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An assessment of dual audit effect and contagious effect on the audit quality of non-Big N CPA firms for Chinese companies in different markets

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AN ASSESSMENT OF DUAL AUDIT EFFECT AND CONTAGIOUS EFFECT ON THE AUDIT QUALITY OF NON-BIG N CPA FIRMS FOR CHINESE COMPANIES IN DIFFERENT MARKETS

by
WANG Meixin

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submitted in partial fulfillment
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ABSTRACT

An Assessment of Dual Audit Effect and Contagious Effect on the Audit Quality of Non-Big N CPA Firms for Chinese Companies in Different Markets

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Master of Philosophy

External auditor is an independent agent to provide assurance about the validity of financial statements prepared by management to enhance the reliability of information in financial reports. As such, audit quality has long been a concern for all stakeholders and is a topic of on-going research interest. In China, the dual audit requirement for AB share companies and AH share companies started in 2001 was abolished in 2007 and 2010 respectively. This study attempts to examine whether there are dual audit effect and contagious effect on the audit quality of non-Big N audit firms for A share companies in different markets. I focus on non-Big N audit firms since the audit quality of these firms are of greater concern. Using data from 2001 to 2012, I compare the audit quality of A share companies that also have B (or H) shares ((AB/H) with the audit quality of pure A share companies to test whether there is a dual audit effect on the audit quality of A-share financial statements. I also compare AB/H share companies which hire only non-Big N auditors with those AB/H share companies who hire non-Big N domestic auditors and Big N international auditors to test the existence of contagious effect on the audit quality of A-share companies. My findings indicate that dual audit does improve the audit quality of non-Big N audit firms for A share companies. However, there was mixed evidences on the contagious effect using different measures of audit quality. This study contributes to the literature on enhancing our understanding of the determinants of audit quality in China. It can also provide policy makers in emerging economies some useful evidence on ways to improve audit quality.

DECLARATION

I declare that this is an original work based primarily on my own research, and I warrant that all citations of previous research, published or unpublished, have been duly acknowledged.

SIGNED

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Date 21/08/2014

CERTIFICATE OF APPROVAL OF THESIS

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An Assessment of Dual Audit Effect and Contagious Effect on the Audit Quality of Non-Big N CPA Firms for Chinese Companies in Different Markets

Chapter 1 Introduction

Financial statements are used to provide users including shareholders, creditors, and regulatory bodies with information regarding the business operation and financial position of companies. However, users of financial statements may have doubts about the integrity and objectivity of management who prepare the financial statements. External auditors, as an independent agent to provide assurance about the quality of financial statements, can help enhance the credibility of information in financial statements and consequently mitigate information risk. Considering the importance of independent audits, non-Big N audit quality has long been a concern for all stakeholders, especially the audit quality for listed firms because of its impact on investors and society. As such, audit quality is a topic of on-going research interest. Audit quality is defined as the probability that an auditor will both discover and report a breach in the client's accounting system (DeAngelo, 1981).

This study is also motivated by the emphasis of audit quality improvement in China in recent years. China Securities Regulatory Commission (CSRC) is now attempting to adjust the structure imbalance in the Chinese capital market. In China, many companies still heavily rely on indirect financing from financial institutions like banks instead of direct capital raising from investors in the capital market.

According to Guo (2012), the Chairman of CSRC, the capital raised through security market consists of only 20% of the capital raised by Chinese companies. Due to the high reliance on debt capital from commercial banks, small and medium sized companies often encounter difficulties in financing, because banks often hesitate to make loans to small and medium-sized companies due to their limited ability to maintain a sound accounting system and relatively high loan risk. Consequently, many of these firms seek to list in foreign markets to obtain capital. For example, in 2010, among the 123 companies producing solar cells, 16 of them chose to be listed in foreign market to raise capital (Xu et al., 2012). To attract some of these small and medium-sized companies back to the Chinese market and adjust the structure imbalance in Chinese capital market, CSRC attempts to stimulate the investment enthusiasm in the Chinese capital market (Guo, 2012). One of its strategies is to build investor's confidence in the Chinese capital market by providing better investor protection and improvement in the quality of information disclosure. Audit quality could play a very important role in enhancing the quality of information disclosure. Interestingly, in 2012, Premier Wen emphasized the importance of audit quality as he asked auditing bodies to reveal in a timely manner and resolve effectively various underlying financial risks in the economy (People's daily online, 2012). Quality audits can reduce those risks. Because of the significance of audit quality in the Chinese market, it is important to examine the factors that could affect auditor's audit quality.

Additionally, in May 2014, the Ministry of Finance in China issued the Provisional Regulations on Cross-border Audit Services of CPA Firms (consultative draft).[1] The proposal precludes non-PRC CPA firms from providing audit services to Chinese companies listed overseas and enterprises registered overseas but with operating entities in China. My research can provide insights into the influence of such restrictions of non-PRC CPA firms audit services to Chinese companies on the audit quality of the Chinese market.

This study attempts to examine the influence of the dual audit effect on the audit quality of non-Big N audit firms for A shares companies and the contagious effect of having Big N international auditors on domestic auditors' work. In contrast to prior studies which focus on the audit quality of Big N auditors, I focus on the audit quality of non-Big N audit firms because the audit quality of these firms is of greater concern. In this thesis, the Big N refers to the largest international accounting firms in China during my sample period (2001-2012), including PriceWaterhouseCoopers, KPMG, Ernst & Young, Deloitte Touche Tohmatsu, Arthur Anderson and BDO. According to the most updated ranking of CPA firms in China issued by CICPA,

[1] The proposed regulations apply to the audits of Chinese enterprises listed overseas and enterprises registered overseas but with operating entities in China, including both IPO audit and regular audit. Non-PRC CPA firms which audit the financial statements of Chinese Enterprises listed overseas and enterprises registered overseas but with operating entities in China according to the regulations in the overseas listing location must cooperate with PRC CPA firms qualified for performing listed-company audits in China or CPA firms listed in the Information of the First 100 CPA Firms in the Comprehensive Assessment issued by CICPA last year. The non-PRC CPA firms are responsible for issuing audit report and will bear the audit responsibility. The audit reports issued by the non-PRC CPAs have no legal effect in China. Additionally, non-PRC CPA firms are prohibited from carrying out audits for enterprises registered overseas but with operating entities in China through provisional license arrangements.

BDO ranked No. 5 in the comprehensive assessment while KPMG ranked No. 6. BDO consistently ranked high in recent years and is comparable in operating income to Big 4 in China.[2] In addition, BDO entered Chinese market early in 1997 and gained reputation in providing high quality services comparable to Big 4. Thus, it is reasonable to include BDO in Big N for the tests of dual audit effect and contagious effect. Big N auditors have global reputation in hiring talented employees with good communication and professional competence. Big N CPA firms provide their people with high-level standardized training and apply standardized audit methodologies worldwide. They are usually perceived to be associated with higher audit quality compared with non-Big N auditors. The dual audit for A-share firms that also have B (or H) shares listed provides a unique opportunity for me to test the dual audit effect by comparing the audit quality of A-share financial statements for firms with A share only with AB/H share firms. The unique dual audit policy (one auditor for A share and one for B (or H) share financial statements) also makes it possible to test the contagious effect of large auditors by comparing the audit quality of A share financial statements for AB/H share firms which hire to those which do not hire a Big N international auditor, since both the domestic and international auditors provide audit service to the same client

[2] In 2012, the ranking of CPA firms by the Chinese Institute of Certified Public Accountants (CICPA) is: PriceWaterhouseCoopers (1), KPMG (6), Ernst & Young (4), Deloitte Touche Tohmatsu (2) and BDO (5) (CICPA, 2013). RSM China certified public accountants ranked No. 3 in 2012, but RSM entered China market late and did not cover the whole sample period. The ranking is a comprehensive one primarily based on annual revenue along with other factors like the number of CPAs and any discipline or punishment received during the year.

at the same time. My setting eliminates many confounding factors associated with cross-sectional and time series analyses because I only compare the audit quality of A-share auditors under the same institutional environment.

My sample consists of Main-Board listed A-share firms on the Shanghai and Shenzhen Stock Exchange from 2001 to 2012. I divide these firms into three groups for my tests. The first group includes firms that issue only A shares and hire non-Big N domestic auditors. My second group includes firms that issue both A shares and B (or H) shares (AB/H share firms) and hire a non-Big N a domestic auditor and a non-Big N international auditor. AB/H share firms having a non-Big N domestic auditor and a Big N auditor form the third group. I examine the dual audit effect by comparing the audit quality of A-share financial statements for firms in the first and second groups, i.e. pure A share firms hiring non-Big N domestic auditors and AB/H share firms with non-Big N domestic and non-Big N international auditors. The contagious effect is tested by a comparison of audit quality of A share financial statements between the second and third groups i.e. AB/H share firms with non-Big N domestic and international auditors and AB/H share firms with a non-Big N domestic auditor and a Big N international auditor.

I use the auditors' propensity to issue modified audit opinion and earning response coefficient as proxies for audit quality. I find consistent evidence that dual audit improves audit quality using both measurements. Mixed evidence was found regarding contagious effect of Big N international auditor on non-Big N domestic

auditor's audit quality. No significant impact of hiring Big N international auditors is found on the non-Big N domestic auditor's propensity to modify audit opinion. However, my empirical tests reveal a positive and significant association between hiring a Big N international auditor and investors' responsiveness to earnings changes (i.e. earnings response coefficient) in the A share financial statements audited by a non-Big N domestic auditor.

The findings on the dual audit effect and contagious effect for non-Big N audit quality of Chinese companies in different markets contribute to the literature in enhancing our understanding about the determinants of audit quality for listed companies in Chinese market. This study also provides evidence on the existence of Big N auditors' contagious effect on the non-Big N auditors regarding audit quality when they work closely. It also provides policy makers some hard evidence on ways to improve audit quality in China and as a result enhance the institutional environment in the Chinese capital market.

I discuss the related institutional background in the next chapter. In the third chapter, I review some prior related research studies. I develop my hypotheses in chapter 4. Chapter 5 shows my research design, in which I discuss my test models in detail. The empirical results of the main tests as well as sensitivity tests are reported in the sixth chapter. The final chapter concludes my findings.

Chapter 2 Institutional Background

This thesis studies Chinese companies in three different markets, namely, AB share companies, AH share companies and pure A share companies. The nature of the audit for these companies as it relates to this research is explained below.

2.1 AB share companies

AB share companies issue two sets of shares, A shares and B shares. A shares are offered to domestic investors in China while B shares are offered to foreign investors.[3] AB share companies are not subject to cross listing. Both shares are listed in China's securities market. In 1992, there was a total of 18 firms with B shares. B share market has experienced rapid development since then. In 2012, there are 107 B-share companies, among which 85 companies issue both A shares and B shares. B share market is established primarily to provide Chinese companies with an alternative international financial channel. Chinese companies could raise capital from foreign investors without cross listing in foreign markets. So B shares are also called domestically listed foreign shares. Therefore, it is necessary for these companies to provide their company information to foreign investors. In September 1992, the Ministry of Finance and State Commission for Restructuring jointly issued the *Provisional Regulation for CPAs in Providing Services for Pilot Joint-Stock Enterprises* which guides the audit of companies with B shares and companies listed

[3] In Feb 19, 2001, the State Administration of Foreign Exchange (SAFE) and CSRC jointly issued the *Notice on Issues Related to Individual Domestic Residents' Investment in Domestically Listed Foreign Shares*. B share market started to be open to Chinese residents from 2001.

in foreign markets. The regulations require that the financial statements of companies with B shares have to be audited by Chinese Certified Public Accountants (CPAs) and Chinese CPAs have to issue an audit report in accordance with Chinese GAAP. *In addition*, to communicate information to foreign investors or upon the requirements of overseas regulatory authorities, these companies should normally employ an international audit firm to carry out additional audits based on international auditing standards and issue audit reports accordingly. This effectively means that AB share companies are subject to a dual audit. The international audit firms employed for B share companies should have a resident representative office in China. The CPA firm performing A share audit and the international audit firm could cooperate with each other during the audit, but they have to issue their audit reports separately. However, the dual audit requirement is not mandatory until 2001, although most companies chose to have dual audit before 2001. CSRC made the dual audit requirement mandatory in 2001 and gave detailed guidelines on dual audit in *The Content and Format of Information Disclosure for Companies with Public Offering No. 2—The Content and Format of Annual Report (2001 revised version).* According to the requirement, in addition to the audit by a domestic auditor, the financial statements of AB share companies should also be audited by an international CPA firm using International Auditing Standards.

In 2006, the Ministry of Finance and the International Accounting Standards Board jointly made a press conference and announced that the new accounting and auditing

standards that would come into effect in 2007 and the implementation of the new standards would achieve substantial convergence of accounting and auditing standards in China with the International Accounting and Auditing Standards (Huang, 2006). Due to the convergence of the accounting standards, the CSRC issued the *Notice on the Relevant Issue about the Auditing of the Companies that Issue the Domestically Listed B-shares (2007)* which effectively abolishes the mandatory dual audit requirement for AB share companies because of the substantial convergence of accounting and auditing standards and the desire to save audit fees for companies. Starting from the fiscal year ended in 2007, AB share companies no longer need to have two sets audit reports, although some have continued to do so on a voluntary basis.

2. 2 AH Share Companies

Unlike AB share companies, AH share companies are subject to cross listing in both Mainland China and the Hong Kong securities markets and issue A shares and H shares respectively. According to the listing rules in Mainland China and Hong Kong, AH share companies have to prepare two sets of financial statements and have them audited by auditors according to the respective requirements and standards in each market until 2010. This means that prior to 2010, AH-share companies have to prepare two sets of financial statements in accordance with Chinese GAAP and Hong Kong Financial Reporting Standards (or International

Financial Reporting Standards) respectively and have them audited by domestic auditors and auditors in Hong Kong in accordance with the respective auditing standards. Thus, like AB share companies, AH share companies are also subject to dual audit, although the auditors involved could be different.

In 2009, however, the Ministry of Finance and CSRC jointly issued the *Pilot Program for CPA firms to engage in H-share Audit(Pilot Program)* under which twelve CPA firms in China were allowed to perform audit service for H share firms. To ensure the quality of the pilot H share audit, the *Pilot Program* sets six requirements for CPA firms which want to apply for the H share audit qualification. First, applicants must be qualified to audit securities and futures business activities. Second, operational income in 2008 should not be less than 300 million (RMB) among which income from audit services cannot be less than 200 million and operating income from auditing securities activities should not be less than 50 million or maintain 30 or more listed companies as audit clients. Third, Chinese CPAs in the applicants' firm should not be less than 400 and among which at least 300 of them qualified as CPAs through public examination. Fourth, no one shareholder or partner obtains more than 25% ownership in the CPA firms. Fifth, applicants have established and maintained a sound corporate governance, quality control and internal control system. Sixth, the applicants must either have a member firm in Hong Kong or belong to the same international CPA firms as a Hong Kong audit firm. The final list is generated by Ministry of Finance and CSRC via

examination and verification, field visit and recommendations. The twelve Chinese auditors' qualification to audit H shares effectively means that the dual audit requirement for AH share companies becomes no longer mandatory following the *Joint Statement on the Alignment of Accounting Standards for Mainland Enterprises and Hong Kong Financial Reporting Standards* in 2007 (CASC and HKICPA, 2007). This indicates that from the fiscal year ended 2010, AH share companies can choose to have only one set of financial statements prepared in accordance with the accounting standards in Mainland China and engage one of the twelve mainland CPA firms mentioned above to audit their financial statements using the auditing standards in Mainland China. However, as of 2012, among the 82 AH-share companies, 57 companies still choose to have two sets of financial statements and two auditors for their financial reports, one domestic Chinese auditor and one Hong Kong auditor.

2.3 Pure A Share Companies

Pure A share companies are listed only in Chinese stock market, either on the Shanghai Stock Exchange or Shenzhen Stock Exchange. Only one set of financial statements and an audit report by a domestic auditor are required to be prepared for these companies. To ensure quality, CPA firms must have a special license to be able to audit listed companies in China. To be qualified to audit listed companies in China, a CPA firm has to be legally formed for more than 3 years and maintain

sound quality control, internal management system and professional ethics. These CPA firms must have at least 120 Chinese CPAs and not less than 80 of them qualified through the unified nationwide qualification examination. At least 60 of those 80 CPAs need to be qualified and have continuous practice for five years or more. The operating income should not be less than 50 million, among which at least 40 million are from audit services. It is also required that an audit firm for listed companies in China should be composed of not less than 25 partners and more than half of them have three-year or longer practice in this firm. In 2012, 54 CPA firms were qualified to audit listed companies in the Chinese stock market. Needless to say, these are the better CPA firms in China. An example of qualified audit report respectively for AB, AH and pure A share firms is attached in Appendix 2.

