OWNERSHIP STRUCTURE, CORPORATE GOVERNANCE AND EARNINGS MANAGEMENT IN CHINA

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FACULTY OF BUSINESS AND ACCOUNTANCY

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ABSTRACT

To address the inherent inefficiencies of state-owned enterprises (SOEs), China has adopted partial and gradual privatization reforms and a series of corporate governance reforms, such as introducing independent directors and audit committees, and reestablishing audit firms. These reforms have resulted in the emergence and rise of private-owned enterprises (POEs) and improved the management efficiency of SOEs in China. Driven by the stronger earnings management motivations of POEs and the potentially greater effect of corporate governance in POEs, this study is conducted to examine whether Chinese SOEs perform a lower level of earnings management than Chinese POEs and whether corporate governance mechanisms (i.e. board independence, audit committee independence and external auditor) can moderate the difference in earnings management between them.

This study selects 582 A-share companies from the Shanghai Stock Exchange (SHSE) and Shenzhen Stock Exchange (SZSE) from 2015 to 2018. The conceptual framework of the study is deduced based on agency theory and the non-profit goals of SOEs. The results show that SOEs perform a lower level of earnings management than POEs in China. The explanation for this phenomenon is that the non-profit goals of SOEs and the Chinese government long-term protection have relatively alleviated the principal-agent conflicts within SOEs, thereby reducing their motivations to manipulate earnings. Results also show that Big 4 firms can effectively reduce the difference in earnings management between Chinese SOEs and POEs. It is attributed to the more severe principal-agent conflicts within POEs and their stronger motivations to manage earnings. Hence, Big 4 firms are faced with higher constraining effects on the earnings management of POEs. However, the results indicate that board independence and audit committee independence cannot reduce the difference in earnings management between them. The reasons are that independent directors fail to improve the effectiveness of the board and the audit committee in China, and both the functions of independent directors and audit committee overlap with the board of supervisors within Chinese firms.

From the theoretical perspectives, this study fills research gaps by illustrating clearly the relationships among ownership structure, corporate governance and earnings management. This study also adds to agency theory by pointing out that the incidence of earnings management and the effectiveness of corporate governance in constraining earnings management vary with the severity of the principal-agent conflicts. Specifically, in firms with more severe principal-agent conflicts, earning management is more likely to occur, and the effectiveness of corporate governance in reducing earnings management is more significant. Besides, the findings of this study give implications to policymakers and market watchdogs that POEs are more likely than SOEs to manipulate earnings. However, this research has several limitations, including the limited timeframe, single research context, failure to consider other potential determinants of independent directors' performance, and failure to generalize the effectiveness of independent directors in other cases.

Keywords: SOEs, POEs, earnings management, corporate governance, principal-agent conflicts

ABSTRAK

China membuat pembaharuan penswastaan secara separa dan sedikit demi sedikit dan juga pentadbiran korporat secara bersiri seperti memperkenalkan pengarah bebas dan jawatankuasa audit dan juga pemulihan terhadap firma-firma audit, mengatasi ketidakcekapan yang berlaku didalam perusahaan-perusahaan milik negara. Pembaharuan ini telah menampakkan kemunculan dan peningkatan terhadap perusahaan-perusahaan milik persendirian dan membaik-pulih kecekapan pengurusan-perusahaan milik negara di China. Didorong dengan motivasi yang kuat oleh perusahaan-perusahaan milik persendirian untuk meguruskan pendapatan dan kesan pentadbiran korporat lebih berpotensi dalam perusahaan-peusahaan milik persendirian, kajian ini dikendalikan untuk mengkaji samada perusahaan-perusahaan milik negara China menjalankan pengurusan pendapatan yang lebih rendah berbanding perusahaan-perusahaan milik persendirian di China dan juga samada mekanisma pengurusan korporat (seperti lembaga bebas, jawatankuasa audit bebas dan juruaudit luar) boleh menyederhanakan perbezaan dalam pengurusan pendapatan di antara pengurusan-perusahaan milik negara dan perusahaan-perusahaan milik persendirian.

Kajian ini telah memilih 582 syarikat yang sahamnya berkelas A daripada Shanghai Stock Exchange (SHSE) dan Shenzhen Stock Exchange (SZSE) dari tahun 2015 sehingga 2018. Konsep kerangka kajian ini dapat disimpulkan berdasarkan teori agensi dan matlamat-matlamat tanpa keuntungan pengurusan-perusahaan milik negara. Hasil kajian menunjukkan bahawa pengurusan-perusahaan milik negara menjalankan pengurusan pendapatann aras rendah berbanding perusahaan-perusahaan milik persendirian di China. Penjelasan bagi fenomena ini adalah bahawa matlamat-matlamat tanpa keuntungan pengurusan-perusahaan milik negara dan perlindungan jangka panjang oleh kerajaan China secara tidak langsung meningkatkan konflik ejen-prinsipal dikalangan mereka, dan demikian mengurangkan motivasi pengurus-pengurus untuk memanipulasi pendapatan. Hasil kajian juga menunjukkan bahawa firma-firma ‘Big 4’ dapat mengurangkan jurang pengurusan pendapatan dengan berkesan di antara keuntungan pengurusan-perusahaan milik negara dan perusahaan-perusahaan milik persendirian. Ini menyebabkan konflik

ejen-prinsipal menjadi lebih teruk dan motivasi yang lebih kuat untuk mengurus pendapatan bagi perusahaan-perusahaan milik persendirian. Oleh iu, firma-firma 'Big 4' menghadapi kesan kekangan yang lebih tinggi terhadap pengurusan pendapatan perusahaan-perusahaan milik persendirian. Walau bagaimanapun, hasil kajian menunjukkan bahawa lembaga bebas dan jawatankuasa audit bebas tidak dapat mengurangkan jurang tersebut. Ini disebabkan pengarah-pengarah bebas gagal meningkatkan kebekesanan ahli lembaga dan jawatankuasa audit di negara China, dan fungsi pengarah-pengarah bebas dan jawatankuasa audit kedua-duanya saling bertindih dengan lembaga penyelia di dalam firma-firma di China.

Daripada sudut teoritikal, kajian ini memenuhi jurang penyelidikan dengan memberi gambaran jelas tentang hubungkait di antara struktur pemilikan, pentadbiran korporat dan pengurusan pendapatan. Kajian ini juga menambah teori agensi dengan menunjukkan bahawa kekerapan pengurusan pendapatan dan keberkesanan pentadbiran korporat di dalam kekangan pengurusan pendapatan berbeza-beza dengan keparahan konflik ejen prinsipal. Secara khususnya, penurusan pendapatan lebih berkecenderungan untuk berlaku, dan keberkesanan pentadbiran korporat dalam nengurangkan pengurusan pendapatan lebih ketara dalam firma-firma dengan konflik ejen-prinsipal. Disamping itu, dapatan dari kajian ini memberikan implikasi-implikasi untuk penggubal dasar dan pengawas pasaran yang mana perusahaan-perusahaan milik persendirian lebih cenderung berbanding pengurusan-perusahaan milik negara untuk memanipulasi pendapatan. Walau bagaimanapun, kajian ini mempunyai beberapa limitasi termasuk jangka masa yang terhad, konteks penyelidikan tunggal, kegagalan dalam pertimbangan lain keberkesanan potensi penentu oleh pengarah bebas dan juga kegagalan untuk menjadi ringkasan umum tentang keberkesanan pengarah bebas dalam semua kes.

Kata kunci: SOEs, POEs, pengurusan pendapatan, pentadbiran korporat, konflik ejen prinsipal.

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LIST OF ABBREVIATIONS

The abbreviations used in this study:

EM	Earnings Management
SOEs	State-owned Enterprises
POEs	Private-owned Enterprises
OECD	Organization for Economic Co-operation and Development
SHSE	Shanghai Stock Exchange
SZSE	Shenzhen Stock Exchange
HKSE	Hong Kong Stock Exchange
NYSE	New York Stock Exchange
NQSE	Nasdaq Stock Exchange
SEC	Securities and Exchange Commission
SASAC	State-owned Assets Supervision and Administration Commission
CSRC	China Securities Regulatory Commission
CICPA	Chinese Institute of Certified Public Accountants
CAS	Chinese Accounting Standards
IFRS	International Financial Reporting Standards
ST	Special Treatment
PT	Particular Treatment
SOX	Sarbanes-Oxley Act
CSMA	China's Stock Market and Accounting
VIF	Variance Inflation Factor
OLS	Ordinary Least Square
UK	United Kingdom
USA	United States of America
IIA	Institute of Internal Audit
ISA	International Standard on Auditing

CHAPTER 1: INTRODUCTION

1.1 Introduction

This chapter introduces this study. Section 1.2 and Section 1.3 present the research background and research problems. The relevant literature and research gaps are discussed in Section 1.4. Based on research questions and research gaps, Section 1.5 proposes two research questions, and Section 1.6 presents the research objectives aligned to the research questions. The motivations to conduct this study are discussed in Section 1.7. Then, Section 1.8 presents this study's findings, and Section 1.9 discusses the contributions of this study to practice and agency theory. Finally, Section 1.10 concludes this chapter.

1.2 Research Background

This section presents the research background of this study, including the privatization reforms and corporate governance reforms in China.

1.2.1 Privatization Reforms

In the post-war period, the role of SOEs in the national economy around the world has become increasingly prominent, including providing public goods and national defense, regulating the market, and acting as "national champions". However, the operating efficiency of SOEs is generally considered to be lower than that of POEs. Megginson and Netter (2001) pointed out that there are many reasons for this general thinking, including government intervention in the operations of SOEs, government's soft budget constraints on SOEs, lack of market competitiveness under government protection, and the inability

of SOEs' owners (i.e. the citizens) to sign complete contracts with managers to align their incentives with SOEs' goals fully. Therefore, both developed and developing countries have engaged in ambitious privatization reforms for several decades (Sheshinski & López-Calva, 2003).

Privatization involves selling off SOEs' assets to non-state owners. The privatization of SOEs is one of the most important characteristics of a country's market-oriented economic reform. The privatization of SOEs is usually regarded as an effective method to improve their efficiency, profitability and transparency. In 1979, the United Kingdom (UK) first privatized several of its SOEs. Many developed countries followed this trend and completed SOEs' privatization in the 1980s and 1990s. Privatization has led to a significant decline in state shares of their gross domestic production (Megginson & Netter, 2001; Sheshinski & López-Calva, 2003). Nevertheless, the importance of SOEs in their national economy and society has not declined (Hope & Vyas, 2017). For example, the Organization for Economic Co-operation and Development (OECD) points out that SOEs play essential roles in the key areas of its member countries, such as telecommunication, petrol and electricity (OECD, 2018).

In China, SOEs were set as a national basic production unit during the planned economy period from the 1950s to the 1980s. There were many management issues in SOEs during this period. First, SOEs undertook the functions of producing and distributing goods. They were also employed by the government as an important tool for planning and allocating resources. Therefore, SOEs did not have the autonomy to determine the types and quantities of goods to be produced, and their production decisions depended on

government policies and economic plans rather than price or profit targets. Second, SOEs usually maintain more employees to guarantee social employment, which led them to bear a heavy burden in ensuring employees' social welfare and reduced their profitability and economic benefits. Finally, the lack of market competition due to protection from the government and their multiple functions (i.e. commercial function and political function) resulted in chronic problems within SOEs during this period, such as low operating efficiency and low production (Song, 2018). Since 1979, China has begun its privatization reforms to tackle these obvious inefficiencies inherent in SOEs, which aims to enhance economic efficiency and strengthen the Communist Party's role in SOEs. A key measure of Chinese SOEs' reforms is to reduce state-owned assets by partially privatizing SOEs, such as reorganizing many SOEs and splitting their operating units into private limited liability companies (Zhang & Freestone, 2013; Holz, 2018).

