed in Shanghai Stock Exchange and Shenzhen Stock Exchange in 2010, so the representation of the conclusion is limited. Secondly, the variables selected by this paper didn’t include all the affecting factors for audit fees, there must be some factors that didn't be identified and empirical tested in this paper. Such as the impact from industries difference, regional differences, non-audit services, etc.

Thirdly, in the research, I didn’t consider the influence of traveling expense in the annual audit fees. There are a number of listed companies didn’t have standardized
disclosure of annual audit fees: some companies just assumed that they responded all the traveling expense of the auditor during audit tenure but they didn’t disclose the exact amount of traveling expense; some companies even didn’t talk anything about the traveling expense which induce the miss of this data. Analysis from the theoretical perspective, traveling expenses would obviously have some impact to audit fees, but whether the effect is significant or not. I still have to wait for further standardize information disclosure in listed companies’ annual reports, thus I can process the data and obtain empirical evidence in the future.

7.2 Future studies
In this research I just pay attention to the analysis of the sample in 2010. So in the future research, first, the samples can be extended from 2007 to 2010, through a longer period of observation to study the trend of Chinese audit fees. Second, this paper discussed the problems about audit fee for Chinese listed companies, but for Chinese small and medium companies, the impact factors of audit fee still need future discussion. Third, in-depth study for determination of audit fee according industries difference, Low-balling strategies and other problems can also be taking into consideration. Third, with the increasing needs of management consulting and other non-audit services, non-audit services fees will occupy a greater proportion in audit fees. So the impact of non-audit services to audit fees can’t be ignored. In my opinion, in order to research the impacts to audit fees, we can conduct studies focus on such as the scales of accounting firms which supply non-audit services, the changes in the relationship between companies and accounting firms which caused by non-audit services and so on. Finally, some economic theory suggests that the quality level of the product or service is an important factor affecting the price. In audit market it has no exception, but how to evaluate the level of audit quality and which alternative variables should be included is still a blind spot, we can do further research.
Reference


Leedy, P. D. & Ormrod, J. E. (2001). Practical research: *Planning and design (7th ed.*)