Chapter 3 Literature Review

In this chapter, a comprehensive review of prior studies related to this thesis is provided. I review the literature in four different fields, including audit quality, peer pressure, dual audit as well as contagious effect.

3.1 Audit Quality

Audit quality has long been studied in the accounting and finance literature. Prior research studies in China and other emerging markets have identified factors that can significantly influence the quality of audits.

3.1.1 Audit firm and Client Firm Characteristics

Certain characteristics of the CPA firms affect the quality of the audits provided. For example, Li, Song and Wong (2008) document a positive relation between audit firm size measured by clients' total assets, total sales or total audit fees from clients and auditors' propensity to issue modified audit opinions (MAOs) in the Chinese market. Chan and Wu (2011) study the audit firm size effect via an examination of the change in the frequency of MAOs following audit firm mergers. Their study documents that auditor quality improves after multi-license mergers, in which at least two constituent CPA firms to a merger have licenses to audit listed companies because of the increase in the quasi rents at stake after such mergers. The impact of CPA firms' legal form on audit quality is also important. Firth et al. (2012) suggest that auditors in a partnership CPA firm tend to be more conservative in issuing audit opinions compared with auditors in a limited liability firm. However, no such

evidence is found by Lennox et al. (2012) that CPA firms supply significantly lower audit quality when they change from unlimited to limited liability form of firms in UK.

Characteristics of client companies could also significantly affect auditor' independence and the quality of audits. For example, using data from East Asian countries, Fan et al. (2005) find evidence that auditors consider agency conflicts in a company when they issue audit opinions. Poor profitability performance is more likely to trigger MAOs in companies with separation between control and ownership than those without such a separation because the former companies suffer from higher agency conflicts.

3.1.2 Government Influences

In China, the influence from government does matter in audit quality. Prior studies explore how CPA firms' association with government could affect auditor independence. For example, an improvement in auditor independence and audit quality has been documented after the disaffiliation program in China (Yang et al., 2001; Gul et al., 2009). Chan et al. (2006) examine whether auditor opinions are affected by political and economic influences from local governments. They find that local audit firms are more likely to suffer from influence from local governments than their non-local counterparts due to their economic reliance on local clients. Local auditors are inclined to report favorably on local government-owned companies and companies tend to switch from a non-local auditor to a local

one after receiving MAOs. In addition, Chan, Lin and Wang (2012) document that local government controlled companies are able to obtain more favorable audit opinions from local auditors when they face the need for new equity financing or the threat of delisting. Chan, Lin and Zhang (2007) suggest that the decrease in government ownership and corresponding increase in institutional ownership lead to a general increase in the demand for high-quality audits in China's stock market.

Other factors that are also found to influence audit quality in China include audit-client importance, audit tenure, auditor switch etc. For example, Chen et al.(2010) examines the association between audit quality and client's importance to the company. They find that from 1995 to 2000, the individual auditor's propensity to issue MAOs is negatively associated with client importance. However, from 2001 to 2004, the association turns to be positive with improvement in the institutional environment. But they do not find significant evidence in the office and firm level. Chen and Xia (2006) document an inverse "U" shape association between auditors' tenure and the audit quality. They indicate that when the audit tenure is less than 6 years, audit tenure has a positive impact on audit quality. The relationship turns to be negative when the audit tenure is more than 6 years. Studies on auditor switches explore how the various forms of auditor switches affect audit-client relationship and audit quality. For example, Firth et al. (2012b) find that partners who rotate back after a mandatory audit partner rotation treat former clients more favorably than non-rotation-back cases. In a related study, Firth et al. (2012a) document that firms

with mandatory audit partner rotations are associated with a significantly higher likelihood of MAO than no-rotation firms in less developed regions in China. Similar but weaker evidence is also found for voluntary audit firm rotations. Chen, Su, and Wu (2009) study the audit quality in a 3-year period after a forced audit firm change but with continued partner-client relationship. They indicate that clients with greater earnings management activities are more likely to follow their audit partners to a new firm, and in the first post-switch year, these followers are less likely to report high earnings management items. However, the earnings management increases in the next two post-switch years. Another study based on A-share companies in China indicates that auditor switch is related to the conservatism of the predecessor auditors and it could affect the independence of the successive auditors (Liu and Liu, 2008). For companies reporting profit in the year of auditor change, there is usually a significant increase in the discretionary accruals after the switch. However, in companies reporting losses in the year of auditor switch, they take a "big bath" to adjust lower earnings of the same year in expectation to report profit in the following year.

3.2 Peer Pressure

Previous research has studied the impact of peer pressure on audit quality in different contexts. Deis and Giroux (1992) find that CPA firms who are members of AICPA Peer Review Section supply higher audit quality compared to those non-

member CPA firms. This indicates that auditors improve the quality of their work when it is reviewed by a third party, which will result in a higher probability of audit failure detection. Shafer et al. (1999) document that auditors do feel the pressure from peer review. The perceived pressure consequently restrains aggressive reporting decisions. More recent literature examines the effectiveness of peer review reports in reflecting audit quality. Hilary and Lennox (2005) find that receiving clean opinions from peer review helps audit firms in gaining clients, while modified and adverse opinions lead to a loss of clients after peer review. Using data set from an insurance company, Casterella et al. (2009) document that AICPA's self-regulatory peer review effectively reflects the quality of services provided by CPA firms. My thesis studies peer pressure in a different context, i.e. the pressure from a second auditor of the same firm in a different capital market.

3.3 Dual Audit

Using three-year data from 1999 to 2001, Li and Wu (2003) find no significant difference in audit quality of statutory auditors among different patterns of dual audit. Participation of Big 5 auditors does not improve auditor independence and consequently audit quality. Lin et al. (2014) document that companies with dual audit are associated with less income-increasing discretionary accruals which indicate higher audit quality. The audit quality is even higher when the two auditors, domestic and international, are unaffiliated.

3.4 Contagious Effect

There is not much accounting literature which specifically examines the contagious effect in an auditing context. However, a spillover effect is widely studied in literature. Prior studies examine the spillover effect between CPA firms' non-audit services and audit work. Simunic (1984) tests the existence of the spillover effect between management advisory services (MAS) and audit service by examining the difference in fees paid by clients. He documents that CPA firms are paid more when they provide combined audit and advisory services than for pure audit service which indicates that MAS have spillover effect on the audit services and improve the audit quality as a consequence. The spillover effect from one service to another service is also supported by Davis et al. (1993) and Ezzamel, Gwilliam and Holland (1996). However, Whisenant, Sankaraguruswamy and Raghunandan (2003) find no significant spillover effect between the non-audit and audit services after controlling the endogenous selection problem. Other studies examine the contagion effect. Gleason, Jenkins and Johnson (2007) find the contagion effect of share price decline due to accounting restatements that have negative impacts on shareholder wealth also lead the share price decline of firms in the same industry who do not restate their accounting numbers. The contagion effect of the accounting restatements induces investors to have concerns about the accounting credibility in the whole industry. Francis and Michas (2013) document contagion effect of low-quality audits. They find that low-quality audits in an audit office have contagion effect on

the quality of audits conducted by the same office. Again, my thesis studies contagious effect of a second auditor of the same firm in a different capital market.

Chapter 4 Hypotheses Development

4.1 The Chinese Audit Market

The work of auditors in China is subject to the supervision from the Chinese Institute of Certified Public Accountants (CICPA), the Ministry of Finance and China Securities Regulatory Commission (CSRC). Practically, these regulatory bodies cooperate with each other in monitoring the work of auditors in China and in rendering sanctions where appropriate. According to the 2012 investigation report by CICPA, sanctions to individual auditors and audit firms are basically in three forms, namely, public condemnation, informed criticism and admonition.

China has adopted similar ethical requirements for auditors of listed companies as in many developed markets including requirements on independence, integrity, objectivity, professional competence and confidentiality. However, according to Shafer (2008), auditors in China, especially those in local firms, are more likely to consider aggressive actions as ethical and express intentions to commit similar actions. Aggressive judgments on acceptable actions could have negative impact on the quality of audits they provide. For example, they could set higher acceptable level of discretionary accruals in their clients' financial statements than their counterparts in other markets.

CSRC requires that all listed companies in China must be audited by Chinese CPAs. However, because of the relatively weak institutional environment in China compared with other industrialized nations, the quality of Chinese audits has long

been of the concern for various stakeholders, especially for small and medium CPA firms. Most auditing firms in China were initially set up or sponsored by government agencies at different levels. The operations of these firms were frequently intervened by government agencies which compromised their independence and consequently the quality of their audits (Chen, 2004; Lin, 2004). Generally speaking, these CPA firms were quite small in size. To solve this problem, Chinese government introduced reforms of CPA practices since 1997. These reforms include encouragement of mergers of CPA firms, and disaffiliation of CPA firms from their government sponsors. These reforms help enhance the independence of CPA firms in China and improve their audit quality (Lin et al., 2003).

Nevertheless, despite the improvement in the governance and supervision for CPA firms, the overall institutional environment in China is still perceived to be weak compared with many developed countries. The capital market and the operation of companies in China are not subject to sufficient supervision from institutional investors. Institutional investors, especially those long-term investors are generally well informed and knowledgeable. They normally keep a close eye on the operation and corporate governance of firms including the audit of companies they invest in. According to Guo (2012), the chairman of CSRC, by the end of 2011, only 15.6% of the circulated A shares were held by institutional investors while in developed market, institutional investors held around 70% of the market capitalization among which half were long-term investors including pension funds and insurance

companies.

4.2 International Well-Renowned CPA firm Groups

To join in as a member of an international CPA firm group, a CPA firm has to fulfil the criteria set by the group for its members. International CPA organizations usually have requirements for members on size, experience and service quality. For example, Crowe Horwath (2014) states that:

Elite firms in the Crowe Horwath International organization have been selected through a rigorous approval process. This includes providing evidence of impeccable service, exhibiting the highest quality standards of operation and delivery, illustrating industry leadership through peer review, as well as demonstrating superior management competency as evidenced by awards such as honors as employer of choice and valued member of their business community.

In addition to the quality control of member firms in the selection stage, members of an international CPA firm organization are also subject to continuous supervision after they have gained membership. As all members in a group bear the same brand name, international CPA groups are inclined to have rigorous continuous examination on the eligibility of their members to avoid possible damage to their brand names and reputation. Moreover, international CPA firm organizations have internal system for information and knowledge exchange among members and provide continuous standardized training. These continuous supervision and training ensure a high service quality provided worldwide. Thus, members of international CPA firm groups are normally subject to the influence from a strong quality assurance environment.

4.3 The Hong Kong Audit Market

AH shares are audited by CPA firms in Hong Kong and the non-Big N international auditors of most (70% to 80%) AB share firms are also Hong Kong CPA firms. The institutional environment in Hong Kong is thus of great importance to the audit quality supplied by the international auditors for AH and AB firms.

Firms listed in Hong Kong are subject to the co-supervision from five main regulatory authorities, namely, the Hong Kong Securities and Futures Commission (HKSFC), the Hong Kong Stock Exchange (HKSE), the Hong Kong Institute of Certified Public Accountants (HKICPA), the Financial Reporting Council(FRC) and the Independent Commission against Corruption (ICAC).[4]

HKSFC and HKSE have legal powers to monitor and investigate the audits of companies listed in the Hong Kong Stock Exchange. In practice, they often refer suspected cases to the HKICPA for further investigation (Ke et al., 2012). HKICPA, as the statutory licensing and standard promulgating body for the accounting profession in Hong Kong, regulates the conducts of its members and maintains investigatory power over audits of non-listed companies. After the establishment of FRC, the power of investigating the audits and the accounting records for listed companies passes to the FRC. ICAC is responsible for receiving and considering allegations of corruptions and investigating the alleged offenses.

As explained above, overall, the institutional environment in China appears to be

[4] The FRC was established on 1 December 2006. It became fully operational on 16 July 2007. AH share firms are subject to its supervision after that.

weaker than that of Hong Kong and many developed markets. Hong Kong and international auditors are often subject to a more established system of supervisions, from investors to regulatory bodies to provide high quality service. The dual audit in China enables the international auditors with high audit quality to examine the financial statement of the same client and issue audit opinion accordingly. This unique setting could entice domestic auditors to improve their audit quality as they have to justify themselves if they issue audit opinions different from the international auditors. The international auditors thus effectively create peer pressure on the domestic auditors. I therefore argue that the audit engagement of Hong Kong or international auditors who often operate in a stronger institutional environment have a spillover effect on the quality of A-share audits when these companies are subject to dual audit. Thus, my first hypothesis on dual audit effect based on the above discussions is as follows:

H1: The quality of A-share audit is higher for AB/H share companies whose domestic and international auditors are non-Big N CPA firms than for pure A share companies which hire non-Big N domestic auditors.

4.4 Big N versus Non-Big N Auditors

Big four (or Big N) CPA firms are found to supply higher audit quality to their clients compared with their non-Big 4 (or non-Big N) competitors. Big 4 (or Big N)

CPA firms have more large clients and obtain better capability in hiring talented and skilled employees compared with other smaller CPA firms. As Big N audit firms have larger pool of clients and hence they have more incentives to protect their reputation to avoid loss of clients in a large scale and possible litigation by providing higher quality services. DeAngelo (1981) finds that audit firms in larger size tend to supply higher audit quality as they have more to lose in audit failures than smaller audit firms. Several studies find consistent evidence using various measures of audit quality. Palmrose (1988) suggests that Big eight CPA firms are less likely to have litigation activities than non-Big eight auditors. Accounting information that has been reviewed by Big N firms is perceived by the market to be more credible inferring from market's more active response to earnings in firms with Big N auditors (Teoh and Wong, 1993). Using analysts' earnings forecast accuracy and forecast dispersion, Behn et al. (2008) find that Big 5 auditors are associated with better analysts forecast performance. Lennox and Pittman (2010) find that Big 5 audits are associated with less likelihood of accounting fraud.

As Big N auditors maintain high audit quality and the dual audit policy in China enables the domestic non-Big N auditor and the Big N international auditor to provide audit service to the same client, the Big N international auditor effectively plays the supervisory role by providing a reference to the work of non-Big N domestic auditors. I therefore argue that the high quality audit of Big N international auditors have contagious effect on the audit quality of domestic non-Big N domestic

auditors (i.e. the A-share audit). Hence, I formulate the second hypothesis on contagious effect that is as follows:

H2: The quality of A-share audit is higher for an AB/H share company which hires a non-Big N domestic auditor and a Big N international auditor than for an AB/H share company which only hires non-Big N domestic and international auditors.

Chapter 5 Research Design

5.1 Sample Selection and Data

My sample includes all non-financial A-share firms listed on the main boards of the Shanghai and Shenzhen stock exchanges during 2001-2012. The sample period begins in 2001, the year when the audit environment in China becomes relatively mature and stable. Chen, Sun and Wu (2010) witness great improvements in the institutional environment in Chinese market, especially in investor protection since 2001. Auditors began to face significant litigation risk arising from accounting fraud and audit failure starting from 2001 (Chen, 2003). In addition, CPA firms have almost completed their mergers prior to 2001. According to Chan and Wu (2011), CPA firm mergers peaked in 2000 and there were only a few more mergers in 2001 and thereafter. This period (2001-2012) also covers the most updated financial report information for listed companies.

I collected the auditor, audit opinion, financial information and corporate governance information about sample firms from the China Stock Market and Accounting Research (CSMAR) database and the WIND database along with other sources, including financial statements of the sample firms and websites of regulatory bodies. Only firm years with non-Big N domestic auditors are included in my sample. Firms in financial sector are excluded from my sample due to their special regulatory and reporting environments. AB/H share firm observations without dual audit and observations with negative equity are not included either.

5.2 Specification of Regression Models

To test my hypotheses, I use two commonly used measures of audit quality in accounting literature as proxies for the audit quality in this study, namely, the frequency of Modified Audit Opinions (MAOs) and the Earnings Response Coefficients (ERCs) (Firth et al., 2007; Chan and Wu, 2011; Chen, Sun and Wu, 2010; Gul et al., 2009; Firth et al., 2012). I include a number of control variables which were found in prior studies to have significant impacts on audit quality in prior literature.

5.2.1 Modified Audit Opinions (MAOs)

Auditors are hired by companies to express opinions on whether the financial statements are prepared in accordance with accounting and legal requirements. Management of client companies will try their best to avoid MAOs for their financial reports since MAOs will generate suspicion and attract scrutinies from regulatory bodies and investors. Due to management's ability to influence the appointment of auditors for audit engagements, auditors could be under pressure not to issue MAOs. Hence, the audit opinions in the financial reports are often the products of negotiations between the management and the auditors. Management's strong preference for unqualified audit opinions and auditors' professional insistence to issue proper audit opinions make the auditors' propensity to issue MAOs a significant challenge and an appropriate proxy for auditor independence and audit quality.