However, compared with those developed countries such as the United States of America (USA), there are some differences in China's privatization reforms. First, despite the large-scale sale of the loss-making SOEs, China adopts a strategy of incomplete and partial privatization reforms (Zhang & Freestone, 2013). It is attributed to the government's reform goals that focus on establishing a market-oriented economy but still dominated by SOEs, thereby retaining the government's majority stake in SOEs. It is also based on the government's fears of tax losses and political instability. Second, unlike the former Soviet Union and the Eastern European countries that adopt rapid and widespread privatization reforms, China adopts a gradual strategy in reforming SOEs (Zhang & Freestone, 2013; Song, 2018). Since the Chinese government is concerned that privatizing SOEs in a short period may cause serious economic, social and political consequences, it

adopts trial-and-error measures to achieve the desired results and gain widespread support. These measures have led China to undergo four gradual stages in privatization reforms since 1979: the first stage (1979-1992) of giving SOEs autonomy through the contract responsibility system and competition, the second stage (1992-2003) of ownership reform (i.e. privatization) through the policy of "grasping the large, letting go of the small", the third stage (2003-2013) of restructuring large SOEs[1], and the fourth stage (2013-present) of the renewed mixed-ownership reform, function-based classification and corporate governance reform[2] (Zhang & Freestone, 2013; Song, 2018). Third, the developed countries mainly privatize healthy and profitable SOEs in privatization reforms to prove their reform successes (Megginson, Nash, Netter, & Poulsen, 2004), while China adopts an opposite strategy to privatize the state sector by selling small and underperforming SOEs to the public. In 2005, driven by corporate governance issues, such as related party transactions and transfer pricing (Lin, 2004), China initiated the split share structure reform that transferred the state shares, which cannot be traded publicly

[1] Mattlin (2007) pointed out that the logic behind this policy is "less is more.....by controlling a small part of all SOEs, the state can maintain disproportionate control over profits, investment and the national economy ". During this period, the merger and restructuring of SOEs have reduced the number of central SOEs from 196 in 2003 to 106 in 2016, with the largest number of SOEs in the industrial sector (Jefferson, 2016).

2 In 2015, the State Council issued a new guideline for SOE reforms. This guideline initiates the mixed-ownership reform, aiming to lower some industries' entry barriers, especially pillar and strategic sectors, thereby solving the problem of overinvestment of SOEs in these industries caused by soft budget constraints. Specifically, the overall strategy in the competitive industries is to allow both state-owned and private capital to participate in operations, while the overall strategy in the strategic industries is to maintain the state as a controlling shareholder but encourage private capital to participate (State Council, 2015).

For the first time, this guideline divided SOEs into two categories based on their functions: a public category and a commercial category. This classification method introduces a dual-track approach for evaluating SOEs' performance: the political logic dominates public SOEs' performance evaluation, while market logic dominates the performance evaluation of commercial SOEs. This dual-track approach helps correctly evaluate SOEs' performance and improve the efficiency of SOEs' performance evaluation.

This guideline also proposed the personal management reform in SOEs, which introduces market-based salary for managers holding government positions and enjoying lifetime job security. In 2017, the State Council issued a document that aims to guide SOEs to build a modern enterprise system, while strengthening the Communist Party' control over SOEs (State Council, 2017).

on the capital market, into tradable shares. This reform aimed to align the interests of controlling shareholders and minority shareholders and improve corporate governance. However, the Chinese government still only sold the stocks of underperforming SOEs as a punishment mechanism for government agents who failed to improve company performance (Liao, Liu, & Wang, 2014).

Since 1979, Chinese privatization reforms have gone through a long process and have been on a yet-to-be accomplished journey. China's state and private sectors have undergone dramatic changes over the past 40 years (1979-2019) of reforms, including the rapid development of POEs and the reduced government's control over SOEs in China. First, the privatization reforms have created conditions for the emergence and rise of POEs in China. According to the China Statistical Yearbook in 2017, the number of the Chinese SOEs declined steadily from 61,301 in 1999 to 18,806 in 2017, while the number of POEs continued to rise from 14,601 in 1999 to 222,473 in 2017, accounting for a larger proportion of the total number of Chinese companies (National Bureau of Statistics of China, 2017). Although the privatization reforms have improved many Chinese SOEs' productivity and financial performance, the overall performance of SOEs continues to decline, lagging behind private enterprises. Second, the government still holds massive shares of SOEs and retains considerable economic power over SOEs, but SOEs are now subject to greater market discipline and more autonomy. These changes help improve their operating efficiency and increase their output, allowing them to maintain a significant share of the national economy. For example, the Chinese SOEs accounted for about 40% of the total industrial assets in 2017 and dominated banking, financial and

other strategic industries (Zhang & Freestone, 2013; Song, 2018). In 2018 Fortune Global 500, 120 Chinese enterprises were on the list, which made China ranked second only to the USA with 126 companies. It is noteworthy that 83 of the 120 firms were SOEs compared to only 3 in 1997. It is noteworthy that many of them were prominent in the ranking. For example, State Grid, Sinopec and China National Petroleum retained their second, third and fourth rankings. Besides, China's big four state-owned banks, including Bank of China, Industrial and Commercial Bank of China, Agricultural Bank of China, and China Construction Bank, were also ranked among the top 10 profitable companies in 2018.

1.2.2 Corporate Governance Reforms

As the privatization reforms progressed, the new economic relations among diversified shareholders such as private, state and legal ownership in Chinese firms required a new corporate governance structure (Lai & Tam, 2017). However, China's corporate governance practices and market regulations were ineffective and lagged behind other developed countries at that time, because many old management styles and mechanisms of traditional SOEs were still retained in Chinese firms. Moreover, the government as controlling shareholder still owned about two-thirds SOEs' ownership in privatization reforms, which led to a new agency problem within Chinese companies: the interest conflicts between controlling and minority shareholders (Cheung, Jiang, Limpaphayom, & Tong, 2008). The highly concentrated ownership structure caused by the privatization reform policies empowers state shareholders to pursue their interests, which seriously damages the minority shareholders' interests. Thus, managers are motivated to

manipulate accounting information to cover up interest expropriation by majority shareholders through internal trading, related party transactions, and direct manipulation of financial statements. With the establishment of the Shanghai Stock Exchange (SHSE) in 1990 and the Shenzhen Stock Exchange (SZSE) in 1991 and continuous opening of capital market to international investors, corporate governance reform became a vital agenda in China. It was also driven by global investors who expect China's corporate governance standards to be compatible with international standards. The Chinese government, playing a leading role, carried out a series of reforms together with market participants to improve corporate governance and financial statements quality of Chinese companies and ensure investor confidence.

From establishing the two stock exchanges in the early 1990s until 1993, the local and central governments regulated China's capital markets complying to temporary administrative rules. To address the problems within the state sector, particularly the traditional SOEs, the National People's Congress promulgated the Company Law in 1993, which laid the legal foundation for corporate governance and provided a framework for corporate governance in China (Wang, 2006). Specifically, the Company Law (1993) incorporated a German-Japanese two-tier board system for Chinese firms and required them to establish a board of directors and a board of supervisors at the same time. The board of supervisors assumes the two primary responsibilities stipulated by the Company Law (1993), including supervising the board of directors and the management and reviewing financial affairs.

However, the board of supervisors usually failed to play an effective supervisory role as expected (Xiao, Dahya, & Lin, 2004). According to the China National Auditing Commission, more than two-thirds of the 1,290 largest SOEs in 2000 falsified accounts, and the illegal funds reached RMB1,000 billion. Many financial scandals since the late 1990s damaged investors' confidence in China's capital market. One of the most prominent scandals is the Yinguangxia case, which is usually referred to as a "China Enron" case. In May 2002, the China Securities Regulatory Commission (CSRC) confirmed that Yinguangxia inflated profits by about RMB 772 million from 1998 to 2001. In another scandal, China Life was found in December 2003 with $ 652 million financial irregularities. Driven by the stock market's critical role in the economy and the continuing corporate governance reforms in the Anglo-American countries such as the USA and the UK, Chinese regulators, particularly the CSRC, incorporated some corporate governance practices in the Anglo-American countries to supplement the function of the board of supervisors. China initiated its reforms by introducing new regulations and codes of corporate governance, which are usually employed as a means by the Anglo-American countries to carry out corporate governance reforms (Aguilera & Cuervo-Cazurra, 2004). One of the most important regulations that have attracted widespread attention is the "Guidelines for introducing independent directors to the board of directors of listed companies" issued by the CSRC in August 2001 (CSRC, 2001). The CSRC (2001) requires the board of directors of the Chinese listed firms to have at least one-third of independent directors by June 30, 2003. Before 2001, the earliest regulation published by the CSRC in 1997 only recommended Chinese listed firms to introduce independent directors and did not stipulate the ratio of board independence. The later

documents related to independent directors were published to guide foreign firms to list on the Chinese stock market (Lin, Xiao, & Tang, 2008). Therefore, the year 2001 marked the mandatory introduction of an independent director system for Chinese firms. As the independent director system was continuously improving, China was gradually considering introducing the audit committee into Chinese firms. The CSRC (2001) strongly recommends establishing an audit committee to enhance directors' oversight of accounting practices and financial reporting. The provisions advocated by the CSRC (2001) require that the audit committee independence of Chinese listed firms should be greater than 50 per cent. The requirements of CSRC (2001) for the board and the audit committee were further elaborated in the "Code of Corporate Governance for Listed Companies" in 2002 (CSRC, 2002), issued by the CSRC together with the National Economic and Trade Commission after China joined the World Trade Organization in 2001 and promised to introduce the Corporate Governance Principles published by the OECD in 1999.[3] The CSRC (2002) strictly adheres to the OECD Corporate Governance Principles and takes the circumstances and institutions in China and the issues of Chinese listed firms into consideration (OECD, 2011).

With the development of the auditing industry, the supervision of independent auditors is gradually employed by the government as an important corporate governance mechanism in the market-oriented economic reform. Before the 1980s, there was almost no independent auditing in China because Chinese companies were directly operated by the

[3] In 1999, the OECD issued Corporate Governance Principles, an international benchmark for corporate governance and laid the foundation for global corporate governance reforms (Jesover & Kirkpatrick, 2005). It provides policymakers, regulators, and market participants with specific guidelines for improving corporate governance and providing practical guidance for stock exchanges, investors, and companies.

state. However, the ownership's shift from the state sector to the private sector with the privatization reforms had increasingly promoted the demands for external auditors to solve the severe agency problems in Chinese firms (Lin & Liu, 2009). Moreover, China's opening-up policy in the early 1980s led to a growing number of foreign joint ventures, further increasing the demand for verification of capital contributions and the audited annual reports by private professionals (Xiao, Zhang, & Xie, 2000). Therefore, the Chinese government carried out a series of reforms to strengthen its auditing industry. Since 1980, China began to reestablish local audit firms. The establishment of the two stock exchanges in the early 1990s further promoted the local audit professions' development, because the annual reports of all Chinese listed firms are required by the CSRC to be audited by public accountants. To further promote the auditing industry's development, China gradually started introducing international accounting firms to its auditing market. In the early 1980s, China began to allow Big 8 (now Big 4) firms to set up representative offices in some cities, but only allowed them to provide consulting services to Chinese companies. By the mid-1980s, China encouraged international accounting firms to establish joint ventures with local professional auditors. The Chinese Institute of Certified Public Accountants (CICPA) finally allowed international accounting firms to establish member firms across China. International accounting firms have been actively gaining shares in China's auditing market by establishing more branch firms and merging sizeable local audit firms. For example, in 2002, Ernst & Young took over Dahua Certified Public Accountants to rapidly increase its shares in China's auditing market. However, compared with the USA's oligarch auditing market, China's auditing market is very competitive, and the market concentration of each audit firm is very low.