Consistent with prior literature, MAOs include unqualified opinion with an explanatory paragraph, qualified, disclaimer and adverse audit opinions (Chan and Wu, 2011; Firth et al., 2012). Auditors who maintain higher audit quality have propensity to issue more MAOs than their counterparts (DeFond et al., 2000; Chan et al., 2006; Gul et al., 2009; Chan and Wu, 2011). I estimate the following probit models to test my hypotheses.

$$MAO = \alpha_0 + \alpha_1 DUAL + \sum \alpha_j \text{ Control Variables} + \varepsilon \quad (1)$$

$$MAO = \beta_0 + \beta_1 BigN + \sum \beta_j \text{ Control Variables} + \varepsilon \quad (2)$$

where MAO is coded one if a firm in the sample receives an MAO for the firm's A share financial statement in the fiscal year, and zero otherwise. DUAL is a dummy variable which equals one if a firm has both A shares and B (or H) shares during the year and hires a non-Big N domestic and a non-Big N international auditor respectively for its A and B (or H) share financial reports, and zero if the firm is a pure A share company hiring a non-Big N domestic auditor. BigN is also a dummy variable that takes the value of one to indicate that an A share company that also has B (or H) shares during the year and hires a non-Big N domestic and a Big N international auditor, and zero if an AB/H share firm which hires only non-Big N domestic and non-Big N international auditors. Equation (1) is used to test the dual audit effect (Hypothesis 1) while equation (2) is used to test the contagious effect

(Hypothesis 2). If there is dual audit effect that suggests dual audit improves audit quality, firm-years with dual audit should more likely receive a MAO comparing with pure A share firms which are only audited by a domestic auditor during the year after controlling other factors which may influence the issuance of MAOs. Hence, I expect the coefficient of DUAL, β_1, to be positive. Similarly, if contagious effect exists, AB/H share firms which hire a non-Big N domestic auditor and a Big N international auditor should have higher audit quality than AB/H share firms which hire only non-Big N domestic and non-Big N international auditors. Therefore, β_2 is expected to be positive as well.

Control Variables

Following previous research in financial reporting, various control variables that are found to have impacts on a firm's probability of receiving a MAO are included (Li, Song and Wong, 2008; Chen, Sun and Wu, 2010; Chan and Wu, 2011).

(1) Financial Statement Variables

I include the following financial statement variables as control variables, Size (natural log of total asset), LOSS (a dummy variable equals to one when the firm report a loss, zero otherwise), ARINV (receivables and inventory divided by total assets), ROE (return on equity, net income divided by shareholder equity), LEV (total liabilities divided by total assets) and TURN (sales divided by total assets). Large clients are usually less risky for auditors because of their more stable

operations and better internal control system. However, Chen et al. (2010) find a positive association between client importance and auditors' propensity to issue MAOs from 2001 to 2004 when the institutional environment in China becomes more investor friendly. Thus, no predication on the direction of the association between SIZE and MAO is made. In general, a higher level of TURN, ROE indicates a lower degree of audit risk. Thus, the coefficients on these variables are expected to be negative. As higher level of ARINV is associated with higher audit complexity and audit risk, a positive coefficient is expected. Higher Leverage level and incurrence of loss are generally associated with higher audit risk. I thus expect a positive sign on the coefficients of Lev and Loss. Age, defined as the number of years between a firm's year of initial public offering and the fiscal year is also included. Conflicting evidences are documented in the literature regarding the relationship between firm age and likelihood to experience financial distress. Dopuch, Holthausen and Leftwich (1987) find that young firms are more likely to experience financial difficulties. Whereas results in other studies suggest that the longer a firm is listed, the more likely the firm becomes financially distressed which indicates a higher probability of receiving MAOs (DeFond et al., 2000; Murray, 1995). Thus, I do not make prediction on the sign of the coefficient on AGE.

(2) Stock Market Variables

To capture those influences on the issuance of MAOs which are not captured by the financial statement control variables, I include two stock market variables. The first

variable is RET defined as the market-adjusted stock return for the fiscal year. RET controls the news or information that has not been reflected by a firm's earning but has been recognized by the market and reflected in the change of market return. As larger RET means better news and lower audit risk for a firm, RET is expected to be negatively associated with MAO. The other variable is STDR which measures market risk of returns. To determine the variable STDR, I first estimate the market model for each firm using weekly stock return data during the fiscal year. I then obtain the standard deviation of residuals from the market model estimated. STDR captures risks not incorporated in the financial statement variables. Higher STDR suggests higher risk and higher likelihood to receive MAOs as a result. Hence, I expect a positive association between STDR and MAO.

(3) Corporate Governance Variables

The corporate governance of a company can influence management's behavior and consequently the audit risk. I include three variables to control the influence of corporate governance environment on audit quality, Indep, Concurrent and EXE. Indep is the percentage of independent directors in the boardroom. Concurrent is a dummy variable equals to one if the CEO and board chairman are different persons and zero otherwise. EXE is the percentage of shareholdings by executives in a firm. In firms where management's actions are closely and effectively monitored, managers' opportunities to benefit their own wealth at the cost of shareholders like some fraudulent schemes should be constrained. Hence, such firms are less likely to

receive MAOs. A higher proportion of independent directors in the board, separation of CEO and board chairman duties and higher shareholdings by executives are found to enhance corporate governance and align the management's interest with shareholders' welfare. Therefore, Indep, Concurrent and EXE are expected to be negatively associated with the dependent variable MAO. However, prior research also found that in firms with low level of independent directors on board and the CEO and board chairman positions being served by one person, the management have more bargaining power with auditors to constrain auditors' issue of MAOs (Carcello and Neal, 2000). Accordingly, the sign of coefficients on Indep and Concurrent will be an empirical question.

(4) Government Influence

It is widely evidenced in prior studies that the audit quality in Chinese market does suffer from the influence from government (Chan et al., 2006; Gul et al., 2009; Chan, Lin and Wang, 2012). SOE, a dummy variable equals one if the controlling shareholder of a firm is government either local or central, and zero otherwise, is included to control the influence from government on auditors' propensity to issue MAOs. Firms that are politically or economically connected with government are able to obtain more favorable audit opinions and thus less likely to have MAOs. Hence, a negative coefficient is expected on SOE.

(5) Audit Firm Characteristics

As prior research finds that audit firm characteristics like size and legal form could

influence the quality of services provided by auditors. Thus, I include three variables to control impact of the A-share audit firm characteristics on audit quality. First, I have Big10 to capture the effect of A-share auditor size on audit quality. Big10 is a dummy variable, which is equal to one if the A-share financial report is audited by one of the Big 10 CPA firms in the fiscal year. The classification is based on the CICPA annual ranking from 2002 onwards. The 2001 classification is based on the ranking in 2002 as CICPA did not issue any CPA firms' ranking until 2002. As I have observed, most of the rankings do not change drastically over years. A positive sign is expected on this variable as larger auditors are inclined to provide higher audit quality. The second control variable is FORM, which control the effect of different legal forms of CPA firms on their audit quality. This dummy variable takes the value of one when the auditors bear unlimited liability in an audit failure and 0 otherwise.[5] Firth et al. (2012) find that auditors with unlimited liability are more conservative. Thus, a positive sign is expected on FORM. I also include SWITCH, a dummy which equals 1 if the audit firm of a company in current fiscal year is different from last year and 0 otherwise. I use this variable to control the impact of auditor switch on audit quality.

(6) Industry and Year Dummy

I use these variables to control the industry and year effects. Industry is a dummy

[5] The classification is based on the title of each CPA firm in A-share audit reports and cross-checked with website of the CPA firm and disclosure by related regulatory bodies. Unlimited CPA firms in China are in two forms, general partnership and special general partnership.

variable coded 1 when a firm is from a manufacturing industry, and zero otherwise. [6] Manufacturing companies and non-manufacturing companies are different in terms of competitive environment, assets structure, nature of business, etc.[7] Eleven year dummy variables are included in the estimation model.

5.2.2 Earnings Response Coefficients (ERCs)

Earnings response coefficient is used to examine market's reaction to the earnings of a firm in the financial statements. It measures the informativeness of the earnings. Strictly speaking, ERC is a measure of earnings quality. In accounting literature, earnings quality is widely used as proxy for audit quality (Myers et al., 2003; Chung and Kallapur, 2003; Ghosh and Moon, 2005). According to agency theory, managers in a company have incentives to serve their own benefits even at the cost of shareholders. They may achieve it through manipulating the earnings. When audit quality is high, management's earnings management faces higher risk of being detected. Thus, high audit quality could constrain earnings management of a firm. As a result, it is reasonable to draw reference about audit quality from earnings quality that higher earnings quality should be associated with higher audit quality. Earnings quality measurements in literature are generally either accounting based like abnormal accruals or market based like ERC. I use the market-based

[6] The classification of manufacturing and non-manufacturing industry is based on CSRC industry classification. Observations with CSRC industry code starting with letter C are in manufacturing industry.

[7] Due to the small sample size in the contagious effect tests, especially in the tests using the PSM method, it is not feasible to adopt industry classifications which were used in many previous studies, as this will result in too many variables in terms of the matched subsample size in contagious effect tests using PSM.

measurement to provide additional evidence about the impact of dual audit and contagious effects on audit quality as MAO is basically an accounting-based measure. When a firm has high audit quality, its earnings information should be more closely related to the firm's capital market performance and this in turn should better facilitate investors' decision making. Investors tend to be more sensitive and respond more actively to the earnings announcements of firms with high audit quality. I use the following models to test my hypotheses. Model (3) tests the impact of dual audit on ERC, a proxy for audit quality, while Model (4) tests the contagious effect.

$$CAR=\gamma_0+\gamma_1\Delta E+\gamma_2 DUAL+\gamma_3\Delta E^{*} DUAL+\sum\gamma_j Control\ Variables+\varepsilon \quad (3)$$

$$CAR=\delta_0+\delta_1\Delta E+\delta_2 BigN+\delta_3\Delta E^{*} BigN+\sum\delta_j Control\ Variables+\varepsilon \quad (4)$$

where CAR is the cumulative abnormal return. To get CAR, I first estimate market model parameters α and β for each individual firm using the weekly stock return without cash dividend reinvested in year t-1. Observations are dropped if less than 15 weekly return data is available in year t-1. Then the weekly return is obtained by subtracting α and βR_{mt} from the weekly return of each firm. I cumulate the weekly abnormal return to get CAR (as shown in equation (5)). The weekly data is used as there are only 12 observations to estimate the market model for each company if monthly figures are used. The estimation may have more biases. Estimation with

daily figures may not clearly show the overall trend of the data. Thus, weekly figures are used in the CAR calculation as the best compromise.

$$CAR=\sum log(1+R_{it}-\alpha-\beta R_{mt}) \quad (5)$$

where i is firm i and t is the week from month -8 to month 4 where month 0 is the fiscal year-end. I begin with the fifth month after the fiscal year-end of t-1 and ending four months after the fiscal year-end to enable investors to incorporate the annual earnings information. According to the Rules of Contents and Format of Information Disclosure by Companies Offering Securities No. 2 issued by CSRC, companies offering securities should publish annual reports in website specified by CSRC and summaries of financial reports in at least one of the specified newspaper within four months after the accounting year. As all listed companies in China have fiscal year end on December 31, this effectively means that all annual reports and summaries of financial reports should be published before the end of April. I use the data from May to April to calculate CAR to incorporate market's reaction (to the earnings information reported in the annual report) into the measurement. Using data from January to December may induce bias as investors do not have earnings information until the release of annual report.

ΔE is the change in the annual earnings deflated by the firm's market value of equity at the beginning of the fiscal year. DUAL and BigN are the same as defined

in the MAO model as dummy variables to indicate whether there is dual audit and contagious effects respectively. The coefficients of ΔE, γ_1 *and* δ_1, respectively assess the earning response coefficient for pure A firms (DUAL equals 0) and AB/H share firms with non-Big N international auditors (BigN equals 0). γ_1 and δ_1 are expected to be positive according to prior research (Firth, Fung and Rui, 2007; Hanlon, Maydew and Shevline, 2008). γ_3 and δ_3 respectively represent the incremental effect of dual audit effect and contagious effect (i.e. having Big N international auditors) on investors' responsiveness to firms' earnings. I hypothesize that the A-share audit quality improves through dual audit and the contagious effect on the work of non-Big N domestic auditors from Big N international auditors. Thus, I expect the coefficients of the interaction terms ΔE^* *DUAL and* ΔE^* *BigN* to be positive and significant.

Same as the MAO models, a number of variables that are found to have impacts on the association between change in earnings and stock returns are included as control variables to control their influences on the association between the test variables and dependent variable. First, I have BV, the book value of equity per share at the end of fiscal year. Barth, Landsman and Lang (2008) find that stock price is positively related to earnings and book value. Thus, a positive coefficient is expected on BV. Growth is defined as the market value to book value ratio of equity at the fiscal year end. It captures the growth opportunities for a firm. It is easier for fast growing firms

to engage in earnings manipulation than it is for mature firms since it is difficult to monitor the business activities of fast growing firms (Collins and Kothari, 1989; Easton and Zmijewski, 1989). Thus, a negative association is expected between Growth and the dependent variable. Other control variables including SIZE, LEV, Indep, Concurrent, EXE are as defined earlier. Current is the current assets divided by current liabilities. The different levels of financial liquidity imply different level of risk for investors. Therefore, I expect Current to be positively and LEV to be negatively associated with ERC (Easton and Zmijewski, 1989). The impact of firm size on market returns is mixed in literature (Warfield et al., 1995; Firth et al., 2007). So, no directional prediction is made on the coefficient of SIZE. Higher percentage of independent directors, separation of board chairman and CEO duties and higher level of executive shareholdings are found to be associated with better corporate governance which constrains management's earnings management. Consequently, investors are inclined to react more actively to the earnings changes of these firms perceived to be with better corporate governance. Hence, positive coefficients are expected on these three variables. STDR is also included as well to capture the risks not incorporated in the financial statement variables. To be consistent with the measurement of CAR, the STDR used in tests based on ERC will be the standard deviation of residuals from the market model estimated using weekly stock return from month -8 to month 4, where month 0 is the fiscal year end. SOE is also included as in MAO model to capture the possible influence from government. The

three audit firm characteristics variables are also included in ERC model to control their influence on the earnings informativeness.

5.3 Self-Selection Bias

Whether to have both A shares and B (or H) shares or to hire a Big N auditor are subject to firms' own choices. To address the potential self-selection bias, I use the two-stage Heckman (1979) approach as well as Propensity Score Matching (PSM) method (Chaney et al., 2004; Lawrence et al., 2011; Kim, Chung and Firth, 2003; Lennox et al., 2012; Chan and Wu, 2011) to estimate the probability of a firm choosing to have both A shares and B (or H) shares and the probability of hiring a Big N CPA firm as the international auditor.

$$\begin{aligned} DUAL= {} & \mu_0+ \mu_1 \text{ Sales\_growth} + \mu_2 SIZE+ \mu_3 Lev + \mu_4 TURN + \mu_5 ROE+ \mu_6 Loss \\ & + \mu_7 ARINV+ \mu_8 CASH+ \mu_9 Indep+ \mu_{10} Concurrent+ \mu_{11} EXE \\ & + \mu_{12} \text{ Industry} + \mu_i \text{ Year} + \varepsilon \end{aligned} \quad (6)$$

$$\begin{aligned} BigN= {} & \lambda_0+ \lambda_1 SIZE+ \lambda_2 TURN+ \lambda_3 LEV+ \lambda_4 CURR+ \lambda_5 Loss_{t-1} + \lambda_6 ROA \\ & + \lambda_7 \text{ Indep} + \lambda_8 Concurrent + \lambda_9 EXE+ \lambda_{10} Rights_{t+1} \\ & + \lambda_{11} MAO_{t-1} + \lambda_{12} \text{ Industry} + \lambda_i Year + \varepsilon \end{aligned} \quad (7)$$

Equation (6) is the selection model to estimate the firm's probability to choose to have both A shares and B (or H) shares listed while equation (7) estimates the probability of hiring a Big N international auditor. Sales_growth is defined as the

percentage change in sales between the current fiscal year and the year before. CURR and CASH respectively represent the percentage of current asset and cash or cash equivalents in total assets. $Loss_{t-1}$ is a dummy variable indicating whether the firm reports a loss in year t-1 where t is the fiscal year. MAO_{t-1} represents whether the firm receives modified audit opinion in year t-1. $Rights_{t+1}$ equals to one if a firm have a rights issue in the year after the fiscal year and 0 otherwise. Firms planning to have rights issue next year tend to be more likely to hire Big N auditors to enhance the credibility of the financial information. Other variables were as defined earlier.

In the Heckman two-stage procedure, I estimate Equation (6) or Equation (7) first. Then I compute the inverse Mills ratio, Lambda, based on the results of the first stage estimation. In the second stage, I include the inverse Mills ratio, Lambda, as a control variable to correct for possible self-selection bias.

In propensity score matching method, the two equations are used to select the observations in treatment and control groups that will be further used in the main test. I first predict the propensity for a firm to choose to have A shares and B (or H) shares listed or to choose a Big N international auditor based on the model defined. Then I match each observation in the treatment group with an observation in the control group with very close propensity. I constrain the propensity difference to be less than 0.1 percent. Consequently, I will obtain a subsample of firms composing of the pairwise observations from the treatment and the control groups with similar firm characteristics.

Chapter 6 Empirical Results

The overall organization of this chapter is given in Figure 1. I test two effects, dual audit effect and contagious effect and use two measures of audit quality, MAO and ERC. Two methods are employed to control for self-selection, Heckman two-stage method and PSM method.

(Insert Figure 1 here)

6.1 Descriptive Statistics and Univariate Tests

Table 1, Panel A presents the descriptive statistics of the dependent variable MAO and the univariate test for the sample. I have 13,540 pure A share firm-year observations, 287 observations for AB/H share firms which hire non-Big N domestic and international auditors and 172 AB/H share firms that hire non-Big N domestic auditors and Big N international auditors. As showed in the table, the mean of MAO is 0.061 and 0.157 for pure A share firms and AB/H share firms with only non-Big N auditors respectively while it is 0.099 for AB/H share firms with Big N international auditors. The portion of observations that have MAO is 6.1%, 15.7% and 9.9% for pure A share firm, AB/H share firm with non-Big N international auditor and AB/H share firm with Big N international auditor, respectively. These numbers are similar when firm-year observations with Big N domestic auditors and firms in financial industry are included, which would be 7.7% versus 15.8% for pure A share and AB/H share firms respectively, while this figure is 7.8% for all main-board listed A share firms in the twelve-year period.

(Insert Table 1 here)

Table 1 panel B displays the descriptive statistics for all the independent variables. AB/H share firms with non-Big N international auditor rank the highest in terms of firm size, leverage and asset turnover among three groups. 21% of AB/H sample firm-year observations reported loss while this figure is only 11.43% for pure A share firms. From the table, some other characteristics could also be observed. AB/H share firms (non-Big N) set aside a higher portion for accounts receivables and inventories in their asset structure than pure A share firms. In terms of corporate governance aspects, I found that pure A share firms have the highest percentage of independent directors in their boardrooms and executives and top managers in pure A share firms hold more company shares measured as their shareholdings over the total shares outstanding. The mean market-adjusted stock return is positive for pure A share firms and AB/H share firms with Big N international auditors but negative for AB/H share firms which hire non-Big N international auditors. Differences of independent variables mentioned are all significant at 1% level. Mean differences in the remaining three independent variables including ROE, Concurrent and STDR are not significant. It is interesting that AB/H share firms with non-Big N international auditors are more likely to hire unlimited liability and larger CPA firms for their A-share audit than AB/H share firms with Big N international auditors. It may indicate that AB/H share firms recognize the high audit quality of international Big N auditors and have lower demand for high quality A-share audit.

Table 2 shows the Pearson correlation matrix for the dependent variable and all the independent variables. The dependent variable MAO is significantly correlated with most of the independent variables except the Concurrent variable, which indicates whether the firm CEO and board chairman are the same person and the STDR variable which captures the risk not reflected in financial statements. It is clear in the correlation matrix the dependent variable MAO is as expected to be positively and significantly correlated with the experimental variable DUAL. MAO is also negatively and significantly related to financial statement variables SIZE, TURN, ROE and corporate governance variables Indep and EXE as well as market variable RET. The negative correlations suggest that larger firms with better performance and liquidity are less likely to receive non-clean audit opinion from their auditors. The corporate governance variables' negative sign suggests that the higher the level of independent directors in the boardroom and the executives' shareholdings, the less likely will the firm receive modified opinion. Furthermore, the negative correlation for RET means that auditors are less likely to modify their opinion when there are more good news recognized by investors but not yet incorporated in earnings. The remaining variables including LEV, LOSS, ARINV SWITCH are positively and significantly associated with auditors' propensity to issue modified opinion. The positive correlations are consistent with prior studies that higher leverage and occurrence of loss bring higher degree of audit risk and induce higher probability for audit opinion to be modified. High percentage of accounts receivable and inventory

in the asset structure increases audit complexity and higher possibility of non-clean audit opinion consequently. Firms with auditor switch are more likely to receive MAO. As there are some significant correlations between independent variables (e.g. correlation between RET and STDR), I use variance inflation factor(VIF) to test if there may be a multicollinearity problem. The result shows that the largest VIF is 2.87 which indicates that multicollinearity is not a problem in my regression analysis.[8]

(Insert Table 2 here)

6.2 Multivariate Analysis---MAOs

6.2.1 Dual Audit effect---Heckman Two-Stage Model

Table 3 presents the multivariate regression result for the dual audit effect testing using the Heckman two-stage selection model. Table 3 panel A reports the result of the stage-one probit estimation of firms choosing to have both A shares and B (or H) shares listed. The year dummies are included in the estimation but the results are not reported. I find the coefficients of SIZE, TURN, LEV, LOSS and Indep are positive and significant. Therefore, firms with both A and B (or H) shares tend to be larger, with higher turnover and leverage, and report loss more frequently than their pure A counterparts. These firms also leave more seats for independent directors in their boardroom. The result also shows that EXE is negatively associated with firms

[8] According to common rule of thumb, further investigation is necessary when a VIF is larger than 4 and a VIF exceeding 10 suggests serious multicollinearity problem (Kutner et al., 2004).

having both A shares and B (or H) shares listed. It means that management in AB/H firms hold less percentage of company shares compared with their peers in the pure A share firms. The coefficients of the remaining five variables are insignificant.

(Insert Table 3 here)

Table 3 panel B shows the second-stage estimation results. The result shows that the coefficient on the experimental variable, DUAL, is positive and significant at 5% level. It suggests that *A share auditors have higher propensity to issue MAOs to firms with dual audit compared with their pure A share clients who are only audited by the domestic auditors.* Thus, I could draw reference from the result that firms with dual audit are associated with higher audit quality. Hypothesis 1 is supported that the A share audit quality is higher for AB/H firms being audited by both domestic and international auditors than pure A share firms.

The coefficients of control variables are also reported in Table 3 Panel B. In particular, the coefficients on SIZE, LEV and LOSS are as expected and significant. It is consistent with the expectations that smaller firms and firms with higher leverage level and incurring a loss in the fiscal year are with higher level of audit risk and more likely to receive MAOs as a result. TURN, RET are as expected to be negatively associated with MAO. It's consistent with prior studies that firms with higher turnover ratio, more good news not recognized in earnings are characterized as firms with lower audit risk. The variable Age is positively and significantly correlated with MAO. It supports that younger listed firms in China are less likely to

receive MAOs (DeFond et al. 2000; Chan and Wu, 2011). The positive and significant coefficient on STDR is consistent with prior research findings that STDR represents additional risks to a firm apart from risks captured by financial statement variables. The results for the three corporate governance variables Concurrent, Indep and EXE are insignificant. Industry and year dummies are controlled in this model but not reported with detail. SOE which captures a firm's association with government, is negatively associated with MAO. It indicates that the association with government influence auditor independence and auditors are less likely to issue MAO to government-connected firms. Auditor switch have significant effect on probability of receiving MAO. New auditors are more likely to issue MAOs.

6.2.2 Dual Audit Effect--- Propensity Score Matching

In this section, I first estimate the selection model as specified in equation (6) to predict the propensity for an A share firm choosing to have both A shares and B (or H) shares listed. Then I use the result from the estimation to match each AB/H share firm with a pure A share firm. To ensure the AB/H group is closely matched with the pure A share group, I constrain the differences in the predicted probabilities to be less than 0.1%. I have 564 pairwise AB/H and pure A share firm-year observations matched. That means 282 AB/H and 282 pure A share firm-year observations will be included in the next-step estimation. To ensure these two groups are really closely matched with each other, I use univariate t test to see whether these two groups have significant differences in the mean values of the independent variables in equation

(6). Table 4 panel A shows the result of the t test. It is clear that the mean value differences of all independent variables in equation (6) are insignificant. It suggests that I have matched these two groups successfully and been able to correct the possible selectivity problem.

(Insert Table 4 here)

Table 4 panel B shows the result of the estimation of equation (1) using the 282 pairs of matched observations. The result is similar to that of the Heckman two-stage selection model. My main interest is the coefficient on DUAL which is as expected to be positive and significant at 1% level, supporting hypothesis 1. Dual audit is again shown to improve the A-share audit quality in China market. The results for most of the control variables are similar using the two different methods to control the potential selection problem. However, the coefficient on ARINV, turns out to be significant in this propensity score matching estimation. The corporate governance variables, Indep and EXE, still have no significant impact on auditors' propensity to issue MAOs. However, it is interesting to find that the Concurrent variable is positively associated with the probability of receiving MAOs. It's consistent with the prior finding that one person holds both the CEO and board chairman position in a firm could have higher bargaining power with auditors to reduce non-clean audit opinions (Carcello and Neal, 2000).

To summarize, the results of both the Heckman two-stage selection model and propensity score matching estimation support hypothesis one that the audit quality

of A-share financial statements measured as auditors' propensity to issue MAOs, is higher for AB/H firms with dual audit than pure A share firms.

6.2.3 Contagious Effect--- Heckman Two- stage Model

Table 5 shows the results of contagious effect on probability of receiving MAOs. Panel A shows the results of the first-stage probit regression. SIZE and LEV are significantly associated with the choice to hire Big N international auditors. It suggests that firms of larger size and with lower leverage level are more likely to hire Big N international auditors. Firms have Big N international auditors also have lower asset turnover and more current assets in the asset structure.

(Insert Table 5 here)

Table 5 Panel B reports the second-stage regression results.[9] The coefficient on BigN is negative but insignificant. It indicates no sufficient evidence that hiring a Big N international auditor significantly affects the probability of receiving MAOs.

6.2.4 Contagious Effect--- Propensity Score Matching

In this section, I first use model specified in Equation (7) to obtain the propensity score for each firm-year observation and match the treatment group in which AB/H share firms hiring non-Big N domestic auditors and Big N international auditors are included and control group which consists of AB/H firms hiring non-Big N domestic and non-Big N international auditors with no replacement. The matched pairs will be further used in the main tests of the contagious effect. Table 6 Panel A shows the

[9] One Control variable, the percentage of independent directors on the board, is excluded from the regression due to its high correlation with a year dummy.

univariate t test of the independent variables in Equation (7). There is no significant difference of the mean values of the variables between the two groups in the matched sample. It indicates that firms in these two groups are similar in characteristics specified in Equation (7) which could influence a firm's decision whether to have a Big N or a non-Big N international auditor.

(Insert Table 6 here)

Table 6 Panel B shows the results of contagious effect on auditors' propensity to issue MAOs using the propensity score-matched sample. The coefficient on BigN is still insignificant. It suggests that the type of the international auditor does not significantly affect domestic auditors' propensity to issue MAOs.

To summarize, no significant evidence is found that hiring a Big N international auditor significantly affects the probability that the audit opinions of A-share financial reports are modified.

6.3 Multivariate Analysis--- Earnings Response Coefficients (ERC)

6.3.1 Dual Audit Effect---Heckman Two-stage Model

Table 7 Panel A reports the results of the first-stage estimation. The results are similar to those in Table 3 Panel A: company size, turnover, leverage level as well as reporting of loss are positively associated with the probability of having both A and B (or H) shares listed. The coefficients on ROE, CASH and Concurrent turn out to

be significant.

Table 7 Panel B reports the results of the Heckman two-stage regressions for the dual audit effect with audit quality being measured by earnings response coefficient. γ_3, the coefficient on the interaction term ΔE^* *DAUL* which is my main interest is positive and marginally significant at 10% level. This is consistent with my expectation in the hypothesis that dual audit improves A-share audit quality. In this case, it is reflected in investors' more active response to earning changes. The positive coefficient suggests that dual audit has an incremental effect on earnings informativeness. γ_1 is, as predicted, positive and significant. Consistent with prior studies, I find that the market reacts more actively to earning changes in smaller firms and with higher percentage of shares held by management and higher book value of equity. STDR which indicates additional risk to investors is negatively associated with the dependent variable CAR.

(Insert Table 7 here)

6.3.2 Dual Audit Effect--- Propensity Score Matching

The t test of each firm characteristics in the selection equation is reported in Table 8 Panel A. According to the univariate t test, no significant difference in the mean value of the variables is observed except Concurrent, indicating that the two groups of firms (pure A share firms and AB/H share firms with non-Big N domestic and non-Big N international auditors) in the matched subsample have similar characteristics. I have 266 propensity-matched pairs in the subsample. Table 8 Panel

B shows the results of the ERC regression for dual audit effect using the matched sample. The coefficient on ΔE is still positive but not significant. The incremental effect of dual audit in this case is positive and significant at 1% level. It indicates that dual audit significantly improves the earnings response coefficient. Regarding the control variable, STDR is negatively and significantly associated with CAR. It's consistent with prior studies that investors react less actively to earnings changes in firms with higher risk.

(Insert Table 8 here)

To summarize, I have evidence that investors are more responsive to earning changes in firms with dual audit compared to pure A share firms which are only audited by domestic auditors when I use both the Heckman two-stage procedure and propensity score matching method to control the potential self-selection bias.

6.3.3 Contagious Effect---Heckman Two-Stage Model

The first-stage selection results are shown in Table 9 Panel A, which are similar to those in Table 5 Panel A. SIZE, LEV are found to have significant impact on AB/H share firms' choice to hire Big N international auditors. Table 9 Panel B shows the results of the second stage regression. δ_3, which represents the incremental effect of having Big N international auditors on the earning response coefficient, is positive with 10% significance. It provides evidence that the market perceives the earnings of firms hiring Big N international auditors more credible. ΔE is positively and significantly associated with the dependent variable as found in prior studies.

(Insert Table 9 here)

6.3.4 Contagious Effect---Propensity Score Matching

Table 10 Panel A reports the t test results of each firm characteristics, no significant difference between the two groups of sample firms hiring Big N versus non-Big N international auditors is observed. It indicates that I have successfully balanced the covariates between the treated subsamples, which consist of AB/H share firms which hire Big N international auditors and the matched control subsample. I obtain 72 pair firm-year observations. Table 10 Panel B shows the results of ERC regression with the matched subsample. Coefficient on the interaction term ΔE^* *BigN* is positive and significant at 5% level. Hypothesis 2 is supported that Big N international auditors have spillover effect on the work of domestic auditors and improves the A share audit quality as a consequence. δ_1, coefficient of ΔE is insignificant in this setting.

(Insert Table 10 here)

In sum, Big N international auditors are shown to have contagious effect on the work of domestic auditors and improvement in A-share audit quality provides one such evidence. I draw implication about the audit quality from market's responsiveness to firm's earnings information. Both the Heckman two-stage and propensity score-matching model demonstrate an incremental effect of Big N international auditors on earnings response coefficient.

Table 11 summarizes the results of the main tests. Hypothesis 1 which predicts that dual audit improves A-share audit quality is supported when audit quality measured by auditors' propensity to issue MAOs and earnings response coefficient (regression #1,2,5 and 6 in Table 11). Mixed evidences are generated for hypothesis 2. Big N international auditors are found to have contagious effect on the work of domestic auditors when earnings response coefficient is used to measure the quality of domestic auditors' work (regression #7 and 8). However, no significant impact of Big N international auditors on the A-share audit quality can be documented when audit quality is measured by probability of receiving MAOs (regression # 3 and 4). It implies that Big N international auditors play an important role in constraining earnings management and improving the earnings quality and investors perceive the earnings information of firms with Big N international auditors to be more credible and response more actively to the earning changes in such firms as a consequence. However, the contagious effect from Big N international auditor does not seem to affect domestic auditors' behavior in modifying their audit opinions probably due to other political or economic factors that affect the audit opinions of domestic auditors.

(Insert Table 11 here)

6.4 Sensitivity Tests

I perform several sensitivity tests to check the robustness of the findings. The details

of these tests are discussed in the followed sections.