For example, by the end of 2004, the market share calculated by the number of customers of international and domestic big four firms were equal at about 10% (Chen, Chen, Lobo, & Wang, 2011).

1.3 Problem Statement

In China, the capital market's opening to global investors has increased stakeholder demand for higher-quality financial information (Firth, Fung, & Rui, 2007). Since the access to financial information of Chinese listed companies is limited, the usefulness and credibility of accounting information in their financial statements are very important for investors. In 2007, the Chinese government took the initiative to improve its regulatory framework by inducing the Chinese accounting system to converge with the International Financial Reporting Standards (IFRS).[4] It is noteworthy that earnings quality is an important element for the usefulness and credibility of accounting information, and excessive or deliberate earnings management would undermine financial information quality. However, earnings management is a pervasive phenomenon in China (Liu & Lu, 2007). Scandals about earnings manipulation by Chinese companies are frequently reported. For example, based on 2015 annual report of Chinese listed companies, China National Audit Commission surveyed 20 central SOEs' financial situation. It was found that 90% of these 20 central SOEs engaged in earnings manipulation. The inflated income

[4] Compared to the old rule-based Chinese Accounting Standards (CAS), the new CAS implemented in 2007 is claimed to be substantially aligned with the IFRS by the Chinese Ministry of Finance. It covers nearly all the topics under the current IFRS/IAS. There are two substantial changes in the new CAS. First, more principle-based accounting standards with less specific accounting guidance limit management's opportunistic discretions in choosing accounting policies. Second, fair value measurement, which could incorporate more timely information on economic gains and losses, is adopted in the new CAS.

of these SOEs totaled RMB 210 billion. Representative companies in many critical industries such as petrol and steel were on the list.

The rampant earnings management in China is attributed to the weak legal protection for investors and the CSRC's heavy reliance on accounting numbers to regulate listed firms. Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998) claimed that countries such as China with a legal system originating from the French's civil law provide shareholders and creditors with the weakest legal protection. Later, Allen, Qian, and Qian (2005) found that China's protection for creditors and shareholders is even worse than many major emerging markets. In the USA, legal actions against companies include both civil actions (the main factors affecting the conduct of USA companies) and criminal actions. However, civil litigation is rare in China, and the CSRC is delegated as the prime discipliner and regulator. Besides, the CSRC mainly regulates the stock market based on strict accounting performance thresholds, motivating Chinese firms to manage earnings to meet the regulatory requirements for performance. First, the CRSC requires a listed firm to be eligible for rights offering if it maintains a return on equity of 6% for at least three years and the three-year average return on equity is not less than 10%. After the initial public offering, Chinese listed firms mainly get additional financing from the capital market through the rights offering. These requirements motivate the firms with needs for funding to manage earnings to meet or exceed the regulatory thresholds. Their opportunistic behaviors on earnings management in response to these thresholds have been found in

many academic studies, such as Chen and Yuan (2004), Chen, Chen, and Su (2001), and Haw, Qi, Wu, and Wu (2005). Simultaneously, the CSRC adopts a delisting system based on the performance thresholds to protect minority shareholders. In 2001, the CSRC required to terminate the listing right of listed firms that had generated 4-consecutive-year losses, which marked that the delisting system was officially launched in China. By 2012, the SHSE and SZSE announced a new delisting system. Specifically, the stock exchanges classify the listed firms with a negative net income for two consecutive years as "Special Treatment" (ST) companies to warn investors of the delisting risk, while classifying companies with a negative net income for three consecutive years as "Particular Treatment" (PT) companies and suspending their shares' trading on the stock market temporarily. If the PT firms' profits continue to be negative in the fourth year, their listing will be terminated. The temporary suspension of listing and permanent delisting mean that the listed firms will lose access to obtain capital from the stock market. Therefore, Chinese listed companies, especially those with earnings around zero, are motivated to manage earnings to avoid reporting negative operating profits.

Previous studies have shown that the different management objectives between SOEs and POEs led to different strength of earnings management motivations (e.g., Liu & Lu, 2007; Yang, Chi, & Young, 2011; Chen et al., 2011). In China, according to the State Council regulations, the Chinese SOEs need to bear the responsibilities of fully implementing the national strategic plan, promoting the development of the national economy and serving the public. Although these activities are usually non-profit, the Chinese government

provides SOEs with much more support than POEs to help SOEs achieve these social and political goals. For example, Chinese SOEs can obtain more financial support from the local government because the local SOEs' success can bring more resources to the local economy (Li & Zhou, 2005). The non-profit goals and government protection help reduce the incentives of Chinese SOEs to manipulate earnings to report good performance. In contrast, the main goal of Chinese POEs is to maximize profit, which motivates their managers more concerned about the company's operating performance. Since performance is usually evaluated based on the reported earnings in POEs, managers are motivated to report a better-than-actual performance through earnings management. Moreover, due to the lack of government protection and financial support, they must improve the reported earnings to assure capital market and performance-based transactions such as debt contracts. Since the specific application of accounting standards in financial reporting involves judgments and discretions, preparers with different goals may choose different accounting policies, which results that the same set of accounting standards produces different results (Burgstahler, Hail, & Leuz, 2006). It is expected that the Chinese POEs' stronger earnings management motivations lead them to exercise more opportunistic discretions in financial reporting to increase the reported earnings. It is possible because the new Chinese Accounting Standards (CAS) in 2007 has brought the Chinese accounting system more convergent to the principle-based IFRS. Along with China's economic reforms, many companies previously owned by the state had been corporatized and listed on the stock market. The increasing trend towards POEs going public and their growing economic importance in China suggest the importance of

examining whether the Chinese POEs and SOEs perform differently in managing earnings and what factors can narrow the difference between the two groups.

Regulators around the world have initiated corporate governance reforms by issuing corporate governance regulations to reduce agency conflicts and improve the transparency in financial reporting, such as the Blue Ribbon Committee (1999) and Sarbanes-Oxley Act (SOX) (2002). Drawing on the global corporate governance reform trend, the CSRC (2001)'s requirements for board independence and audit committee independence and external auditors independent from internal governance are expected to constrain the earnings management of Chinese firms. However, several studies documented that compared to Chinese SOEs, China's corporate governance reforms usually have more influences on Chinese POEs (e.g., Berkman, Cole, & Fu, 2010; Conyon & He, 2011; Li, Wang, Cheung, & Jiang, 2011; Tang, Du, & Hou, 2013). For example, Berkman et al. (2010) studied the effectiveness of the three provisions, which were issued by the CSRC in 2000 and aimed to improve protection for minority shareholders. They found that these three new regulations help reduce the principal-agent interest conflicts within Chinese firms. However, this effect is more significant in private-controlled firms than in state-controlled firms. Beltratti and Bortolotti (2006) found that the split share structure reform in 2005 positively affects Chinese listed companies' stock prices, but the companies that transformed non-tradable state shares into tradable shares experience more positive stock price reactions during the reform. These previous studies give rise to consider whether the impacts of the corporate governance reforms are more significant in the Chinese POEs. The following two aspects further promote the thinking about this issue. First, SOEs and POEs have different strength of earnings management

motivations. POEs have stronger earnings management motivations than SOEs due to the lack of government protection and financial support. Consequently, corporate governance plays a more influential role in reducing their earnings management. Second, the same regulations may have different impacts on companies with different ownership structure and agency relations. It is noteworthy that the government-dominant corporate governance reforms are carried out in different contexts worldwide, but these reforms usually provide the same guidance on corporate governance for different firms. As Solomon (2010) pointed out the principle of establishing the board that "one size cannot fit everyone", it is necessary to think about whether the same guidance would similarly affect the quality of financial statements across companies with different characteristics. In China, the legal protection for investors is weak (Allen et al., 2005), and corporate governance is expected to solve the agency conflicts by supplementing this weak legal system. This case prompts the necessity to conduct more empirical studies to understand whether corporate governance mechanisms, such as board independence, audit committee independence and external auditors, exert different impacts on earnings management of the Chinese SOEs and POEs. This insight will provide implications for regulators as to whether corporate governance has different effectiveness in improving the quality of financial statements across firms with different ownership structures.

1.4 Research Gap

Existing research has conducted extensive comparative studies on the performance of SOEs and POEs (e.g., Gunasekarage, Hess, & Hu, 2007; Le & Buck, 2011; Yu, 2013; Phung & Mishra, 2016). Compared to this research stream, the difference in the incidence

and extent of earnings management between SOEs and POEs has been less examined (Capalbo, Marco, & Smarra, 2018). The existing studies also provide controversial evidence on the relationship between ownership structure and earnings management in China. On the one hand, some research found that state ownership positively impacts earnings management (e.g., Shao & Zhang, 2009; Ji, Ahmed, & Lu, 2015). It is mainly attributed to the "tunnelling effect" that controlling shareholders (i.e. the government) expropriate company resource, which is driven by the separation of their control rights (voting rights) and ownership (cash flow rights) (Shao & Zhang, 2009; Ji et al., 2015).[5] The weak corporate governance within SOEs also provides their managers more opportunities to manipulate earnings, such as government intervention in corporate governance (Chafen & Zhiwen, 2008), information asymmetry caused by the multi-level principal-agent relationships (Song, 2018) and the undermined board independence by state or state-affiliated persons. On the other hand, some studies found that SOEs perform fewer earnings management than POEs (e.g., Ding, Zhang, & Zhang, 2007; Wang & Yung, 2011; Zeng, 2014; Kim, 2018). Besides, some academic studies even found the lower level of earnings management of SOEs than POEs around the specific events, such as China's IFRS adoption in 2007 (Wang & Campbell, 2012), the China's tax system reform in 2007 (Zeng, 2014) and initial public offerings (e.g., Aharony, Wang, & Yuan, 2010; Cheng, Wang, & Wei, 2015). Previous research attributes their findings to the government's protection for the state sector, which weakens SOEs' incentives to

[5] "*Regulations on the Administration of State-owned Asset*" clearly states that state-owned assets belong to the state, and the State-owned Assets Supervision and Administration Commission (SASAC) affiliated to the State Council or local governments acts as investors on behalf of the state. Therefore, in Chinese SOEs, the state as the ultimate investor has cash flow rights, while SASACs as the agent of capital contributors have control rights but no actual cash flow rights.

manipulate earnings management to assure capital market (e.g., Ding et al., 2007; Wang & Yung, 2011). In contrast, the needs of POEs to obtain finance from the capital market motivate them to meet the CSRC's performance thresholds for rights offering by earnings management (Cheng et al., 2015; Kim, 2018). To conclude, it is far from clear whether SOEs and POEs perform differently in earnings management in China.

Global corporate governance reforms have stimulated many studies to examine whether corporate governance mechanisms help constrain opportunistic earnings management and improve earnings quality in the financial statements. The existing research has paid great attention to the relationship between the board and earnings management. Many studies have found that board independence can help reduce aggressive earnings management (e.g., Klein, 2002; Garcia Osma, 2008; Peasnell, Pope, & Young, 2005; Visvanathan, 2008; Cornett, McNutt, & Tehranian, 2009; Chen, Cheng, & Wang, 2015). The audit committee has also attracted wide attention in the studies on earnings management. Its effective role in reducing earnings management has been documented in the existing research (e.g., Klein, 2002; Davidson, Goodwin-Stewart, & Kent, 2005; Bédard, Chtourou, & Courteau, 2004; Xie, Davidson, & DaDalt, 2003; Benkel, Mather, & Ramsay, 2006; Gallery, Hutchinson, Percy, & Erkurtoglu, 2008; Chang & Sun, 2009; Prawitt, Smith, & Wood, 2009; Kent, Routledge, & Stewart, 2010). Moreover, many studies have found the significant role of external auditors, as a vital external governance mechanism, in constraining earnings management (e.g., Becker, DeFond, Jiambalvo, & Subramanyam, 1998; Krishnan, 2005; Fan & Wong, 2005; Francis & Wang, 2008; Rusmin, 2010; Gerayli, Yanesari, & Ma'atoofi, 2011; Alzoubi, 2016; Alhadab & Clacher,

2018; Alzoubi, 2018). However, the existing research usually sets board independence, audit committee independence or external auditors as separate exploratory variables to investigate how they affect earnings management individually. Therefore, how the ownership structure and these three corporate governance mechanisms jointly affect earning management are still largely under-explored. This makes it unclear whether board independence, audit committee independence and external auditor have different effects on earnings management of firms with different ownership structures.

1.5 Research Questions

Therefore, this study's research questions are postulated as follows:

1. Do the Chinese SOEs perform a lower level of earnings management than the Chinese POEs?

2. Do board independence, audit committee independence and external auditors moderate the relationship between ownership structure and earnings management in China?

1.6 Research Objectives

Accordingly, this study's objectives are as follows:

1. To examine whether the Chinese SOEs engage in fewer earnings management practices than the Chinese POEs;

2. To investigate whether board independence, audit committee independence and external auditors moderate the relationship between ownership structure and earnings management in China.

1.7 Research Motivations

This research is conducted based on the research problems highlighted in the previous discussions. Accordingly, there are several motivations to conduct this research, which shall be further deliberated in the following discussions.

First, as the world's largest trader, China has accounted for more than 10% of global trade since 2013 (Anderlini & Hornby, 2014). According to the OECD Trade Policy Paper, which studied the world's 2,000 largest public companies, China has 70 of the 204 largest SOEs in the world, accounting for 26% of China's gross national income in 2011. Moreover, China's stocks were added to the Morgan Stanley Capital International Emerging Markets Index (accounting for 31.3% of the index) in May 2018 due to its growing importance in the global economy. The issues regarding the earnings quality of Chinese listed firms are attracting wide attention. Unlike other developed countries, China's trade and economy are mainly driven by SOEs, although the importance of POEs has increased with the privatization reforms. Thus, investors need to understand Chinese SOEs' earnings quality. Policymakers should take corresponding measures in the privatization reforms to promote China's stock market development.

Second, the different settings of SOEs and POEs in China during the ongoing economic reforms provide a background for comparing the incidence and occurrence of earnings management between SOEs and POEs. In China, SOEs and POEs differ in agency relations due to their different goals and government policies. As a result, their managers have different strengths of earnings management motivations in preparing financial statements. Specifically, the Chinese government takes SOEs as a tool to improve its

national power and adopts many measures to increase their competitiveness, especially in today's increasingly fierce competition for trade and technology with other countries. For example, there are many problems in listing SOEs on the Hong Kong Stock Exchange (HKSE), such as long-term slump in share sales, lower share price and additional costs for auditing and disclosure. Under the Chinese government's efforts to strengthen its industrial base, a growing number of SOEs, such as China Agri-Industries Holdings and Huaneng Renewables, delist from the HKSE to turn their attention to enhance core business in the mainland. Therefore, Chinese SOEs' managers pay more attention to the realization of social and political goals. In contrast, since the primary business goal of POEs is to maximize profit, their managers pay more attention to financial performance. Besides, in the absence of government protection and financial support, they are more likely than SOEs to go bankrupt when they perform poorly.

Third, China's corporate governance reforms provide a natural experiment for investigating the impacts of corporate governance on earnings management and their different effects on earnings management in firms with different ownership type. The CSRC (2001) marked China's formal introduction of the independent director system and audit committee into Chinese companies. Almost all companies complied with the requirements within two years after implementing the CSRC (2001). Although global corporate governance reforms are usually carried out through the promulgation of strict rules, it is controversial whether such strict rules improve corporate governance and financial statements quality because more stringent *de jure* requirements for corporate governance may not strengthen *de facto* corporate governance (Lai, 2011). Therefore, it is crucial to examine whether the CRSC (2001)'s strict requirements have helped improve

financial information quality as desired. Moreover, the Chinese government reestablished audit firms since 1980 and subsequently allowed joint ventures with international Big 4 firms in China to enhance the corporate governance of Chinese firms. Big 4 firms have performed better than non-Big 4 firms in detecting and constraining earnings management in other contexts where the auditing industry is more developed, such as the USA (e.g., Francis & Wang, 2008; Krishnan, 2005; Jordan, Clark, & Hames, 2010) and the European countries (e.g., Alzoubi, 2016, 2018; Alhadab & Clacher, 2018). It is important to examine whether international Big 4 firms are also more likely than local audit firms to detect and constrain earnings management in China with a relatively underdeveloped auditing industry. However, the research on the impacts of corporate governance on earnings management should take the ownership structure into account because there are different agency conflicts and earnings management motivations between SOEs and POEs. Therefore, this study is motivated to study whether board independence, audit committee independence and Big 4 firms differently impact earnings management of firms with different ownership structures (i.e. private and state-owned).

Fourth, the weak legal protection for investors in China makes it important to examine corporate governance's effectiveness in improving accounting information quality. China has a weak legal protection system for shareholders' interests (Tam, 2002). In the USA, civil litigation is the main factor that constrains managers' opportunistic behaviors which are detrimental to shareholders' interests. However, the legal protection for shareholders is relatively weak in China, because the relevant laws such as the Company Law (1993), the Chinese Criminal Law (1997) and the Securities Law (1998) relatively ignored civil liability and compensation and did not provide an enforceable civil litigation procedure

(Lin, 2004). Therefore, corporate governance is expected to complement the weak legal protection environment for investors in China.

1.8 Findings

This study found that Chinese POEs and SOEs perform differently in earnings management. Specifically, POEs perform a higher level of earnings management than SOEs in China. This is because the Chinese SOEs' non-profit social and political goals and the government's support and protection have alleviated the principal-agent interest conflicts within them, thereby reducing their managers' incentives to manipulate earnings.

This study also found that Big 4 firms can significantly reduce the divergence in earnings management between the Chinese SOEs and POEs. This is because Big 4 firms perform better in reducing earnings management of POEs with more severe principal-agent interest conflicts and stronger earnings motivations than SOEs. However, this study found that board independence and audit committee independence cannot narrow this difference. The reasons are that independent directors fail to improve the effectiveness and monitoring of the board and the audit committee in China, and the board of supervisors' functions overlap with independent directors and the audit committee in Chinese firms.

1.9 Contributions

First, this study expands the existing research by examining the relationships among ownership structure, corporate governance and earnings management in the context of China. It is among the few research investigating how ownership structure affects earnings management individually or jointly with corporate governance. This study's

findings make it clear that earnings management and the constraining impacts of corporate governance on earnings management vary cross-sectionally between SOEs and POEs with different agency relations. It provides implications for future studies that the assumption that corporate governance's effectiveness in reducing earnings management is similar cross different firms would lead to erroneous conclusions.

Second, this study complements agency theory by pointing out that the incidence of earnings management and the corporate governance' effectiveness in constraining earnings management varies with the strength of earning management motivations caused by the severity of principal-agency interest conflicts. This study's results verify that POEs with more serious agency conflicts than SOEs perform more earnings management, and Big 4 firms perform better in constraining POEs' earnings management.

Third, this study's findings suggest that board independence and audit committee independence have no impacts on earnings management even in the Chinese POEs where principal-agent conflicts are more severe, and earnings management motivations are stronger than in the SOEs. Instead, this study suggests that Big 4 firms perform more effectively in constraining Chinese POEs' earnings management. This is because that the regulatory requirements of the CSRC (2001) for board independence and audit committee independence have yielded limited benefits to improve the board and the audit committee's effectiveness in improving financial information quality, and both the functions of independent directors and the audit committee overlap with the board of supervisors within Chinese firms.

The findings can give the Chinese government implications to take corresponding measures to improve the effectiveness and monitoring of the board and the audit committee and promote the development of local auditing professions, thereby enhancing corporate governance and financial statement quality. This is conducive to attracting more attention from domestic and foreign investors to China's capital market. The corresponding measures can include raising the regulatory thresholds of both board independence and audit committee independence, strengthening the independent directors' qualification certification, enhancing market supervision and minimizing the overlapping functions of the audit committee, independent directors and the board of supervisors by redesigning their functions appropriately.

Fourth, industry watchdogs such as regulators, investors and auditors have always focused on earnings management because excessive earnings management negatively impacts the company and erodes market participants' confidence. For example, the findings can attract regulators to pay more attention to the private sector, where the principal-agent conflicts are more severe and the incidence of earnings management is higher than in the state sector, and take corresponding measures to reduce its opportunistic earnings management. This study also gives implications to investors that ownership structure and corporate governance should be taken into their investment decision-making. The higher reported earnings of POEs may be caused by their aggressive earnings management, while Big 4 firms can effectively reduce the difference in earnings management between POEs and SOEs. For auditors, this study's findings can guide

external auditors to increase vigilance when auditing the POEs' annual reports and improve their effectiveness in detecting opportunistic earnings management.

1.10 Chapter Summary

This chapter mainly introduces this study. The remainder of this study is organized as follows.

Chapter 2 reviews the existing research on the relationships among ownership structure, corporate governance and earnings management. This chapter also identifies and presents the research gaps accordingly.

Chapter 3 first deduces the study's conceptual framework based on agency theory and the characteristics of SOEs. This chapter further presents the discussions surrounding the previous studies to develop the hypotheses aligned with the research objectives.

Chapter 4 discusses this study's research methodology, including data collection, sampling, variable measurement, empirical model and data analysis method.

Chapter 5 clarifies the data analysis process of the study and presents the results.

Chapter 6 discusses the findings of the study.

Chapter 7 summarizes the study. The study's contributions and limitations will be discussed in this chapter.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter reviews the previous studies and sorts out the research gap. Section 2.2 reviews the literature on the relationship between ownership structure and earnings management. The existing literature on the impacts of board independence, audit committee independence and external auditor on earnings management is discussed in Section 2.3. Finally, Section 2.4 identifies the research gaps and summarizes this chapter.

2.2 Ownership Structure and Earnings Management

The existing research has extensively examined how the frequency and incidence of earnings management are related to ownership structure, such as family ownership, institutional ownership and managerial ownership (e.g., Hart 1995; Warfield, Wild, & Wild, 1995; Teshima & Shuto, 2008; Jiraporn & DaDalt, 2009; Jiambalvo, Rajgopal, & Venkatachalam, 2002). Therefore, research that examines how state/private ownership influences earnings management will complement this research stream. Such research is gradually increasing (e.g., Burgstahler et., 2006; Capalbo, Frino, Mollica, & Palumbo, 2014; Poli, 2015; Ben-Nasr, Boubakri, & Cosset, 2015). Some studies have explored the impact of state ownership on the earnings management of Chinese firms. However, the existing literature provides controversial evidence on how state ownership affects the earnings management of Chinese firms. Therefore, it is still unclear whether SOEs perform fewer earnings management than POEs in China.