6.4.1 Alternative Definition of MAO

Dependent variable MAO is a dummy variable classified as either clean or modified audit opinion. This classification may raise concern that the results may be inaccurate as different types of audit opinions reflect different level of seriousness of problems in the financial statement. The second sensitivity test is used to address such concern.[10] I use a new dependent variable MAO_N which is an ordered-level variable, which is coded from 0 to 4 for standard unqualified, unqualified with explanatory notes, qualified, disclaimed and adverse opinions, respectively. Then I use the ordered-probit regression to rerun prior regressions. The results are qualitatively similar as in the main tests as shown in Table 12 Panel B. In the dual audit testing, DUAL is positive and significant at 10% level using Heckman two-stage and significant at 1% level with propensity score-matching method when MAO is used to measure audit quality. For the contagious effect, hiring a Big N international auditor is not found to significantly affect the A-share audit quality.

(Insert Table 12 here)

6.4.2 Alternative Definition of CAR

In ERC test above, CAR is measured using the estimated market model parameters α and β. In the sensitivity test, I assume the market model beta is unity for sample

[10] I also perform another sensitivity test by reclassifying the "unqualified opinion with emphasis of matter paragraph" audit opinion as clean to rerun the MAO regressions. Neither dual audit nor hiring a Big N international auditor has significant impact on the dependent variable MAO due to the highly unbalanced sample. More than 65% of the modified audit opinions in the main tests are "unqualified opinion with emphasis of matter paragraph" audit opinion.

firms and calculate the weekly abnormal return by subtracting the market return from each firm's weekly stock return without cash dividend reinvested (see equation (8) below) (Teoh and Wong, 1993). Then I cumulate the weekly abnormal return beginning with the fifth month to get the new cumulative abnormal return, CAR2, after the fiscal year-end of t-1 and ending four months after the fiscal year-end to enable investors to incorporate the annual earnings information. Here, I use the simpler measure of CAR by adopting the unity beta assumption to avoid introducing unnecessary noise which could rise if stock beta estimated from market model is used in the equation. Prior studies suggest that the market model with the beta estimated from the market model may not be applicable in Chinese market in explaining the risk and return relationship, due to relatively low market efficiency and less educated investors (Jin and Liu, 2001; Li, 2009).

$$CAR2=\sum log(1+R_{it}-R_{mt}) \quad (8)$$

Table 12 Panel B reports the results of dual audit effect and contagious effect on ERC based on CAR2 instead of CAR in the main tests. As can be observed from the Table (Panel B), both dual audit and hiring a Big N international auditor have positive and significant effect on earnings responsiveness when Heckman two-stage model is used to address the potential self-selection problem. Contagious effect is also supported by propensity score matching method. However, no significant evidence about dual audit effect is provided if propensity score matching method is used. My results are robust to alternative measurement of CAR.

6.4.3 Mandatory Dual Audit Only

My samples in the main tests contain both mandatory and voluntary dual audit in the sample period from 2001 to 2012. To respond to the concern that there may be some unobservable factors that influence a firm's decision to continue to have dual audit voluntarily, which may be biased in favour of the conclusion drawn from the main tests. To address such concern, I exclude the firm-year observations with voluntary dual audit in the sample and rerun the regressions. This means that AB share firm-year observations which still have dual audit in the fiscal year end 2007 and afterwards and AH share firm-year observations that have dual audit from 2010 to 2012 will be excluded in this sensitivity test. The results are as shown in Table 12 Panel C. The results are similar to the main test results. However, the dual audit effect and contagious effect on ERC based on propensity score matching turn out to be insignificant. The test of contagious effect based on MAO using PSM method is not feasible due to sample size limitation. The results suggest that the conclusion drawn earlier in the main tests regarding the dual audit effect and contagious effect is robust when voluntary dual audits are excluded from the sample.

6.4.4 Include AB Share Dual Audit Only

Despite that both AB share firms and AH share firm are subject to dual audit in China, there may be concern that international auditors hired by these two kinds of firms are with different characteristics. For example, although many AB share firms hire CPA firms in Hong Kong as their international auditors, CPA firms' audit work

for AH share firms are subject to the scrutiny of Hong Kong Stock Exchange and HKSFC while AB share audits are not. To respond to the concern the potential different characteristics of AB share firms and AH share firms' international auditors may make the conclusion drawn about the dual audit and contagious effect inaccurate, I use subsamples with AH share firm-year observations excluded. Table 12 Panel D shows the results. Dual audit effect on probability of receiving MAOs is still significant. No significant evidence of contagious effect on audit opinion is found. Both dual audit effect and contagious effect on earnings responsiveness are supported when Heckman two-stage selection model is used. The coefficient on the interaction terms (ΔE* DUAL and ΔE* BigN) turn out to be insignificant using propensity score matching method.

6.4.5 Pre- and Post-abolishment Comparison

Another approach to assess the dual audit effect is to compare pre- and post-abolishment audit quality to test whether the abolishment of dual audit requirement compromises the audit quality of AB/H share firms.[11] I compare the audit quality of A-share financial statements of AB share firms in the pre-abolishment period (with dual audit) with the audit quality post-abolishment period (without dual audit). In this comparison, voluntary dual audits after the abolishment are not included. Table 12 Panel E shows the test results. POST is a dummy variable that takes the value of

[11] The dual audit requirement for AH share firms is abolished in 2010. However, most AH share firms in my sample do have dual audit in the post-abolishment period (from 2010 to2012) on a voluntary basis. As a result, AH share firm observations are excluded from the comparison.

1 if the fiscal year is in the post-abolishment period and 0 if the fiscal year is in the pre-abolishment period. As shown in the table, the coefficient of POST is negative and significant, suggesting that AB share firms are less likely to receive MAOs in the post-abolishment period compared with the pre-abolishment period. However, no significant difference in earnings responsiveness is found between those two periods.

Lin et al. (2014) also examine the impact of dual audit on A-share audit quality. My thesis is different from their study in terms of measures of audit quality, self-selection methods used, effects tested as well as my focus on non-Big N audit quality and sample period used. They use discretionary accruals as a proxy for audit quality and they only use Heckman two-stage model to address the potential self-selection problem. Two measures of audit quality are adopted in this thesis, MAO and ERC, representing both Accounting-Auditing based and market-based measures. As discretionary accruals tend to have high measurement error and there is a lack of consensus on how it should be measured, I believe I use better measures of audit quality. In addition, I use both Heckman two-stage and PSM methods to solve the self-selection problem. As these two methods have their own merits in addressing self-selection bias, my thesis provides more comprehensive evidence in assessing the real effect of dual audits on audit quality. My thesis separates the dual audit effect and contagious effect while these two effects were confounded with by Lin et

al.(2014). I focus on the audit quality of non-Big N auditors which is of greater concern and academic interest. My thesis utilizes the most updated data including both mandatory and voluntary dual audits. My sample period is from 2001 to 2012 as opposed to 2001 to 2009 in Lin et al.(2014).

Chapter 7 Conclusion

This thesis examines the dual audit effect and the contagious effect on the audit quality of A-share financial statements. The unique setting in the Chinese market that pure A share firms only need to be audited by domestic auditors while AB/H share firms are subject to dual audit by both domestic and international auditors makes it possible to test the impact of dual audit and contagious effect of Big N international auditors on audit quality by comparing the quality of services provided by domestic auditors. The test results reveal consistent superior audit quality in AB/H share firms that are subject to dual audit and hire non-Big N domestic and non-Big N international auditors, as compared with those pure A share firms which are only audited once by their domestic auditors. However, mixed evidences are documented regarding the contagious effect of Big N international auditors on the audit quality of A-share financial reports when different measures of audit quality are used. Hiring a Big N CPA firm as an international auditor is found to improve investors' responsiveness but no significant influence on the audit opinion issued by auditors.

This study contributes to the literature of audit quality, particularly the literature on audit quality of non-Big N auditors in emerging markets. Audit quality of non-Big N auditors in emerging markets with relative weak institutional environment is of great concern and attracts increasing research interests. My findings provide new evidence on the factors that affect the audit quality of non-Big N auditors in China.

This study has important implications for regulatory bodies in China by providing empirical evidence on the dual audit effect and contagious effect in the dual audit setting and consequently on ways to improve audit quality in Chinese market. Regulatory bodies, especially the Chinese Institute of Certified Public Accountants (CICPA) and China Securities Regulatory Commission (CSRC), emphasize the importance of auditors' service quality and have made persistent efforts to explore ways to improve audit quality. As this study shows that being dual audited and hiring Big N international auditors are associated with higher audit quality, regulatory bodies could consider such effects in making new regulations and rules.

My thesis has important policy implications for the Ministry of Finance in China which issued the Provisional Regulations on Cross-border Audit Services of CPA Firms (consultative draft) in May 2014.[12] According to the draft, non-PRC CPA firms are not allowed to supply audit services to Chinese enterprises listed overseas. It also specifically precludes non-PRC CPA firms' audit services to enterprises registered overseas but with operating entities in China. My research results indicate that dual audit does improve the audit quality supplied by domestic auditors, as established international auditors provide effective pressure on the domestic auditors to maintain higher audit quality.[13] Thus, the restriction of non-PRC CPA firms' audit services to Chinese companies may make it more difficult to improve audit quality

[12] See footnote 1.

[13] Particularly, Hong Kong auditors play very important roles in providing peer pressure to domestic auditors. Hong Kong auditors are familiar with the Chinese business environment (70% to 80% of international auditors in dual audit effect tests are Hong Kong CPA firms) and are subject to a more established and stronger institutional environment.

in China. This is an important implication of my research.

There are also implications for regulatory bodies in other emerging markets. Many emerging markets are exploring ways to improve the institutional environment in their markets in order to attract worldwide investment. As audit quality is an important factor in assessing the institutional environment of a country, policy makers in these markets should consider the dual audit effect and contagious effect of Big N international auditors when making their policies to improve audit quality and enhance the institutional environment.

There are additional implications from this research. The mandatory dual audit requirement for AB-share and AH-share firms is abolished from 2007 and 2010 fiscal year end, respectively. Dual audit is adopted by firms only on a voluntary basis after the abolishment. My findings suggest that management could continue to have dual audit as it can enhance the credibility of the financial statements. For example, when a firm plans to have rights issue, management should be inclined to improve financial reports credibility to ensure market's responsiveness to the rights issue. This study provides management an alternative to improve the credibility of the financial reports and information transparency.

I acknowledge several limitations on this study. First, I only used MAO and ERC to measure the audit quality of A-share financial statements. MAO measures auditors' propensity to modify audit opinions. Audit opinions are the final product of audit services and are under auditors' control. Thus, it is a direct measure of audit quality.

Unlike MAO which is an Accounting-Auditing based measure, ERC is a market-based measure of audit quality. The thesis is that if the audit quality is high, the audited earnings should have a high impact on share value. Thus, ERC provides an additional evidence of audit quality in light of dual audit and contagious effects on audit quality. Prior literature also employs other measures as proxies for audit quality related to material misstatements and earnings quality, among which restatements of financial statements and discretionary accruals by management are more widely used in the literature. Restatements are the corrections of material misstatements in previous financial statements. Restatements indicate that auditors did not detect or fail to report some important issues which may affect their audit opinions. However, not all material misstatements could be detected and generally auditors and companies are reluctant to restate their financial statements. Furthermore, using restatements as proxies for audit quality could aggravate the sample size problem in my research setting especially in the contagious effect tests. As for the use of discretionary accruals as a measure of audit quality, DA is known to have larger measurement error (Defond & Zhang, 2013). There is also a lack of consensus on how it should be measured. It is also affected by the different accounting methods chosen within GAAP.

Second, the tests in this thesis, especially the contagious effect tests, are subject to the sample size limitation. As observed in the sensitivity tests, some tests are even not feasible due to the small sample size. Third, I do not have sufficient observations

to have pre- and post-abolishment comparison of AH share firms' audit quality because the dual audit requirement for AH share companies is not abolished until 2010. For future research, dual audit effect as well as the influence of the abolishment may be tested when more data is available in the future.

Table 1 Descriptive Statistics

Panel A Dependent variable

Dependent Variable ---MAO

	Pure A	**AB/H** Non-BigN	**AB/H** Big N	**Test of Mean Difference** P-Value	
	(1)	(2)	(3)	(1) vs (2)	(2) vs (3)
Mean	0.061	0.157	0.099	0.0000**	0.0790*
S.D.	0.239	0.364	0.299		
Number of Obs	13,540	287	172		

Notes: MAO is coded one if the sample firm-year receives a modified audit opinion in the firm's A -share financial statements, and zero otherwise. Modified audit opinions include unqualified opinion with an explanatory paragraph, qualified, disclaimer and adverse audit opinions.

Pure A donates firms that only issue A shares and have non-Big N domestic auditors.

AB/H (Non-BigN) are firms that issue both A shares and B (or H) shares and hire non-Big N domestic auditors and *non-Big N* international auditors.

AB/H (BigN) are firms that issue both A shares and B (or H) shares and hire non-Big N domestic auditors and *Big N* international auditors.

Table 1 (continued)

Panel B Independent Variables

Variables	Pure A (1)		AB/H (non-BigN) (2)		AB/H (BigN) (3)		Diff. Mean (1)-(2)	Diff. Mean (2)-(3)
	Mean	S.D.	Mean	S.D.	P value	S.D.		
SIZE	21.3850	1.0610	21.7316	1.4154	22.1771	1.2379	-0.3466***	-0.4464***
LEV	0.4866	0.1956	0.5754	0.1760	0.4919	0.1911	-0.0888***	0.0839***
TURN	0.6713	0.5503	0.8084	0.9945	0.6352	0.5188	-0.1371***	0.1729**
LOSS	0.1117	0.3151	0.2091	0.4073	0.1860	0.3903	-0.0970***	0.0230
ROE	0.0195	1.7954	-0.0431	0.4871	-0.0575	0.9582	0.0625	0.0146
ARINV	0.2820	0.1765	0.3076	0.1690	0.2800	0.1863	-0.0256**	0.0278
AGE	7.7684	4.5637	10.7282	3.228	8.2733	3.6259	-2.9600***	2.4201***
Indep	0.3302	0.0970	0.3148	0.1109	0.3023	0.1205	0.0154***	0.0111
Concurrent	0.8540	0.3532	0.8502	0.3575	0.8663	0.3413	0.8575	-0.0161
EXE	0.0440	0.2162	0.0021	0.0197	0.0008	0.0032	0.0419***	0.0013
SOE	0.6031	0.4820	0.8084	0.3943	0.8488	0.3593	0.0000***	-0.0405
RET	0.0826	0.6691	-0.0792	0.4201	0.0360	0.7083	0.1619***	-0.1156**
STDR	0.0515	0.0787	0.0478	0.0264	0.0399	0.0219	0.0036	0.0078**
FORM	0.1267	0.3326	0.1707	0.3769	0.0349	0.1840	-0.0441**	0.1358***
Big10	0.2231	0.4164	0.4669	0.5000	0.2326	0.4237	-0.2438***	0.2378***
SWITCH	0.0970	0.2960	0.2509	0.4343	0.0698	0.2555	-0.1538***	0.1846***
Industry	0.5583	0.4966	0.5436	0.4990	0.5814	0.4948	0.0147	-0.038

Notes: *,** and *** denote significance at 0.10, 0.05 and 0.001 levels, respectively. All variables are as defined in Appendix 1.

Table 2 Correlation Matrix

	MAO	DUAL	SIZE	LEV	LOSS	ROE	TURN	ARINV	Indep	Concurrent	AGE	SOE	EXE	RET	STDR	Big10	FORM	SWITCH	Industry
MAO	1.000																		
DUAL	0.056 ***	1.000																	
SIZE	-0.160 ***	0.047 ***	1.000																
LEV	0.169 ***	0.065 ***	0.280 ***	1.000															
LOSS	0.325 ***	0.044 ***	-0.139 ***	0.199 ***	1.000														
ROE	-0.077 ***	-0.005	0.018 **	-0.060 ***	-0.159 ***	1.000													
TURN	-0.087 ***	0.035 ***	0.101 ***	0.087 ***	-0.101 ***	0.023 ***	1.000												
ARINV	0.029 ***	0.021 **	-0.035 ***	0.255 ***	0.035 ***	-0.019 **	0.060 ***	1.000											
Indep	-0.074 ***	-0.023 ***	0.143 ***	0.048 ***	-0.032 ***	0.009	0.072 ***	-0.020 **	1.000										
Concurrent	-0.007	-0.002	0.072 ***	0.048 ***	-0.001	-0.016 *	0.026 ***	-0.062 ***	-0.053 ***	1.000									
AGE	0.047 ***	0.093 ***	0.195 ***	0.261 ***	0.064 ***	0.005	0.040 ***	0.001	0.231 ***	0.063 ***	1.000								
SOE	-0.032 ***	0.060 ***	0.203 ***	0.111 ***	0.004	-0.011	0.040 ***	-0.089 ***	-0.125 ***	0.159 ***	0.105 ***	1.000							
EXE	-0.035 ***	-0.028 ***	0.015 *	-0.106 ***	-0.046 ***	0.009	-0.006	0.053 ***	0.077 ***	-0.097 ***	-0.215 ***	-0.234 ***	1.000						
RET	-0.039 ***	-0.035 ***	0.052 ***	0.032 ***	-0.085 ***	0.040 ***	0.034 ***	-0.020 **	0.044 ***	0.006	0.067 ***	-0.014	-0.008	1.000					
STDR	0.016 *	-0.007	-0.028 ***	0.057 ***	0.010	0.012	0.011	0.017 **	0.089 ***	0.003	0.078 ***	-0.042 ***	-0.008	0.483 ***	1.000				
Big10	-0.030 ***	0.071 ***	0.160 ***	0.002	-0.029 ***	0.004	0.059 ***	0.016 *	0.100 ***	-0.008	0.050 ***	-0.012	0.077 ***	0.023 ***	0.004	1.000			
FORM	-0.011	0.019 **	0.057 ***	-0.002	0.002	-0.003	-0.021 **	0.040 ***	0.045 ***	-0.035 ***	0.025 ***	-0.074 ***	0.061 ***	-0.037 ***	-0.016 *	0.308 ***	1.000		
SWITCH	0.072 ***	0.073 ***	-0.025 ***	0.046 ***	0.047 ***	-0.012	-0.035 ***	0.024 ***	-0.078 ***	0.011	0.000	0.035 ***	-0.025 ***	0.008	0.021 **	0.025 ***	0.013	1.000	
Industry	-0.040 ***	-0.004	-0.038 ***	-0.086 ***	0.004	-0.005	0.063 ***	0.007	0.025 ***	-0.032 ***	-0.157 ***	-0.071 ***	0.052 ***	0.007	-0.010	0.029 ***	0.004	-0.022 ***	1.000

Notes: ***,** and * indicate statistical significance at the 1%, 5% and 10% level, respectively (two-tailed tests).