2.2.1 Studies Supporting a Positive Relationship between State Ownership and Earnings Management

Some studies found that state ownership has a positive impact on earnings management. For example, although Ding et al. (2007) found that compared with Chinese POEs, ownership concentration's entrenchment effect on earnings management is greater in Chinese SOEs. Shao and Zhang (2009) selected a sample of Chinese SOEs and POEs from 2003 to 2006. Their empirical data shows that the proportion of shares held by state controlling shareholders positively relates to earnings management. In contrast, the percentage of shares held by other minority shareholders is negatively associated with earnings management. Liu (2009) studied how state ownership affected income informativeness based on 5,238 Chinese firm-year observations between 2001 and 2005 and obtained the same finding that state ownership undermines income informativeness. Ji et al. (2015) found that the split share structure reform in 2005 fails to reduce earnings management of the privatized SOEs. This is because state controlling shareholders still maintain decision-making power over the privatized SOEs, although the reform help increase the tradability of state shares.

Several factors are proposed by previous studies to explain why state ownership promotes earnings management, such as the high degree of information asymmetry (Song, 2018), the severe interest conflicts between the controlling and minority shareholders (e.g., Ding et al., 2007; Shao & Zhang, 2009; Ji et al., 2015), and the relatively weak corporate governance (e.g., Chafen & Zhiwen, 2008; Leutert, 2016; Zhuang, 2017). First, there is a high degree of information asymmetry in the Chinese SOEs arising from the multi-level

principal-agent relationships between governments at different levels and SOEs' executives (Song, 2018), which results in their more opportunities to perform opportunistic earnings management.

Second, the interest conflicts between controlling and minority shareholders of Chinese SOEs is an important factor in stimulating earnings management, and the separation of voting rights and cash flow rights of controlling shareholders further strengthens this incentive. China reopened its stock market in the early 1990s to raise funds for SOEs and improve their performance. However, the state still maintains full or partial control of the state sector and the ownership of listed SOEs mainly concentrates in state shares. Therefore, the managers appointed by the government often take actions that benefit the largest shareholder. As the controlling shareholder, the government can pursue its interests in various ways, including politically-desirable projects (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2002), related party transactions (Cheung, Jing, Lu, Rau, & Stouraitis, 2009) and strengthening their power in the board (Fan, Wong, & Zhang, 2007). As the regulator of SOEs, the government can even formulate policies conducive to its interests, thereby further promoting their tunneling activities (Leutert, 2016). Therefore, the SOEs' managers are motivated to cover up the damage to enterprises and minority shareholders' interests by earnings management. Compared with POEs whose shareholders own proportional cash flow rights, the incentives to manipulate earnings are enhanced by the separation of controlling shareholders' voting and cash-flow rights in SOEs, because the controlling shareholders believe that the loss of a company's value caused by benefits expropriation is far less than the gain transferred to themselves.

Third, the relatively weak corporate governance within the Chinese SOEs is also an important driving force of their earnings management activities. Although China has been committed to the de-administration reform of SOEs since 2000, SOEs' senior executives are still mainly appointed by the government. Since the state or state-affiliated legal persons are the largest shareholders in most cases, the delegated representatives who control the board significantly damage board independence (Liu, 2006), which brings more opportunities for SOEs to manage earnings. Moreover, the directors and managers are encouraged to have cross-holding positions in the two parallel governance structures of SOEs (i.e. legal governance based on the Company Law of 1993 and political governance dominated by the Communist Party), resulting in that the state holds the real control of SOEs. Chafen and Zhiwen (2008) pointed out that the government intervention and the lower debt constraints have resulted in the lower earnings quality of Chinese SOEs, which indicates that it is crucial to improve SOEs' earnings quality by improving internal governance, such as strengthening the internal oversight mechanisms and reducing the interference of government controlling shareholders. Zhuang (2017) proposed that Chinese SOEs' corruption and low operating efficiency make them more likely to perform accounting manipulation. Leutert (2016) pointed out that since the state is both SOEs' regulator and controlling shareholder, they can influence the policymaking process to maximize their interests. Chen, Lee, and Li (2008) found that the Chinese government helps the listed SOEs increase their earnings by providing various government subsidies to meet the regulatory thresholds for rights offering and delisting, thereby avoiding the central government's supervision. This phenomenon is particularly severe among local government and listed SOEs, because the listing status and good

performance of local listed SOEs can attract more capital and promote local economic development. Moreover, the promotion of government officials is affected by local economic development, promoting government officials' support for the earnings management of local listed SOEs.

2.2.2 Studies Supporting a Negative Relationship between State Ownership and Earnings Management

Some studies have found that the level of earnings management of Chinese SOEs is lower than that of Chinese POEs (e.g., Ding et al., 2007; Bo & Wu, 2009; Wang & Yung, 2011; Zeng, 2014; Kim, 2018; Guo & Ma, 2015). Ding et al. (2007) examined whether ownership structure influences earnings management in China. They selected 273 Chinese POEs and SOEs and found that compared with the SOEs, the POEs perform more earnings management. Their findings are contrary to the popular belief that state ownership would compromise corporate governance and financial statements quality because of government control and corruption. Both Ding et al. (2007) and Wang and Yung (2011) attributed their findings to the government protection for SOEs, which reduces their incentives to influence capital market participants through manipulating accounting information.

Some studies also found the weaker incentives of the Chinese SOEs than POEs to manipulate earnings around specific events in which the principal-agency interest conflicts are more likely to occur. For example, to avoid endogenous problems related to sample selection bias and different company characteristics proposed by Megginson and Netter (2001), Kim (2018) took the split share structure reform in 2005 as the background

and examined how ownership structure and earnings management are correlated by studying the influence of the changes in state shares' tradability on earnings management. Specifically, Kim (2018) studied the changes in earnings management of a group of SOEs converted into POEs during the share structure reform and found that these privatized SOEs driven by the external financing needs behave more aggressively in earnings management. In the study of Wang and Campbell (2012), they examined the firm's earnings management behaviors around China's introduction of IFRS in 2007. They found that the introduction of IFRS fails to constrain the opportunistic earnings management behaviors of the sample of 1,329 Chinese listed firms from 1998 to 2009. However, state ownership restricts their earnings management to some extent. Zeng (2014) studied the impact of China's 2007 accounting system reform on earnings management, which reduced the corporate income tax rate from 33% to 25%. Their empirical data shows that Chinese firms shift profits from 2007 to 2008 to save taxes, and state ownership plays a constraining effect on their behaviors. Cheng et al. (2015) used 437 initial public offering companies from 2003 to 2009 as a sample to study their earnings management behaviors around the initial public offering in China and explore whether the level of earnings management differs between SOEs and POEs. They found that in China's weak regulatory environment, these companies manipulate earnings actively around the initial public offering to meet the thresholds of earnings for the initial public offering set by the CSRC. However, compared with POEs, SOEs perform a lower level of earnings management, which indicates that compared with the weaker regulatory environment, SOEs' relatively lower incentives to manipulate earnings dominate their fewer earnings management than POEs around the initial public offering. Aharony et al. (2010) also pointed out that the

initial public offering is affected by non-financial indicators such as political relations and policies. SOEs have more opportunities to obtain initial public offering qualifications. Thus, they are less likely to be driven to manage earnings around the initial public offering. Besides, their earnings management incentives are alleviated by their more opportunities to get loans from the state-owned banks after the initial public offering (Brandt & Li, 2003).

2.3 Corporate Governance and Earnings Management

Corporate governance is a set of mechanisms to balance shareholder rights and management control (Denis & McConnell, 2003). Corporate governance can effectively reduce agency cost by aligning managers and shareholders' interests and supervising the management. Watts and Zimmerman (1986) pointed out that in preparing financial statements, corporate governance can reduce opportunistic activities that undermine financial information quality, thereby providing investors with information about the company's actual operating results. For example, a good corporate governance mechanism can effectively monitor financial reporting and reduce opportunistic earnings management behaviors (e.g., Kelin, 2002; Chang & Sun, 2009; Garcia-Meca & Sanchez-Ballesta, 2010). Internal corporate governance mechanisms, such as the board and the audit committee, have received extensive attention in earnings management research. Many studies have verified that higher board independence (e.g., Klein, 2002; Garcia Osma, 2008; Chen et al., 2015) and an independent audit committee (e.g., Klein, 2002; Mendez & Garcha, 2007; Chang & Sun, 2009) would help reduce opportunistic earnings management behaviors. Besides, the principal-agent interest conflicts and the information

asymmetry between the preparers and external users of financial statements have also triggered the need for external corporate governance to independently monitor financial reporting. The existing research has extensively verified the effective role of external auditors in constraining earnings manipulation (e.g., Fan & Wong, 2005; Francis & Wang, 2008; Alhadab & Clacher, 2018).

2.3.1 Board Independence and Earnings Management

Corporate governance aims to ensure that a company's assets are effectively managed and reduce all possible expropriation of these assets, thereby protecting investors' interests (Shleifer & Vishny, 1997). The board of directors undertakes the responsibilities to make decisions and play a critical role in corporate governance (Fama & Jensen, 1983). Mather and Ramsay (2006) also pointed out that the board can effectively monitor the management and establish other instruments to solve agency problems. However, whether the board can perform well depends on its independence of management in supervising of the company's operation (Fama, 1980; Beasley, 1996; Dechow, Sloan, & Sweeney, 1996). The degree of board independence is determined by the ratio of independent directors in the board (Wang & Campbell, 2012). Although internal directors can more easily obtain information about the organization's internal activities and promptly discover the operational problems and frauds, they are more likely to cooperate with management to expropriate the company's interests. However, in the case of principal-agent interest conflicts, supervision from independent directors can provide maximum protection to shareholders (Baysinger & Butler, 1985). To maintain their reputation, independent directors actively perform their duties and play an effective

supervisory role to ensure that the management acts in a responsible manner (Fama, 1980; Fama & Jensen, 1983). They also provide strategic guidance to the board to improve the quality of its decisions (Zahra & Pearce, 1989).

Agency theory proposes that independent directors can strengthen board independence, which can effectively monitor and control opportunistic behaviors in the case of the separation of ownership and management (Jensen & Meckling, 1976). The resource dependence theory also points out that independent directors have professional knowledge and social connections, and advocates that the board should appoint more independent directors (Kesner & Johnson, 1990). Driven by the critical role of independent directors, board independence is clearly stipulated by many corporate governance standards. For example, the Cadbury Report (1992) recommends all UK listed companies to appoint at least three non-executive directors in the board, and at least two of them are independent directors. They are also required to have no business or other relationships with the company that seriously interfere with their judgment. In the USA, after several financial reporting scandals such as WorldCom and Enron, the New York Stock Exchange (NYSE) proposed a new rule in 2002, which requires that the board of the USA listed firms should consist of a majority of independent directors. The Securities and Exchange Commission (SEC) approved this new rule in 2003 and required all the USA listed firms to comply with this new rule from 2004. In China, the CSRC (2001) requires the Chinese listed firms to establish a board with at least one-third of independent directors and required them to be independent of the company and not hold any other company positions.

Many previous studies found the effective role of board independence in reducing the earnings management of USA and UK firms (e.g., Klein, 2002; Visvanathan, 2008; Cornett et al., 2009; Chen et al., 2015; Peasnell et al., 2005; Garcia Osma, 2008). This finding supports the policy statements issued by the USA and the UK to increase the ratio of independent directors in the board. Klein (2002) analyzed 692 USA firm-year observations and found that board independence is negatively related to abnormal accruals. Moreover, as board independence decreases, the abnormal accruals increase greatly, especially in firms with a board composed of minority independent directors. Chen et al. (2015) studied whether the USA listed companies' earnings quality has been improved after the NYSE's regulatory reform in 2002, which requires the board of USA firms to be composed of a majority of independent directors. They divided 1,587 sample companies from 2000 to 2005 into compliant companies, which met the regulatory requirement before the reform, and non-compliant companies, which met the regulatory requirement after the reform. A comparative analysis of the two groups' changes in earnings management around the reform suggests that compared with the compliant companies, these non-compliant companies' earnings management have been significantly reduced. Besides, they found that a rich information environment can improve independent directors' supervision. Peasnell et al. (2005) studied how board independence is related to earnings management in UK listed companies. They analyzed the data from a group of UK firms from 1993 to 1996 and found that board independence negatively correlates with abnormal accruals. Based on 3,438 firm-year observations of UK firms from 29 industries during 1989 and 2002, Garcia Osma (2008) examined the effectiveness of board independence in constraining real earnings management activities

through manipulating research and development expenditures. The empirical evidence shows that board independence helps constrain real earnings management. Studies conducted outside the USA and the UK have also found similar evidence that higher board independence can effectively reduce earnings management, such as Australia (Visvanathan, 2008; Cornett et al., 2009; Chen et al., 2015), Portuguese (Alves, 2014), South Korea (Kim & Yoon, 2008; Kang & Kim, 2012), Milan (Marra, Mazzola, & Prencipe, 2011), India (Sarkar, Sarkar, & Sen, 2008), Iran (Roodposhti & Chashmi, 2010) and Nigeria (Uwuigbe, Peter, & Oyeniyi, 2014). Overall, the findings of the previous studies confirm that independent directors can help constrain earnings management.

Interestingly, some studies have been conducted in the context of family businesses to examine how family ownership and board independence are jointly related to earnings management (e.g., Setia-Atmaja, Haman, & Tanewski, 2011; Chi, Hung, Cheng, & Lieu, 2015; Jaggi, Leung, & Gul, 2009; Idris, Siam, & Nassar, 2018). Setia-Atmaja et al. (2011) studied whether board independence impacts the relationship between family ownership and earnings management in Australian family firms. They found that family ownership positively influences discretionary accruals. It is attributed to the fact that although Australia, like other Anglo-American law countries, has a relatively complete legal protection system for shareholder (La Porta, Lopez-de-Silanes, & Shleifer, 1999), the highly concentrated ownership of Australian family companies has led to severe interest expropriation by controlling shareholders (Nenova, 2003). Nonetheless, they found that independent directors can significantly reduce this problem and earnings management. Chi et al. (2015) conducted a similar study in Taiwan. Although the ownership of Taiwan's family firms is also highly concentrated, the legal system of Taiwan is relatively

weak. In this case, they still found similar evidence that family ownership and earnings management are positively related, and board independence can weaken this relationship. However, Jaggi et al. (2009) and Idris et al. (2018) studied whether family ownership can effectively moderate board independence's impact on earnings management. Jaggi et al. (2009) analyzed family companies listed on the HKSE from 1998 to 2000 and found that board independence is negatively related to earnings management. However, family ownership can help moderate this relationship. Idris et al. (2018) also found in 64 Jordanian companies from 2009 to 2013 that family ownership can significantly moderate the negative relationship between board independence and earnings management.

2.3.2 Audit Committee Independence and Earnings Management

The audit committee has received widespread attention from industry and academia after serial accounting scandals, such as Enron and WorldCom and the Asian financial crisis. Although the board still maintains the ultimate responsibility for financial reporting in practice, many companies delegate the responsibility of supervising financial reporting to an independent audit committee. The Institute of Internal Audit (IIA) defines internal auditing as an assurance that helps improve an organization's operations by evaluating and improving its performance of risk management, control and governance. Previous research has shown that the monitoring of the audit committee can be strengthened by independent directors. The first reason is that independent directors have no economic and psychological relationships with internal managers (Carcello & Neal, 2000, 2003; Baysinger & Butler, 1985). Thus, they can maintain professional judgment and objectively and fairly communicate financial information and operating conditions to shareholders. Protecting reputation is also an important reason why independent directors can help strengthen the audit committee's function. External independent directors usually

signal to the outside market that they are professionals through their directorships (Beasley, 1996). The audit committee is usually subject to stricter scrutiny than other sub-committees in the case of financial report failures (Srinivasan, 2005; Krishnan & Visvanathan, 2009). Therefore, the audit committee proactively performs its duties and monitors committee members in supervising financial reporting to maintain reputation (Vafeas, 2005).

Regulators and institutional authorities usually strengthen the audit committee's importance and independence by introducing corporate governance guidelines or rules. For example, in the USA, the NYSE in 1978 required all the USA listed companies to establish a completely independent audit committee composed of 100% independent directors. In 1999, the NYSE and the Nasdaq Stock Exchange (NQSE) further tightened the regulations on the audit committee, stipulating that the audit committee must consist of at least three directors, and all directors must be independent directors. The Blue Ribbon Committee (1999) also recommends that the listed companies with a more than $200 million market value should set up a completely independent audit committee based on the proposition that independent directors can objectively assess the appropriateness of accounting practices and internal control. After the Enron scandal, the USA issued the Sarbanes-Oxley Act (SOX) of 2002, which stipulates the complete independence of the audit committee and clarifies its responsibilities. The audit committee is required to take the responsibilities to supervise financial reporting and audit financial statements. In the UK, the Cadbury Report (1992) works on another agenda that ensures a better balance between executive and non-executive members by requiring that all listed companies should set up an audit committee with at least three non-executive directors. But unlike

the USA, the Cadbury Report (1992) only requires most of them to be independent directors. The UK's later Combined Code (1998) further stipulates that all board members should be non-executive directors, but the requirement of a completely independent audit committee is only specified in the Combined Code (2003). In China, the CSRC (2001) allows the Chinese listed companies to establish an audit committee, but only requires more than half of independent directors in the audit committee. The CSRC (2001) also clearly stipulates the audit committee's responsibilities, including supervising the formulation and implementation of the internal audit system, providing suggestions on selecting external auditors, coordinating internal and external auditors' work, auditing accounting information, and disclosing internal control plan. Since high-quality earnings information is regarded as a critical evaluation criterion for the audit committee's success, it usually takes decisive actions to improve reported earnings.

Many previous studies have shown that an independent audit committee can effectively constrain opportunistic earnings management. Lin and Hwang (2010) conducted a meta-analysis of previous 48 research to integrate key corporate governance mechanisms that can effectively constrain earnings management. Meanwhile, Inaam and Khamousi (2016) conducted a meta-analysis of previous 58 studies to explore whether the difference in these research's results from the moderating effect of corporate governance. They found from their selected sample research that an independent audit committee can effectively limit earnings management. It is noteworthy that more than half of their sample literature was conducted in the USA, which indicates that how audit committee independence impacts earnings management has been extensively examined in the context of the USA

(e.g., Klein, 2002; Bédard et al., 2004; Chang & Sun, 2009). Klein (2002) investigated whether an independent audit committee can constrain earnings management in 692 USA listed companies from 1992 to 1993. Klein (2002) adopted two methods to measure audit committee independence. One is to set it as a dummy variable which equals 1 if the audit committee consists of more than 50% independent directors, and 0 otherwise. Another one is to set it as a dummy variable which equals 1 if the audit committee comprises 100% independent directors, and 0 otherwise. The results show that an audit committee composed of more than 50% independent directors rather than a completely independent (100% independent) audit committee can help reduce earnings management. Therefore, more evidence is needed to support the USA regulations on the proportion of independent directors (i.e. 100% independent directors) in the audit committee. Later, Bédard et al. (2004) explored whether audit committee independence can limit earnings management based on 300 USA companies in 1996. Contrary to the findings of Klein (2002), they found that a 100% independent audit committee rather than a 50-99% independent audit committee can significantly constrain earnings management. Chang and Sun (2009) also found that the USA firms' audit committee independence is negatively correlated with earnings management after the SOX (2002), but there was no such relationship in the period before SOX (2002). To conclude, the findings of Bédard et al. (2004) and Chang and Sun (2009) support the requirements of the relevant USA regulations that the audit committee should be wholly independent and composed of 100% independent directors. The effectiveness of audit committee independence in constraining earnings management is also found in other contexts (e.g., Bradbury, Mak, & Tan, 2004; Choi, Jeon, & Park,

2004; Davidson et al., 2005; Saleh, Iskandar, & Rahmat, 2007; Mendez & Garcha, 2007; Gallery et al., 2008; Kent et al., 2010). However, these researches also denoted conflicting arguments, especially on how an independent audit committee is defined. For example, Davidson et al. (2005) studied whether internal governance constrains earnings management in 434 Australian listed companies in 2000. Their findings support Klein (2002)'s finding that a fully independent (100% independent) audit committee has no impact on earnings management, but an audit committee with more than half of independent directors can effectively reduce earnings management. However, Saleh et al. (2007) found in Malaysian listed companies that a completely independent (100% independent) audit committee helps limit earnings management and improve the earnings quality of financial statements.

2.3.3 External Auditors and Earnings Management

The International Standard on Auditing (ISA) requires external auditors to check and report whether financial statements are free from material misstatements, whether financial reporting complies with the applicable financial reporting standards, and whether financial statements reflect an entity's actual economic status and operating results. Hakim and Omri (2010) pointed out that external auditors play the role of "insurer" of financial information. External auditors can provide objective and fair verification of financial information due to their independence, thereby improving the credibility of financial statements and reducing information asymmetries between the preparers and users. However, Becker et al. (1998) pointed out that auditing effectiveness varies with external auditors' quality. Higher-quality auditors are more likely to

effectively detect earnings management activities, material misstatements and missing information of financial statements. The existing research has widely studied the audit quality of large accounting firms (e.g., DeAngelo, 1981; Lennox, 2003; Francis & Yu, 2009; Choi, Kim, Kim, & Zang, 2010), which stems from the following two reasons. First, large audit firms usually lose more when their auditing fails, especially regarding their reputation (Dye, 1993). Therefore, large audit firms have stronger motivations to discover and disclose frauds and misstatements that undermine accounting information quality to avoid legal liability and protect their reputation (Behn, Carcello, Hermanson, & Hermanson, 1997). DeAngelo (1981) also demonstrates that larger audit firms have more significant economic interests in assuring financial statements free from errors. Moreover, compared with small audit firms, large audit firms usually have more resources and capabilities to discover problematic accounting practices (Becker et al., 1998). Following the above arguments, the audit quality of Big 4 firms should be higher than other audit firms because they are larger than their competitors, which has been confirmed by many existing studies such as Francis and Yu (2009) and Eshleman and Guo (2014).

Numerous studies have documented that Big 4 firms can constrain earnings management. For example, DeFond and Jianmbalvo (1991) found that the incidence of earnings management, measured by accounting errors or irregularities, is lower in Big 6 (now Big 4) firms' client firms than in other auditors' client firms. DeFond and Jianmbalvo (1993) investigated the factors that lead to the disagreements between audit firms and their client firms. Through a comparative analysis of 40 companies that changed auditors for disagreements with auditors and 40 companies that changed auditors for other reasons, they found that when a company is audited by Big 6 auditors, its disagreements with

auditors over accounting methods which increase earnings are more likely to occur. Many studies have verified these findings by providing evidence that Big 4 firms can help reduce discretionary accruals (e.g., Becker et al., 1998; Francis, Maydew, & Sparks, 1999; Zhou & Elder, 2004; Fan & Wong, 2005; Francis & Wang, 2008; Van Tendeloo & Vanstraelen, 2008; Alhadab & Clacher, 2018). For example, Becker et al. (1998) examined whether audit quality influences discretionary accruals. Their results show that the discretionary accruals of Big 6 firms' clients are less than that of the firms audited by non-Big 6 firms. In another similar study conducted in high-accrual companies, Francis et al. (1999) found that the discretionary accruals of Big 6 firms' clients are lower than that of non-Big 6 firms' clients. It is attributed to the fact that these high-accrual companies have more opportunities to conduct opportunistic earnings management through discretionary accruals, and they are motivated to hire higher-quality auditors to verify the quality of disclosed earnings. Zhou and Elder (2004) studied how audit quality affects discretionary accruals in the initial public offering companies. They found that Big 5 (now Big 4) firms can limit discretionary accruals manipulation around the initial public offering. Alhadab and Clacher (2018) also found that high-quality auditors constrain discretionary accruals manipulation of the initial public offering companies. Besides, Zhou and Elder (2004) studied the relationship between auditing from Big 5 firms and discretionary accruals in the companies that issue seasoned equity offerings. They found that Big 5 firms also help reduce earnings management activities around seasoned equity offerings.