This correlation matrix is based on Pearson correlation.

Table 3 Dual Audit Effect on MAO Based on Heckman Two-Stage Method

Panel A First-Stage Results

Stage one: probit estimation of firms choosing to have both A shares and B (or H) shares listed

$$DUAL = \mu_0 + \mu_1 \text{Sales\_growth} + \mu_2 SIZE + \mu_3 LEV + \mu_4 TURN + \mu_5 ROE + \mu_6 LOSS + \mu_7 ARINV + \mu_8 CASH + \mu_9 Indep + \mu_{10} Concurrent + \mu_{11} EXE + \mu_{12} Industry + \mu_i Year + \varepsilon$$

Variables	Coefficients	P>|z|
Constant	-6.431	0.000***
Sales_Growth	-0.011	0.504
SIZE	0.203	0.000***
TURN	0.149	0.000***
ROE	0.026	0.400
ARINV	0.088	0.574
LEV	0.602	0.000***
LOSS	0.328	0.000***
CASH	-0.438	0.126
Indep	1.110	0.006***
Concurrent	-0.116	0.125
EXE	-2.108	0.056*
Industry	0.042	0.422
YEAR	Included, but not reported for brevity	
pseudo R-sq	9.74%	
Number of Obs	13,033	

Notes: This table shows the results of the first-stage probit regression, estimating the probability of a firm choosing to have either pure A shares or both A and B (or H) shares listed. All variables are as defined in Appendix 1.

*,** and *** denote significance at 0.10, 0.05 and 0.001 levels, respectively.

Table 3 (continued)

Panel B Second-Stage Results

$MAO = \alpha_0 + \alpha_1 DUAL + \sum \alpha_j$ Control Variables $+ \varepsilon$

Variables	Expected Sign	Coefficients	t-statistic	P>|z|
Constant		3.779	6.47	0.000***
DUAL	+	0.284	2.49	0.013**
SIZE	?	-0.276	-10.57	0.000***
LEV	+	1.587	11.29	0.000***
LOSS	+	0.923	17.91	0.000***
ROE	-	-0.015	-1.20	0.230
TURN	-	-0.254	-3.86	0.000***
ARINV	+	-0.187	-1.63	0.104
Indep	?	-0.055	-0.15	0.883
Concurrent	?	-0.034	-0.57	0.567
EXE	-	0.065	0.29	0.771
AGE	?	0.037	5.93	0.000***
SOE	-	-0.137	-3.03	0.002***
RET	-	-0.085	-1.72	0.085*
STDR	+	0.622	2.30	0.022**
FORM	+	-0.154	-2.22	0.027**
Big10	+	0.085	1.62	0.106
SWITCH	?	0.257	4.38	0.000***
Lambda		-0.041	-0.75	0.452
Industry		-0.076	-1.81	0.070*
YEAR		Included, but not reported for brevity		
N		12,885		
pseudo R-sq		25.36%		

Notes: This table shows the second stage estimation results of the impact of being dual audited by both non-Big N domestic and non-Big N international auditors on auditors' propensity to issue MAOs. The dependent variable is Modified Audit Opinion (MAO) as defined in Appendix 1. All other variables are as defined in Appendix 1.

*,** and *** denote significance at 0.10, 0.05 and 0.001 levels, respectively.

Table 4 Dual Audit Effect on MAO under PSM Model

Panel A Mean Test of Firm Characteristics

Firm characteristics (Pure A share vs. AB/H share firms) for the propensity matched-pair subsample

$$DUAL= \mu_0+ \mu_1 Sales\_growth + \mu_2 SIZE+ \mu_3 LEV + \mu_4 TURN+ \mu_5 ROE+ \mu_6 LOSS + \mu_7 ARINV + \mu_8 CASH + \mu_9 Indep + \mu_{10} Concurrent+ \mu_{11} EXE + \varepsilon$$

	Pure A share firm	AB/H share firm	Test of Mean Diff.
Firm Characteristics	Mean	Mean	P-Value
Sales_Growth	0.2457	0.2723	0.771
SIZE	21.6717	21.7300	0.583
TURN	0.7701	0.7427	0.627
ROE	- 0.0506	- 0.0365	0.775
ARINV	0.3114	0.3073	0.783
LEV	0.5695	0.5737	0.782
LOSS	0.2021	0.2128	0.689
CASH	0.1342	0.1337	0.958
Indep	0.3117	0.3147	0.752
Concurrent	0.8617	0.8511	0.719
EXE	0.0013	0.0022	0.522
N	282	282	

Notes: This table shows the univariate t test of each firm characteristics used in the selection equation to match the control and treatment group partitioned by whether a firm has both A share and B (or H) share listed. As shown in the t test of mean differences between the two groups, there is no difference in firm characteristics between pure A share firms and AB/H share firms with Non-Big4 domestic and Non-Big N international auditors. Variables are as defined in Appendix 1.

Table 4 (Continued)

Panel B Regression Results with Matched Subsample

$$MAO = \alpha_0 + \alpha_1 DUAL + \sum \alpha_j \text{ Control Variables} + \varepsilon$$

Variables	Expected Sign	Coefficients	t-statistic	P>|z|
Constant		-0.773	-0.42	0.677
DUAL	+	0.744	3.10	0.002***
SIZE	?	-0.114	-1.30	0.193
LEV	+	2.224	3.84	0.000***
LOSS	+	0.197	0.85	0.395
ROE	-	-0.683	-3.26	0.001***
TURN	-	-0.207	-1.15	0.250
ARINV	+	1.149	2.30	0.021**
AGE	?	-0.057	-1.54	0.123
Indep	?	-0.078	-0.06	0.949
Concurrent	?	0.612	1.86	0.063*
EXE	-	-116.428	-1.20	0.229
SOE	-	-0.481	-2.30	0.021**
RET	-	-0.294	-1.14	0.255
STDR	+	3.819	1.10	0.272
FORM	+	0.094	0.38	0.706
Big10	+	0.279	1.46	0.144
SWITCH	?	0.120	0.63	0.526
Industry		0.195	1.18	0.239
YEAR		Included, but not reported for brevity		
N		564		
pseudo R-sq		34.02%		

Notes: This table shows the results of the probit estimation of auditors' propensity to issue MAOs based on the propensity matched subsample. The sample consists of 282 AB/H share firms with non-Big N domestic and non-Big N international auditors and their pure A share matches with non-Big N domestic auditors. All variables are as defined in Appendix 1.

*,** and *** denote significance at 0.10, 0.05 and 0.001 levels, respectively.

Table 5 Contagious Effect on MAO based on Heckman Two-Stage Model

Panel A First-Stage Results

Stage one: probit estimation of AB/H firms choosing to hire Big N international auditors

$$BigN = \lambda_0 + \lambda_1 SIZE + \lambda_2 TURN + \lambda_3 LEV + \lambda_4 Curr + \lambda_5 LOSS_{t-1} + \lambda_6 ROA + \lambda_7 Indep + \lambda_8 Concurrent + \lambda_9 EXE + \lambda_{10} Rights_{t+1} + \lambda_{11} MAO_{t-1} + \lambda_{12} Industry + \lambda_i Year + \varepsilon$$

Variables	Coefficients	P>|z|
Constant	-7.638	0.000***
SIZE	0.359	0.000***
LEV	-1.576	0.000***
TURN	-0.341	0.011**
Curr	0.882	0.017**
ROA	0.564	0.543
$LOSS_{t-1}$	0.020	0.915
Indep	1.142	0.213
Concurrent	0.186	0.329
EXE	-6.135	0.387
$Rights_{t+1}$	0.566	0.231
MAO_{t-1}	-0.224	0.282
Industry	0.131	0.329
YEAR	Included, but not reported for brevity	
N	459	
pseudo R-sq	14.65%	

Notes: This table shows the results of the first-stage probit estimation of the probability that a firm chooses to hire Big N CPA firm as international auditor. The dependent variable, BigN, is an indicator variable set equal to 1 if an AB/H firm has a Big N international auditor and 0 if its international auditor is a Non-Big N CPA firm. All other variables are as defined in Appendix 1.

*,** and *** denote significance at 0.10, 0.05 and 0.001 levels, respectively.

Table 5 (Continued)

Panel B Second-Stage Results

$$MAO = \beta_0 + \beta_1 BigN + \sum \beta_j \text{ Control Variables} + \varepsilon$$

Variables	Expected Sign	Coefficients	t-statistic	P>|z|
Constant		-24.435	-3.60	0.000***
BigN	+	-0.055	-0.24	0.812
SIZE	?	0.913	3.18	0.001***
LEV	+	-2.681	-2.01	0.045**
LOSS	+	0.151	0.59	0.555
ROE	-	-0.531	-1.94	0.052*
TURN	-	-1.157	-4.38	0.000***
ARINV	+	4.301	4.99	0.000***
AGE	?	-0.141	-2.39	0.017**
Concurrent	?	1.387	3.24	0.001***
EXE	-	-30.109	-3.59	0.000***
SOE	-	-0.401	-1.67	0.095*
RET	-	0.047	0.16	0.876
STDR	+	1.590	0.44	0.660
FORM	+	0.535	1.50	0.133
Big10	+	0.191	0.86	0.388
SWITCH	?	0.282	1.18	0.240
Lambda		4.057	4.19	0.000***
Industry		0.850	3.56	0.000***
YEAR		Included, but not reported for brevity		
N		435		
pseudo R-sq		42.04%		

Notes: This table shows the results of second stage probit estimation regression for the test of contagious effect of Big N international auditors on the A-share audit quality. The dependent variable is MAO as defined in Appendix 1. Lambda is the inverse Mills ratio estimated from the stage one probit estimation. All independent variables are as defined in Appendix 1.

Variable Indep is omitted from this regression due to its high correlation with one year dummy.

*,** and *** denote significance at 0.10, 0.05 and 0.001 levels, respectively.

Table 6 Contagious Effect on MAO Based on PSM Model

Panel A Mean Difference Test of Firm Characteristics
Firm Characteristics Partitioned by the international auditor type for the propensity matched-pair subsample

$$BigN = \lambda_0 + \lambda_1 SIZE + \lambda_2 TURN + \lambda_3 LEV + \lambda_4 Curr + \lambda_5 LOSS_{t-1} + \lambda_6 ROA + \lambda_7 Indep + \lambda_8 Concurrent + \lambda_9 EXE + \lambda_{10} Rights_{t+1} + \lambda_{11} MAO_{t-1} + \varepsilon$$

	Pure A share firm	AB/H share firm	Test of Mean Diff.
Firm Characteristics	Mean	Mean	P-Value
SIZE	22.0972	22.1746	0.713
LEV	0.5221	0.5238	0.543
TURN	0.6471	0.6895	0.947
Curr	0.4894	0.5008	0.727
ROA	0.0222	0.0294	0.410
$LOSS_{t-1}$	0.1446	0.1566	0.830
Indep	0.3087	0.3205	0.471
Concurrent	0.9036	0.8675	0.468
EXE	0.0002	0.0009	0.148
$Rights_{t+1}$	0.0120	0.0120	1.000
MAO_{t-1}	0.1325	0.0964	0.468
N	83	83	

Notes: This table shows the univariate t test of each firm characteristic specified in the equation to match the control and treatment group partitioned by whether an AB/H share firm hire Big N international auditor or hire non-Big N international auditor. As shown in the t test of mean differences between the two groups, there is no difference in firm characteristics between AB/H share firms with non-Big N domestic and non-Big N international auditors and AB/H share firms with non-Big N domestic and Big N international auditors in the matched subsample.

All variables are as defined in Appendix 1.

Table 6 (Continued)

Panel B Regression Results with Matched Subsample

MAO= β_0+ β_1BigN +$\sum\beta_j$ Control Variables +ε				
Variables	Expected Sign	Coefficients	t-statistic	P>|z|
Constant		-6.819	-1.02	0.308
BigN	+	-0.798	-1.41	0.157
SIZE	?	0.228	0.76	0.447
LEV	+	-0.562	-0.30	0.767
LOSS	+	-0.855	-1.34	0.180
ROE	-	-0.537	-2.56	0.011**
TURN	-	-0.003	-0.01	0.992
ARINV	+	6.447	4.42	0.000***
AGE	?	-0.045	-0.45	0.653
Concurrent	?	0.596	0.82	0.410
EXE	-	-338.538	-0.48	0.631
SOE	-	-0.870	-1.52	0.127
RET	-	-1.401	-1.02	0.306
STDR	+	1.372	0.10	0.921
FORM	+	0.850	0.92	0.358
Big10	+	0.453	0.88	0.379
SWITCH	?	0.511	0.85	0.395
Industry		-0.512	-1.22	0.221
YEAR		Included, but not reported for brevity		
N		166		
pseudo R-sq		45.19%		

Notes: This table shows the results of contagious effect on auditors' propensity to issue MAOs based on the propensity-matched subsample. The subsample consists of 83 AB/H share firms with non-Big N domestic auditor and Big N international auditor and their AB/H share matches which hire non-Big N domestic auditors and non-Big N international auditors. The dependent variable is MAO. All variables are as defined in Appendix 1.

*,** and *** denote significance at 0.10, 0.05 and 0.001 levels, respectively.

Table 7 Dual Audit Effect on ERC Based on Heckman Two-Stage Method

Panel A First-Stage Results

Stage one: probit estimation of firms choosing to have both A shares and B (or H) shares listed

$$DUAL = \mu_0 + \mu_1 \text{Sales\_growth} + \mu_2 SIZE + \mu_3 LEV + \mu_4 TURN + \mu_5 ROE + \mu_6 LOSS + \mu_7 ARINV + \mu_8 CASH + \mu_9 Indep + \mu_{10} Concurrent + \mu_{11} EXE + \mu_{12} Industry + \mu_i Year + \varepsilon$$

Variables	Coefficients	P>|z|
Constant	-7.346	0.000***
Sales_Growth	-0.010	0.394
SIZE	0.253	0.000***
TURN	0.206	0.000***
ROE	-0.977	0.054*
ARINV	0.175	0.276
LEV	0.358	0.048**
LOSS	0.166	0.099*
CASH	-0.497	0.096*
Indep	1.022	0.014**
Concurrent	-0.158	0.039**
EXE	-1.911	0.070*
Industry	0.033	0.542
YEAR	Included, but not reported for brevity	
pseudo R-sq	10.76%	
Number of Obs	12,984	

Notes: This table shows the results of the first-stage probit regression, estimating the probability of a firm choosing to have either pure A shares or both A and B (or H) shares listed. The variables are as defined in Appendix 1.

*,** and *** denote significance at 0.10, 0.05 and 0.001 levels, respectively.