Some studies have found similar evidence in multinational samples. For example, in the study of Fan and Wong (2005), the role of Big 5 firms in constraining earnings management is supported by an analysis involving a sample from eight East Asian

economies. Specifically, companies with serious agency problems caused by ownership structure are more likely to hire Big 5 firms to better monitor agency problems. Francis and Wang (2008) examined whether earnings quality is affected by the combined effect of institutional factors (i.e. protection environment for investors) and the auditing of Big 4 firms. They conducted a comparative analysis of companies from 42 countries and regions from 1994 to 2004 and found that the earnings quality is usually higher in the companies which come from higher investor protection environments and are audited by Big 4 firms. This is because under a higher investor protection environment, Big 4 auditors are motivated to improve their audit quality due to strict investor protection mechanisms. Van Tendeloo and Vanstraelen (2008) obtained the same findings through a comparative analysis of companies from six European countries (i.e. Belgium, Finland, France, Netherlands, Spain and the UK). They found that Big 4 firms can only limit earnings management in countries where financial statements are subject to stricter scrutiny from tax authorities, and audit failures are more likely to be found. This finding shows that the strict regulatory environment motives Big 4 firms to improve their ability and performance in detecting earnings management.

2.4 Chapter Summary

This chapter first reviews the previous studies on ownership structure and corporate governance on earnings management. The existing studies provided conflicting evidence on the impact of state ownership on earnings management, which makes it unclear whether SOEs are less likely than POEs to perform earnings management in China. Previous studies have investigated the constraining effects of board independence, audit committee independence and external auditor on earnings management. However, how

their interactions with ownership structure affect earning management are largely underexplored in the existing literature.

This research attempts to address these gaps by examining the different incidence of the Chinese SOEs and POEs in performing earnings management and the moderating impacts of board independence, audit committee independence and external auditors on the divergence in earnings management between the two groups. Based on agency theory and the different operating goals between SOEs and POEs, the following Chapter 3 will deduce the study's conceptual framework, which depicts the relationships among ownership structure, corporate governance and earnings management. Then, the hypotheses aligned with the research objectives will be developed based on the proposed conceptual framework.

CHAPTER 3: CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

3.1 Introduction

This chapter first discusses the alleviated principal-agent interest conflicts of SOEs based on agency theory and SOEs' political and social goals. Following this discussion, Section 3.2 deduces the study's conceptual framework which elaborates the relationships among ownership structure, corporate governance and earnings management. Section 3.3 develops hypotheses based on the proposed conceptual framework. Section 3.4 summarizes this chapter.

3.2 Conceptual Framework

3.2.1 Ownership Structure and Earnings Management

With the continuous refinement of social division, the improvement of productivity and the expansion of production scale, enterprises owners cannot take the dual identity of owner and manager due to their limited time, energy and ability. The growing demands for professional talents to replace owners in managing enterprises' operations have gradually separated management from ownership, which correspondingly forms the principal-agent relationship in corporations. The idea of separating management from ownership was put forth as early as in the 19th century by Berle and Menas (1932). They advocated that company owners should transfer management to talents with professional knowledge. In the early 1970s, agency theory began to focus on agency costs arising from the separation of ownership and management. In this regard, many economists started to

break away from the black box model, which creates useful information based on inputs and outputs without any knowledge of internal workings, and proceed from enterprises' internal structure. They employed mathematical models and empirical methods to deeply analyze agency relationship in enterprises, focusing on exploring contract mechanism between the principal and agent in the case of interest conflicts and information asymmetry (e.g., Ross, 1973; Fama & Jensen, 1983). These researchers pointed out that the principal-agent relationship needs two basic conditions: both parties of the contract have natural attributes of maximizing their interests, and there is information asymmetry between them. In the contractual relationship, the agents provide services and receive corresponding remuneration (Jenson & Mecking, 1976). As the agents, managers' primary responsibility stipulated in the contract is to maximize shareholders' interests. However, managers usually focus on pursuing good remuneration and reputation, and they are motivated to use their information advantages to behave opportunistically in the hope to achieve their own interests.

Agency theory points out that managers are motivated to behave opportunistically in pursuing their private interests even at the expense of the principals' interests (Jensen & Meckling, 1976). External parties mainly obtain company information through financial statements. Their heavy reliance on accounting numbers of financial statements encourages managers to report a better performance through earnings manipulation. Managers can achieve earnings management by exercising their discretions in choosing accounting policies to mislead stakeholders about the company's actual performance and influence earnings-based transactions (Healy & Wahlen, 1999). Agency theory is the leading theoretical framework in earnings management research. The existing studies on

earnings management usually develop research hypotheses based on different earnings management incentives, such as compensation, debt covenants and income smoothing. First, performance-based compensation is an important factor that motivates managers to conduct earnings management (e.g., Watts & Zimmerman, 1978; Healy, 1985; McNichols & Wilson, 1988; Dechow & Solan, 1991; Holthausen, Larcker, & Sloan, 1995; Gaver, Gaver, & Austin, 1995; Guidry, Leone, & Rock, 1999; Beneish & Vargus, 2002; Peng & Roell, 2008). Owners often take long-term incentive measures such as share options to align individual managers' compensation with company performance, thereby reducing agency costs, increasing managerial enthusiasm, and improving business efficiency and performance. In theory, managers would work hard to improve their performance and maximize the owner's interests. However, in the context of weak internal and external supervision, managers are likely to manipulate earnings to maximize financial indicators, which ultimately damages shareholder interests and corporate value. For example, Watts and Zimmerman (1978) pointed out that performance-based bonus can drive management to conduct earnings management to increase their compensation. Healy (1985) also found that managers increase accounting profits by changing accounting policies and methods to maximize their bonuses. Secondly, the current research results show that debt covenants are also an important factor in inducing earnings management. Companies that violate or may violate debt covenants are more likely to increase their profits through earnings management (e.g., Watts & Zimmermann, 1986; DeFond & Jiambalvo, 1994; Sweeney, 1994). For example, Defond and Jiambalvo (1994) found that companies manipulate earnings to report a better-than-actual income in the year before violating debt covenants and in the year of the default. Sweeney (1994) also

found that companies that violated debt covenants are more likely than the control sample to increase the current earnings by changing accounting policies. Finally, income smoothing is also an important driving factor (e.g., Gonedes, 1972; Ronen & Sadan, 1981; Lambert, 1984; Trueman & Titman, 1988; DeFond & Park, 1997). Ronen and Sadan (1981) pointed out that managers usually take a series of measures to reduce the fluctuation of reported income, in the belief that a stable income is more likely to attract investors. Trueman and Titman (1988) proposed that if managers can choose to report a certain income in a specific period, they prefer an accounting choice that makes income more stable. This is because a smooth income can reduce external estimates of income fluctuations, which reduces the company's borrowing costs and improves its bargaining power with customers and suppliers.

However, it is noteworthy that the principal-agent interest conflicts in the state sector have been relatively alleviated, and the managers' earnings management behaviors driven by the above factors are reduced. From both theoretical and practical perspectives, SOEs are owned by the state. In the post-war, SOEs occupy essential shares in the industrial sector and play a central role in promoting a country's industrialization and development. Nunnenkamp (1986) pointed out that SOEs are usually set to achieve various political and social objectives. SOEs provide a country with infrastructure and national defense, solve market failures, and promote social welfare. Besides, SOEs, especially those strategically important "national champions" or monopolies, are usually employed by a country as a means to prevent foreign companies and private individuals from affecting its key industries or sovereignty. Shleifer and Vishny (1994) pointed out that SOEs' managers are often required to achieve sub-optimal decisions relative to maximizing

profits, such as employing more people to secure social employment, producing the products desired by politicians rather than consumers to achieve political and economic goals, operating in politically rather than economically ideal areas, charging a price lower than marginal cost to ensure people's livelihoods, adjusting the products' price to reflect the actual cost, and providing the public with necessities at an acceptable price in the industries dominated by them. Although these goals have different weights in different countries and regions, these goals are usually legally defined.

SOEs usually actively achieve these social and political goals even if they are not beneficial to their financial performance. This is because the government officials in the position can influence SOEs' operations when the promotion of its managers depends more on the performance in the political and social fields, such as the increase in employment rate and the increase in taxation (Fan et al., 2007). Besides, the state usually takes many measures to protect SOEs due to its vital role in the national economy. For example, the government provides SOEs preferential and cheaper funding and acts as the ultimate guarantee to protect them from bankruptcy risks. SOEs are motivated to undertake their responsibilities in serving the public welfare to obtain more supportive policies. From these discussions, it is therefore apparent that the national interests imposed on the SOEs help to alleviate the agency conflicts between their managers and the state as the owners. In practice, SOEs' managers bear the obligation to realize these objectives. In the report "State-Owned Enterprises - Catalysts for public value creation?" in 2015, PWC recommended SOEs' managers to actively manage enterprises and maintain a balance between internal cost control and external services provided to countries or regions (Sturesson, McIntyre, & Jones, 2015). Under the government's

supervision and interference, SOEs' managers often pay more attention to the non-financial indicators which are related to the achievements of their political status, such as whether the relevant policies of the state are implemented and whether their behaviors contribute to the realization of the public goals. Therefore, compared to POEs' mangers who are mainly responsible for maximizing company's profit, SOEs' managers have weaker incentives to manipulate earnings driven by financial-performance-based compensation. The government protection and financial support for SOEs also reduce their motivations to report better earnings to assure capital market and performance-based transactions such as debt contracts.

3.2.2 The Moderating Impact of Corporate Governance

Agency theory is also commonly employed in corporate governance research. Hart (1995) proposed two necessary conditions for effective corporate governance: principle-agent interest conflict and incomplete principal-agent contract. On the one hand, when agency problems do not exist, everyone associated with organization can be encouraged to pursue the overall goals such as cost minimization and profit maximization. However, this situation is impossible in modern enterprises in which the shareholding structure is decentralized, and shareholders delegate the daily management of the company to professional managers. Although the interest conflicts between the agent and the principal are different across companies, the principal-agent relationship itself inherently provides the conditions for managers to behave opportunistically. When agency conflicts and information asymmetry between shareholders and managers exist, managers are motivated to make decisions that benefit themselves rather than the company. This is

possible because their behaviors cannot be observed. On the other hand, although agency theory can help explain why managers need to be provided with incentives such as share options to reduce agent costs when agency problems exist, it cannot support the role of corporate governance in reducing agency conflicts. The agency costs can be minimized by formulating a detailed contract (Jensen & Meckling, 1976), such as requiring the agents to disclose their responsibilities in detail so that the principals can monitor the extent to which they have performed the contract, and setting the agreed terms for the purchase and sale of assets and the choices of accounting policies. A comprehensive and optimal principal-agent contract is expected to specify all parties' obligations to the greatest extent. However, this is not true in practice. Since managers' actions are mostly unobservable, they are motivated to take opportunistic behaviors to benefit themselves (Fama, 1980; Jensen & Meckling, 1976). In the context characterized by the interest conflicts between shareholders and managers, corporate governance involves designing a series of mechanisms that reconcile the interests of shareholders and managers (Fama & Jensen, 1983; Hart, 1995).