Table 7 (continued)

Second-Stage Results

$$CAR=\gamma_0+\gamma_1\Delta E+\gamma_2 DUAL+\gamma_3\,\Delta E^{*}\,DUAL+\sum\gamma_j\,\text{Control Variables}+\varepsilon$$

Variables	Expected Sign	Coefficients	t-statistic	P>|z|
Constant		2.243	3.84	0.000***
ΔE	+	0.685	6.95	0.000***
DUAL	+	0.038	1.23	0.218
ΔE*DUAL	+	0.493	1.79	0.074*
SIZE	?	-0.090	-4.45	0.000***
LEV	-	0.002	0.03	0.975
CURRENT	+	0.002	1.22	0.222
BV	+	0.019	5.32	0.000***
GROWTH	-	0.0003	0.79	0.430
Indep	+	-0.079	-0.78	0.434
Concurrent	+	0.017	1.02	0.310
EXE	+	0.235	2.04	0.042**
SOE	-	0.016	1.09	0.277
STDR	-	-7.081	-2.96	0.003***
FORM	+	-0.005	-0.27	0.785
Big10	+	0.011	0.87	0.384
SWITCH	?	0.013	0.69	0.490
Lambda		-0.131	-2.12	0.034**
Industry		0.014	1.18	0.237
YEAR		Included, but not reported for brevity		
N		12,983		
R^2		10.81%		
adjusted R^2		10.6%		

Notes: This table shows the results of the second stage regression for the dual audit effect on firm's earnings response coefficient. The dependent variable is CAR, cumulative abnormal return, cumulate the weekly abnormal return from month -8 to month 4, where the fiscal year end is month 0, calculated as $CAR=\sum log(1+R_{it}-\alpha-\beta R_{mt})$. All other variables are as defined in Appendix 1.

*,** and *** denote significance at 0.10, 0.05 and 0.001 levels, respectively.

Table 8 Dual Audit Effect on ERC under PSM Model

Panel A Mean Test of Firm Characteristics

Firm characteristics (Pure A share vs. AB/H share firms) for the propensity matched-pair subsample

$$DUAL= \mu_0+ \mu_1 Sales\_growth + \mu_2 SIZE+ \mu_3 LEV + \mu_4 TURN+ \mu_5 ROE+ \mu_6 LOSS + \mu_7 ARINV + \mu_8 CASH + \mu_9 Indep + \mu_{10} Concurrent+ \mu_{11} EXE + \varepsilon$$

	Pure A share firm	AB/H share firm	Test of Mean Diff.
Firm Characteristics	Mean	Mean	P-Value
Sales_Growth	0.1082	0.0924	0.520
SIZE	21.9023	21.8160	0.457
TURN	0.7870	0.7620	0.674
ROE	0.0138	0.0057	0.235
ARINV	0.3048	0.3130	0.599
LEV	0.5504	0.5701	0.203
LOSS	0.1617	0.1955	0.309
CASH	0.1312	0.1327	0.847
Indep	0.3199	0.3122	0.414
Concurrent	0.7669	0.8421	0.029**
EXE	0.0021	0.0023	0.908
N	266	266	

Notes: This table shows the univariate t test of each firm characteristics used in the selection equation to match the control and treatment group partitioned by whether a firm has both A share and B (or H) shares listed. As shown in the t test of mean differences between the two groups, there is no difference in firm characteristics between pure A share firms and AB/H share firms with non-Big4 domestic and non-Big N international auditors except Concurrent.

All variables are as defined in Appendix 1.

Table 8 (continued)

Panel B: Regression Results with Matched Subsample

$$CAR=\gamma_0+\gamma_1\Delta E+\gamma_2 DUAL+\gamma_3\,\Delta E^{*}\,DUAL+\sum\gamma_j \text{ Control Variables}+\varepsilon$$

Variables	Expected Sign	Coefficients	t-statistics	P>|z|
Constant		1.204	2.27	0.024**
ΔE	+	0.044	0.15	0.882
DUAL	+	0.050	0.97	0.333
ΔE*DUAL	+	1.072	2.80	0.005***
SIZE	?	-0.067	-2.60	0.010**
LEV	-	0.376	2.05	0.041**
CURRENT	+	0.021	0.59	0.555
BV	+	0.013	1.03	0.302
GROWTH	-	-0.0001	-0.44	0.660
Indep	+	-0.431	-1.01	0.311
Concurrent	+	0.030	0.51	0.610
EXE	+	0.135	0.16	0.876
SOE	-	0.084	1.42	0.157
STDR	-	-4.320	-1.82	0.069*
FORM	+	-0.029	-0.53	0.594
Big10	+	-0.006	-0.11	0.915
SWITCH	?	-0.020	-0.39	0.698
Industry		-0.046	-1.14	0.254
YEAR		Included, but not reported for brevity		
N		532		
R^2		8.77%		
adjusted R^2		3.7%		

Notes: This table shows the results of dual audit on the earning response coefficient based on the propensity-matched subsample. The subsample consists of 266 AB/H share firms which hire non-Big N domestic auditor and non-Big N international auditor and their pure A matches who only hire non-Big N domestic auditor. The dependent variable is CAR, cumulative abnormal return. Other variables are as defined in Appendix 1.

*,** and *** denote significance at 0.10, 0.05 and 0.001 levels, respectively.

Table 9 Contagious Effect on ERC Based on Heckman Two-Stage Model

Panel A First-Stage Results

Stage one: probit estimation of AB/H firms choosing to hire Big N international auditors

$$BigN = \lambda_0 + \lambda_1 SIZE + \lambda_2 TURN + \lambda_3 LEV + \lambda_4 Curr + \lambda_5 LOSS_{t-1} + \lambda_6 ROA + \lambda_7 Indep + \lambda_8 Concurrent + \lambda_9 EXE + \lambda_{10} Rights_{t+1} + \lambda_{11} MAO_{t-1} + \lambda_{12} Industry + \lambda_i Year + \varepsilon$$

Variables	Coefficients	P>|z|
Constant	-7.638	0.000***
SIZE	0.352	0.000***
LEV	-1.912	0.000***
TURN	-0.271	0.037**
Curr	1.020	0.010**
ROA	0.417	0.674
LOSSt-1	-0.009	0.967
Indep	1.013	0.318
Concurrent	0.273	0.188
EXE	-8.552	0.506
$Rights_{t-1}$	0.303	0.567
MAOt-1	-0.312	0.162
Industry	0.088	0.535
YEAR	Included, but not reported for brevity	
N	423	
pseudo R-sq	15.81%	

Notes: This table shows the results of the first-stage probit estimation of the probability that a firm chooses to hire a Big N CPA firm as international auditor. The dependent variable, BigN, is an indicator variable set equal to 1 if an AB/H firm has a Big N international auditor and 0 if its international auditor is a Non-Big N CPA firm. All other variables are as defined in Appendix 1.

*,** and *** denote significance at 0.10, 0.05 and 0.001 levels, respectively.

Table 9 (continued)

Panel B Second-Stage Regression Results

$$CAR=\delta_0+\delta_1\Delta E + \delta_2 BigN+\delta_3\Delta E^* BigN+\sum\delta_j \text{ Control Variables } +\varepsilon$$

Variables	Expected Sign	Coefficients	t-statistics	P>|z|
Constant		0.181	0.21	0.837
ΔE	+	0.419	2.06	0.040**
BigN	+	0.014	0.26	0.796
ΔE*BigN	+	0.665	1.77	0.077*
SIZE	?	-0.006	-0.15	0.881
LEV	-	0.003	0.02	0.987
CURRENT	+	-0.012	-0.39	0.699
BV	+	0.003	0.21	0.831
GROWTH	-	-0.0008	-0.69	0.493
Indep	+	-0.162	-0.56	0.579
Concurrent	+	-0.008	-0.12	0.906
EXE	+	-0.620	-0.54	0.586
SOE	-	-0.018	-0.33	0.745
STDR	-	0.122	0.11	0.912
FORM	+	0.029	0.51	0.612
Big10	+	0.038	0.79	0.429
SWITCH	?	-0.011	-0.19	0.847
Lambda		0.017	0.15	0.880
Industry		-0.017	-0.37	0.711
YEAR		Included, but not reported for brevity		
N		423		
R^2		11.45%		
adjusted R^2		4.9%		

Notes: This table shows the results of second stage regression for test of contagious effect of Big N international auditors on the A-share audit quality. The dependent variable is CAR as defined in Appendix 1. All independent variables are defined in Appendix 1.

*,** and *** denote significance at 0.10, 0.05 and 0.001 levels, respectively.

Table 10 Contagious Effect on ERC Based on PSM Method

Panel A Mean Difference Test of Firm Characteristics

Firm Characteristics Partitioned by the international auditor type for the propensity matched-pair subsample

$$BigN= \lambda_0+ \lambda_1 SIZE+ \lambda_2 TURN+ \lambda_3 LEV+ \lambda_4 Curr+ \lambda_5 Loss_{t-1} + \lambda_6 ROA+ \lambda_7 Indep + \lambda_8 Concurrent + \lambda_9 EXE + \lambda_{10} Rights_{t+1} + \lambda_{11} MAO_{t-1}+ \varepsilon$$

	Pure A share firm	AB/H share firm	Test of Mean Diff.
Firm Characteristics	Mean	Mean	P-Value
SIZE	21.9416	22.0817	0.489
LEV	0.5342	0.5364	0.936
TURN	0.7112	0.6417	0.325
Curr	0.5404	0.4902	0.149
ROA	0.0161	0.0286	0.255
$LOSS_{t-1}$	0.1944	0.1667	0.667
Indep	0.3146	0.3072	0.695
Concurrent	0.9028	0.8889	0.787
EXE	0.0070	0.0050	0.789
$Rights_{t+1}$	0.0417	0.0278	0.652
MAO_{t-1}	0.1389	0.1111	0.617
N	72	72	

Notes: This table shows the univariate t test of each firm characteristics specified in the equation to match the control and treatment group partitioned by whether an AB/H share firm hire international auditor or hire non-Big N international auditor. As shown in the t test of mean differences between the two groups, there is no difference in firm characteristics between AB/H share firms with non-Big N domestic and non-Big N international auditors and AB/H share firms with non-Big N domestic and Big N international auditors in the matched subsample.

All variables are as defined in Appendix 1.

Table 10 (continued)

Panel B Regression Results with Matched Subsample

$$CAR=\delta_0+\delta_1\Delta E+\delta_2 BigN+\delta_3\Delta E^* BigN+\sum\delta_j \text{ Control Variables}+\varepsilon$$

Variables	Expected Sign	Coefficients	t-statistics	P>|z|
Constant		0.176	0.14	0.890
ΔE	+	-0.094	-0.14	0.885
BigN	+	0.023	0.20	0.842
ΔE*BigN	+	1.483	2.01	0.047**
SIZE	?	0.001	0.02	0.981
LEV	-	-0.019	-0.06	0.955
CURRENT	+	0.164	1.54	0.127
BV	+	-0.019	-0.75	0.453
GROWTH	-	-0.001	-0.12	0.907
Indep	+	0.048	0.08	0.938
Concurrent	+	0.007	0.05	0.960
EXE	+	11.800	1.27	0.207
SOE	-	-0.240	-1.98	0.050*
STDR	-	-2.494	-0.94	0.349
FORM	+	0.027	0.17	0.867
Big10	+	0.047	0.41	0.679
SWITCH	?	-0.011	-0.08	0.938
Industry		-0.094	-1.18	0.242
YEAR		Included, but not reported for brevity		
N		144		
R^2		20.38%		
adjusted R^2		1.0%		

Notes: This table shows the results of contagious effect on earnings response coefficient based on the propensity-matched subsample. The subsample consists of 72 AB/H share firms with non-Big N domestic auditor and Big N international auditor and their AB/H share matches which hire non-Big N domestic auditor and non-Big N international auditor. The dependent variable is CAR. All variables are as defined in Appendix 1.

*,** and *** denote significance at 0.10, 0.05 and 0.001 levels, respectively

Table 11 Summary of Results

Results of Main Tests

Regression #	Reference Table	Dependent Variable	Selection Method	Effect Tested	Expectation	Empirical Results	
						Sign	Significance
1	3	MAO	Heckman two-stage	Dual audit	positive	positive	5% level
2	4	MAO	PSM	Dual audit	positive	positive	1% level
3	5	MAO	Heckman two-stage	Contagious	positive	negative	insignificant
4	6	MAO	PSM	Contagious	positive	positive	insignificant
5	7	ERC	Heckman two-stage	Dual audit	positive	positive	10% level
6	8	ERC	PSM	Dual audit	positive	positive	1% level
7	9	ERC	Heckman two-stage	Contagious	positive	positive	10% level
8	10	ERC	PSM	Contagious	positive	positive	5% level

Table 12 Sensitivity Tests

Panel A Alternative Definition of MAO

Effect Tested	Selection Method	Test variable	Empirical Results		Main test results	
			Coefficient	P>|z|	Coefficient	P>|z|
Dual audit	Heckman two-stage	DUAL	0.2042	0.057*	0.284	0.013**
Dual audit	PSM	DUAL	0.6652	0.004***	0.744	0.002***
Contagious	Heckman two-stage	BigN	-0.0258	0.906	-0.055	0.812
Contagious	PSM	BigN	-0.5035	0.352	-0.798	0.157

Panel B Alternative Measure of CAR---CAR2

Effect Tested	Selection Method	Test variable	Empirical Results		Main test results	
			Coefficient	P>|z|	Coefficient	P>|z|
Dual audit	Heckman two-stage	ΔE*DUAL	0.3181	0.039**	0.493	0.074*
Dual audit	PSM	ΔE*DUAL	0.1435	0.597	1.072	0.005***
Contagious	Heckman two-stage	ΔE*BigN	0.8648	0.019**	0.665	0.077*
Contagious	PSM	ΔE*BigN	1.2466	0.056*	1.483	0.047**

Table 12 (continued)

Panel C Mandatory dual audit only

Regression #	Dependent Variable	Selection Method	Effect Tested	Expectation	Empirical Results		Main Test Results	
					Coeff.	Sig.	Coeff.	Sig.
1	MAO	Heckman two-stage	Dual audit	positive	0.3200	0.007***	0.284	0.013**
2	MAO	PSM	Dual audit	positive	0.9739	0.001***	0.744	0.002***
3	MAO	Heckman two-stage	Contagious	positive	-0.0055	0.981	-0.055	0.812
4	MAO	PSM	Contagious	positive	N/A	N/A	-0.798	0.157
5	ERC	Heckman two-stage	Dual audit	positive	0.5784	0.036**	0.493	0.074*
6	ERC	PSM	Dual audit	positive	0.2306	0.644	1.072	0.005***
7	ERC	Heckman two-stage	Contagious	positive	0.7595	0.075*	0.665	0.077*
8	ERC	PSM	Contagious	positive	1.0074	0.337	1.483	0.047**

Panel D AB dual audit only

Regression #	Dependent Variable	Selection Method	Effect Tested	Expectation	Empirical Results		Main Test Results	
					Coeff.	Sig.	Coeff.	Sig.
1	MAO	Heckman two-stage	Dual audit	positive	0.2653	0.039**	0.284	0.013**
2	MAO	PSM	Dual audit	positive	0.5865	0.050**	0.744	0.002***
3	MAO	Heckman two-stage	Contagious	positive	-0.1478	0.581	-0.055	0.812
4	MAO	PSM	Contagious	positive	N/A	N/A	-0.798	0.157
5	ERC	Heckman two-stage	Dual audit	positive	0.6822	0.038**	0.493	0.074*
6	ERC	PSM	Dual audit	positive	-0.1813	0.840	1.072	0.005***
7	ERC	Heckman two-stage	Contagious	positive	0.9661	0.044**	0.665	0.077*
8	ERC	PSM	Contagious	positive	1.1625	0.360	1.483	0.047**

Table 12 (continued)

Panel E Pre- and Post-Abolishment Period Comparison

Dependent Variable	Independent Variable	Expectation	Coefficient	P value
MAO	POST	Negative	-1.4156	0.014**
ERC	ΔE*POST	Negative	0.5000	0.234

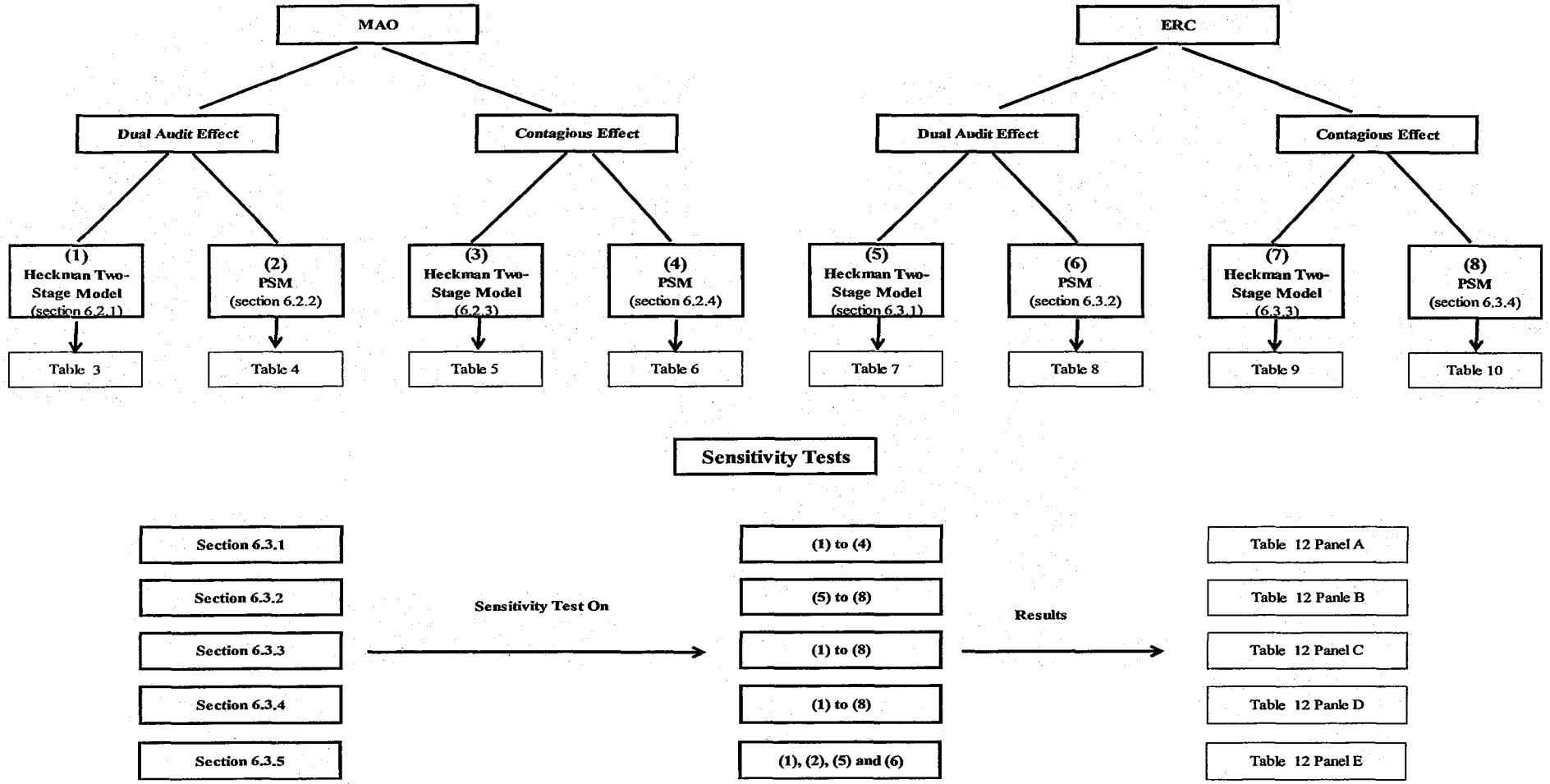
Notes: 1. MAO represents modified audit opinions and ERC represents earnings response coefficient.

2. Heckman two-stage is Heckman two-stage selection model. PSM is propensity score matching method.

3. N/A means the test is not feasible due to the limitation of sample size.

4. *,** and *** denote significance at 0.10, 0.05 and 0.001 levels, respectively

Figure 1 Research Design for Empirical Results



Appendix 1 Variable Definitions

Variable	Definition
AGE	The number of years a company has been listed
ARINV	Sum of accounts receivable and inventory divided by total assets at the end of the fiscal year
Big10	Dummy variable, which is equal to 1 if a firm's A-share financial statement is audited by one of the Big10 CPA firms (based on CICPA annual ranking), otherwise 0
BigN	Dummy variable, which equals 1 if the international auditor is one of the BigN CPA firms, otherwise 0
BV	The book value of equity per share at the end of fiscal year
CAR	The cumulative abnormal return
CASH	The ratio of cash and cash equivalents to total assets at the end of fiscal year
Concurrent	Dummy variable, which is equal to 1 if the CEO and board chairman are different persons, otherwise 0
Curr	The ratio of current assets to total assets at the end of fiscal year
CURRENT	The ratio of current assets to current liabilities at the end of fiscal year
DUAL	Dummy variable, which equals 1 if the firm is audited by both domestic and international auditors, otherwise 0
EXE	Percentage of shares held by executives
FORM	Dummy variable, which equals 1 if the auditor bears unlimited liability in audit failure, otherwise 0
Growth	The market-to-book ratio at the end of fiscal year
Indep	Percentage of independent directors on the board
Industry	Dummy variable, which is equal to 1 if a company is in manufacturing industry and for a non-manufacturing company
Lambda	The inverse Mills ratio in the Heckman two-stage model
LEV	The ratio of year-end total liabilities to total assets
LOSS	Dummy variable, which equals 1 if the net income in the fiscal year is less than zero, otherwise 0.
MAO	Dummy variable, which equals 1 if a firm receives modified audit opinion for its A-share financial statement, otherwise 0
RET	The annual market-adjusted stock returns
Rights	Dummy variable, which equals 1 if the firm have a rights issue, otherwise 0
ROA	The ratio of year-end net income to total assets

ROE	The ratio of year-end net income to shareholders' equity
Sales_Growth	The percentage change in annual sales
SIZE	The nature logarithm of year-end total assets
SOE	Dummy variable, which is equal to 1 if a firm is ultimately controlled by the government, and 0 otherwise
STDR	The standard deviation of residuals from the market model estimated by weekly return data during the year
SWITCH	Dummy variable, which is equal to 1 if the firm changes its auditor in the current fiscal year, and 0 otherwise
TURN	The ratio of year-end sales to total assets
ΔE	The change in the annual earnings deflated by the firm's market value of equity at the beginning of the fiscal year

Appendix 2

Report 1 Pure A Share Audit Report

(stock code: 000009, 2005 audit report)

审计报告

2005 年贵公司发生重大购买或出售资产行为，收购或出售资产相关的利润占上市公司最近经审计后利润的 50%以上。按证监公司字[2000]75 号规定应先公告，经股东大会审议通过后才能办理。但公司未按相关规定的要求办理。并且其股权的售（受）让作价依据，未按规范要求进行评估。其中武汉华安置业有限公司股权转让后，按账面价值形成转让收益 6,637 万元。但公司将应收武汉华安置业有限公司的 1,074.5 万元直接冲减了转让收益，其投资收益 136.3 万元也未反映在转让资产的作价中。

上述交易事项公司已在期后作了公告，但相关的会计处理依据仍未完善。我们认为，除上述事项可能产生的影响外，上述会计报表符合国家颁布的企业会计准则和《企业会计制度》的规定，在所有重大方面公允反映了宝安集团 2005 年 12 月 31 日合并及母公司的财务状况以及 2005 年度合并及母公司的经营成果和现金流量。

此外，我们还关注到：

1、贵公司因为其他公司作担保，而被追索承担担保责任，发生了被查封账户、划走存款等情况的出现，为保证公司经营的正常开展，贵公司存在借用银行账户、合作经营设立共管账户、过户权证代管等情况。此类事项虽有利于公司经营的正常开展，但违反了有关规定。有关监管部门已要求公司进行整改，公司提出了整改的措施。

2、根据贵公司提供的境外公司经当地会计师事务所审计的会计报告，经核查，我们发现境外公司存在所有投资均按成本法核算，有未入账的收支（国内收支）造成与集团公司往来不一致的情况。

中磊会计师事务所有限责任公司

二〇〇六年四月二十六日

Report 2 A-Share Audit Report of AB-share Firm

(stock code: 000017, 2006 audit report)

审 计 报 告 深鹏所股审字[2007]049 号

导致保留意见的事项

我们注意到：

我们注意到：中华公司主营业务虽在正常经营，由于不能清偿到期巨额债务，贵公司原最大债权人，第一大股东及债务重组牵头人---中国华融资产管理公司为了公司能够持续经营,达成债权人对中华公司的债务重组，于 2005 年 8 月 1 日向深圳市中级人民法院申请中华公司破产，深圳市中级人民法院已接收了中国华融资产管理公司提交的破产申请材料，由于破产和解程序阶段尚未完成,截至 2006 年 12 月 31 日中华公司债务存在不确定性。

四、审计意见

我们认为，除上述事项产生的影响外，中华公司财务报表已经按照企业会计准则和《企业会计制度》的规定编制，在所有重大方面公允反映了中华公司 2006 年 12 月 31 日的合并与公司财务状况以及 2006 年度的合并与公司经营成果和现金流量。

五、强调事项

我们提醒财务报表使用者关注，如注释 13 所述：截止 2006 年 12 月 31 日，中华公司的资产总额 26,702 万元，负债总额为 212,515 万元，净资产为-185,813 万元，已资不抵债。中华公司已在财务报表附注 13 披露了采取的改善措施，但可能导致对持续经营能力产生重大疑虑的事项或情况仍然存在重大不确定性，可能使中华公司无法在正常的经营过程中变现资产、清偿债务。本段内容不影响已发表的审计意见。

深圳市鹏城会计师事务所有限公司

2007 年 4 月 23 日

Report 3 B-Share Audit Report of AB-share Firm

(stock code: 000017, 2006 audit report)

INDEPENDENT AUDITOR'S REPORT .

BASIS FOR QUALIFIED OPINION

Scope limitation – Liabilities in respect of corporate guarantees

As disclosed in note 18 to the consolidated financial statements, the Group has not provided contingent liabilities for its subsidiaries, associates and related companies amounting to RMB25,271,000 as at 31 December 2006. We were not provided with sufficient audit evidence to determine the completeness of the corporate guarantee entered into by the subsidiaries, associates and related companies. Therefore, we were unable to satisfy ourselves on the completeness of contingent liabilities disclosed as at 31 December 2006 nor had obtained adequate information to assess the completeness of liabilities of the Group in providing the corporate guarantees. Consequently, we were unable to determine whether the contingent liabilities had been properly disclosed and provided for in the financial statements.

Disclaimer opinion – liabilities

As disclosed in notes 1 and 28 to the consolidated financial statements, the Group is under refinance and restructure process and has not yet completed. According to the confirmations received from the bankers and financial institutes, the Group's accrued interest was understated in amounting to RMB199,669,982.39. Up to the date of this report, the Group has not yet agreed the interest elements with the bankers and financial institutes. Adjustment has not recorded by the Group and we were unable to express our opinion to whether the liabilities of the Group was correctly recorded as at 31 December 2006.

4. Disclaimer opinion – interest in an associate and accounting treatment

As disclosed in note 10 to the consolidated financial statements, the Company invested 39.83% in Jiang Xi Li Hua Enterprises Limited ("Li Hua"). According to the share register of Li Hua, the shareholder of investment in 39.83% should be Hong Kong (Link) Bicycles Limited. Therefore, we were unable to express our opinion as to whether the Company has equity right in Li Hua and the recoverability of the net carrying amount of investment in Li Hua in amounting to RMB26,879,903.07.

We were unable to carry out alternative audit procedures to satisfy ourselves as to the matters set out in paragraphs 1 to 4 above.

Any adjustment that might have been found to be necessary in respect of the matters set out above would have a consequential effect on the financial positions of the Group as at 31 December 2006, the net loss and cash flows of the Group for the year then ended and the related disclosures in the consolidated financial statements.

QUALIFICATION ARISING FROM MATERIAL UNCERTAINTIES RELATING TO THE GOING CONCERN BASIS

In forming our opinion, we have considered the adequacy of the disclosure made in note 1(b) to the consolidated financial statements which describes the liquidity issues and financial

difficulties experienced by the Group and the steps undertaken by the Group to ensure the Group is able to continue as going concern. As described in note 20 to the consolidated financial statements that concerning the overdue bank borrowings as at 31 December 2006, the Group has outstanding borrowings of approximately RMB523,309,000 due to various banks plus accrued interest which is still under disputes. All these amounts were overdue and the Company is still in the process to re-negotiate the payment terms and dates with the lenders. The Group's adoption of going concern basis is based on the successful outcome of the debt restructuring as well as the resulting improvement in the financial position of the Group. It is uncertain at this stage whether and how the Group can be able to repay the overdue bank borrowings and other payables.

The consolidated financial statements have been prepared on a going concern basis, the validity of which depends upon the attainment of profitable and positive cash flow operations, the restructuring/refinancing of its debts, the continuing financial support of its bankers and the successful outcome of the steps undertaken as described in note 1(b) to the consolidated financial statements to ensure the Group is able to continue as going concern. The consolidated financial statements do not include any adjustments that would result from a failure to obtain such financial support. We consider that appropriate disclosures have been made. However, in view of the extent of the material uncertainties relating to the steps mentioned above that may cast significant doubt on the Group's ability to continue as a going concern, we have disclaimed our opinion. The consolidated financial statements do not include any adjustments that would be necessary if the various steps as described above fail to obtain. Any adjustment to the consolidated financial statements may have a consequential significant effect on the loss for the year and net liabilities as at 31 December 2006.

DISCLAIMER OF OPINION : DISCLAIMER ON VIEW GIVEN BY CONSOLIDATED FINANCIAL STATEMENTS

Because of the significance of the matters described in the basis for disclaimer of opinion section and the material uncertainties relating to the going concern basis as set out above, we do not express an opinion on the financial statements as to whether they give a true and fair view of the state of affairs of the Group as at 31 December 2006 and of the loss and cash flows of the Group for the year then ended in accordance with International Financial Reporting Standards.

For and on behalf of
Wong Lam Leung & Kwok C.P.A. Limited

Report 4 A-Share Audit Report of AH-share Firm

(stock code: 000585, 2007 audit report)

审计报告

深鹏所股审字[2008]052 号

导致保留意见的事项

东北电气 2007 年 12 月 31 日对新东北电气（沈阳）高压开关有限公司的长期股权投资 252,430,228.40 元，2007 年度对该公司的投资收益 29,426,398.58 元。由于公司未委托我们对新东北电气（沈阳）高压开关有限公司进行审计，我们无法实施必要的审计程序，以获取充分、适当的审计证据。

审计意见

我们认为，除了前段所述未能实施必要的审计程序可能产生的影响外，东北电气财务报表已经按照企业会计准则的规定编制，在所有重大方面公允反映了东北电气 2007 年 12 月 31 日的财务状况以及 2007 年 1 月 1 日至 12 月 31 日的经营成果和现金流量。

深圳市鹏城会计师事务所有限公司

2008 年 4 月 29 日

Report 5 H-Share Audit Report of AH-share Firm

(stock code: 000585, 2007 audit report)

不發表意見基礎

1. 範圍限制- 聯營公司之權益

於二零零七年十二月三十一日，貴集團於聯營公司的權益包括分占新東北電氣（瀋陽）高壓開關有限公司（[新瀋高]）的資產淨值人民幣252,430,000 元, 而貴集團的年度虧損乃於計入所分占新瀋陽高截至該日止年度的溢利人民幣 29,426,000 元後達至。該金額乃摘錄自新瀋高截至二零零七年 十二月三十一日止年度根據中華人民共和國（“中國”）普遍採納的會計原則編制的經審核財務報表。

上文所提述的新瀋高財務報表乃由一間與我們無關的中國註冊核數師行審核。該核數師行已於二零零八年二月二十五日就該財務報表發出無保留意見的報告。然而，該核數師行未能向我們提供我們認為必要的足夠資料及解釋，以使我們可就彼等的工作對我們而言是否足夠達至結論。因此，我們未能信納：

a. 集團於二零零七年十二月三十一日於 新瀋高的權益，集團所分占截至該日止年度的溢利是否按照香港財務報告準則公平地呈列；及
b. 財務報表附注所披露的新瀋高財務資料概要是否按照香港財務報告準則公平地呈列。

2. 範圍限制- 商譽

誠如綜合財務報表附注所披露，收購兩家附屬公司的少數股東權益所產生之商譽帳面值為人民幣 94,644,000 元已計入二零零七年十二月三十一日之綜合資產負債表。我們未能取得充分可靠的憑證，足以令我們信納商譽減值是否需要及上述商譽是否已於二零零七年十二月三十一日之綜合財務報表內公平列示。

我們未能進行其他審核程式，足令我們信納以上第（1）點至第（2）點載列之事宜。

倘以上第（1）點至第（2）點載列之事宜必須作出任何調整，將對貴集團及貴公司於二零零七年十二月三十一日之財務狀況，貴集團截至該日止年度之虧損及現金流量以及財務報表之相關披露造成相應及重大影響。

不發表意見：就綜合財務報表所載意見之免責聲明

鑒於不表意見的基礎一節所述事宜之重要性，我們對綜合財務報表是否按照香港財務報告準則真實公平地反映貴集團於二零零七年十二月三十一日之財務狀況及貴集團截至該日止年度之虧損及現金流量並不發表意見。在所有其他方面，我們認為綜合財務報表乃按照香港公司條例之披露規定妥為編制。

匯領會計師事務所有限公司

香港：二零零八年四月二十九日

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