The main objective of corporate governance in financial reporting is to ensure that the agents comply with accounting standards and improve the quality of financial information. When agency problems and incomplete agency contracts exist simultaneously, corporate governance acts as an effective mechanism in balancing managers' decisions on matters that are not agreed in the initial principal-agent contracts. Therefore, the debate on how governance mechanisms affect earnings management should be placed in the context of agency problems that managers intend to behave opportunistically to pursue their private interests (Jensen & Meckling, 1976). When managers are driven to manage earnings for

their own interests, the value of corporate governance can be realized by reducing managers' opportunistic discretions in preparing financial statements. Therefore, the effectiveness of corporate governance in constraining earnings management should vary with the strength of earnings management motivations affected by the severity of the principal-agent interest conflicts. Specifically, the stronger the managers' incentives to manipulate earnings caused by the more severe principal-agent interest conflicts, the more significant role of corporate governance in limiting earnings management should be. Since SOEs' social and political goals and the government protection have help alleviated the principal-agent conflicts within them, their managers have relatively weaker incentives than POEs to manage earnings. This may make the effectiveness of corporate governance to be less pronounced in SOEs than in POEs. In other words, corporate governance performs better in POEs, where the principal-the agent interest conflicts are more severe than in SOEs.

Corporate governance is usually divided into internal and external governance mechanisms. Since external governance mechanisms usually cost more, internal mechanisms should be preferred, such as ownership structure, the board of directors and the audit committee (e.g., Agrawal & Chadha, 2005; Davidson et al., 2005). However, Walsh and Seward (1990) pointed out that when internal control mechanisms fail, external control mechanisms should be adopted, such as external auditors. Therefore, this study proposes that corporate governance mechanisms, including board independence, audit committee independence and external auditor, have a more significant influence on the earnings management of POEs.

Based on the above discussion from the agency theory perspectives and the different severity of principal-agent interest conflicts between SOEs and POEs, this study proposes an integrated conceptual framework, as shown in Figure 3.1. In the conceptual framework, the independent variable is the ownership structure (i.e. private and state-owned), and the dependent variable is earnings management. Two internal corporate governance mechanisms (i.e. board independence and audit committee independence) and one external mechanism (i.e. external auditor) are set as moderating variables. Moreover, this conceptual framework introduces six control variables widely employed in the previous research on earnings management, including size, growth, leverage, return on asset (ROA), industry and year (e.g., Roychowdhury, 2006; Cohen & Zarowin, 2010; Wang & Yung, 2011). Figure 3.1 below also depicts the hypotheses developed in this study - namely H1, H2a, H2b and H2c.

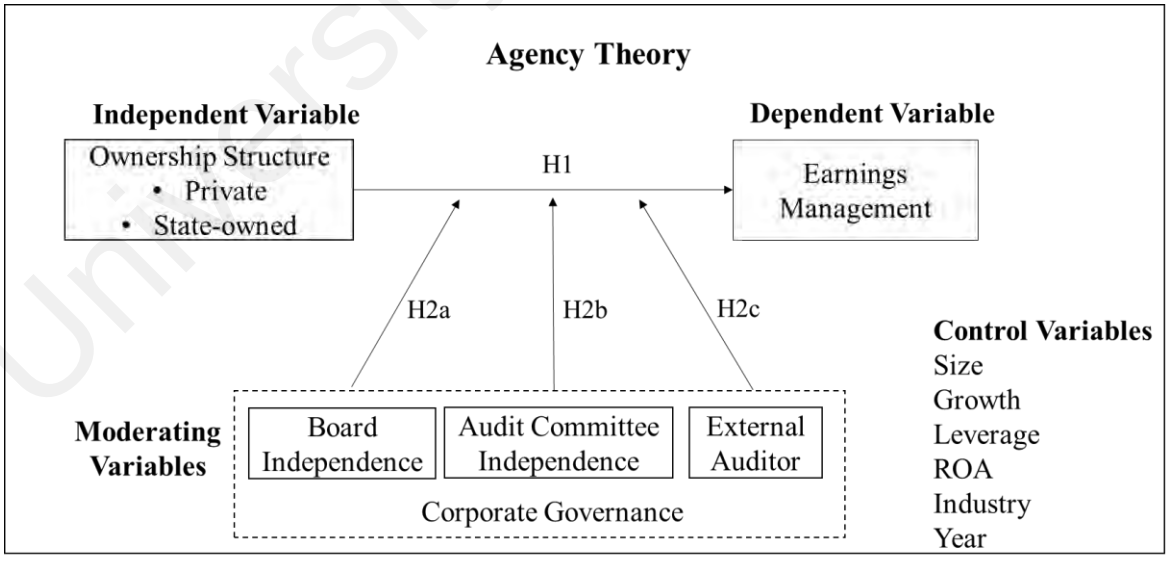

Figure 3.1: Conceptual framework

3.3 Hypotheses Development

Based on the proposed conceptual framework, this study encompasses four hypotheses aligned with the research objectives to examine the different incidence of SOEs and POEs in performing earnings management and the moderating impact of corporate governance on this divergence. Specifically, as shown in Figure 3.1, H1 predicts the relationship between ownership structure and earnings management, and H2a, H2b and H2c respectively predict the moderating impact of board independence, audit committee independence and external auditor. The following subsections will develop the hypotheses.

3.3.1 Ownership Structure and Earnings Management

In the existing literature, some research found the negative relationship between state ownership and earnings management (e.g., Ding et al., 2007; Wang & Yung, 2011; Zeng, 2014; Kim, 2018; Guo & Ma, 2015), while some other studies found that state ownership positively impacts earnings management (e.g., Shao & Zhang, 2009; Ji et al., 2015). Based on SOEs' political and social goals and government protection, which result in their relatively reduced principal-agent interest conflicts and weaker earnings management motivations, this study predicts that Chinese SOEs perform fewer earnings management than Chinese POEs.

First, the performance evaluation and political promotion of the managers of Chinese SOEs are based on the realization of political and social goals, which helps reduce their incentives to manipulate accounting numbers. The privatization reform has improved many SOEs' management efficiencies and productivity, but their overall performance has

been declining and lags behind POEs over the recent years (Song, 2018). SOEs, which are critical to the Chinese economy, are required to perform public functions and achieve government goals, such as maintaining economic and social stability and responding to financial and political crises. The State-owned Assets Supervision and Administration Commission (SASAC) issued the governance guidelines for SOEs to promote a harmonious socialist and realize economic development, social progress, and environmental protection (Jefferson, 2016). Moreover, the state sector's lower performance than the private sector in China also results from the overstaffing in the privatization reforms. In 2015, the Chinese government for the first time classified SOEs into two types: a public category and a commercial category (Song, 2018). This classification method promotes the performance evaluation of SOEs based on their attributes and helps correctly evaluate the performance of the state sector. In the performance evaluation of the public SOEs, the politics rather than the market logic occupies a dominant position. For example, the public SOEs' performance is evaluated based on how the public tasks are implemented and how the public objectives are achieved. In contrast, improving market competitiveness and financial performance have been designated as priorities in evaluating the commercial SOEs' performance. It is worth noting that the Chinese government has pointed out that regardless of the category of SOEs, they should undertake to achieve political goals such as maintaining social stability, stimulating independent innovations and promoting economic initiatives such as the "Belt and Road". The Chinese government collects few dividends (5%-15%) from profitable SOEs. Besides, to maintain the control over SOEs, the Chinese government (i.e. the SASAC) retains the right to appoint CEOs who are responsible for managing SOEs (Song,

2018). For example, Fan et al. (2007) found that 20% of CEOs of the Chinese listed SOEs are related to the government from 1993 to 2000. These politically connected CEOs undertake the responsibility to achieve SOEs' social and political goals. Since their political promotions are based on the achievement of these non-profit goals, they pay less attention to financial performance and have fewer incentives to manipulate earnings.

Second, the government's various economic support for SOEs have reduced their incentives to meet the CSRC's regulatory thresholds of earnings for rights offering and delisting. In China, SOEs play an essential role in strategic areas, such as agriculture, oil and high-tech industries. The Chinese government adopts many political measures to promote their development and provides financial support to SOEs in financial troubles through soft budget constraints. When SOEs face financial difficulties, they can seek additional financial assistance from the government. Local governments usually also provide local SOEs with financial support such as tax cuts and preferential financing. In China, the government is usually regarded as the implicit guarantee of SOEs' potential value (Chen, Shi, & Xu, 2013). The Chinese government has strong incentives to improve the corporate governance and financial performance of SOEs to reduce its policy burden and ensure social stability. For example, during the 2008 financial crisis, PetroChina received RMB 16.9 billion government subsidies, which is equivalent to 12.34% of its net income in 2008. However, since private companies mainly obtain financing through rights offering after the initial price offering, they are more inclined to meet the strict regulatory thresholds of earnings for rights offering through earnings manipulation. Besides, delisting means the loss of opportunities for financing from the stock market. Thus, POEs in the absence of government guarantees, especially those with earnings close

to zero, have strong incentives to manage earnings to avoid a negative income. It is noteworthy that the historical privatization reforms have exacerbated their earnings management motivations. Specifically, unlike other developed countries, China mainly privatized those underperforming SOEs as a punishment measure for the government agents who failed to improve SOEs' performance. As a result, these companies with poor performance lose government subsidies and protection, and they need to obtain financing from the capital market and improve performance to avoid delisting, which exacerbates their motivations for earnings management (Liao et al., 2014).

Third, the Chinese SOEs can more easily obtain loans from banks, which reduces their motivations to be eligible for debt covenants through earnings management. There is a long-term trend in China to supplement the resource shortages of SOEs by providing them loans, mainly through the four central state-owned banks (Jefferson, 2016). In China, state-owned banks dominate the financial industry. Because of the state-owned banks' political and social goals, they are more inclined to provide loans to SOEs rather than POEs (Brandt & Li, 2003). Commercial banks also tend to provide loans to SOEs because of the ultimate guarantee from the government (Chen et al., 2008). As a result, SOEs' relatively more straightforward access to loans from both state-owned and commercial banks reduces their earnings management motivations to meet debt terms. In contrast, when the Chinese POEs cannot repay their loans, lenders will lose the loan amount specified in the contract without the government guarantee. Thus, lenders usually strictly review POEs' financial status, especially their profitability, which motivates them to manipulate earnings to meet debt covenants.

To conclude, all these political and economic preferences to SOEs in the Chinese institutional environment have helped alleviate the principal-agent interest conflicts within SOEs and weaken their incentives to manipulate earnings. In contrast, Chinese POEs are more likely to be driven by several motivations to perform earnings management, such as performance-based compensation, the CSRC's strict earnings thresholds for rights offering and delisting, and debt covenants. Therefore, these arguments lead to the formulation of the following hypothesis:

H1: The Chinese SOEs are less likely to perform earnings management than the Chinese POEs.

3.3.2 The Moderating Impact of Corporate Governance

According to the conceptual framework, the significance of corporate governance in constraining opportunistic earnings management varies with managers' earnings management motivations. Since POEs have stronger incentives than SOEs to manipulate earnings as discussed above, the monitoring of corporate governance would have a more significant impact on their earnings management. Therefore, if Chinese SOEs' weaker earnings management motivations result in their fewer earnings management than Chinese POEs as hypothesized, board independence, audit committee independence and external auditors can be expected to have a significant moderating effect on the difference in earnings management between them.

3.3.2.1 The Impact of Board Independence

It is necessary to clarify the restraint of board independence on earnings management before predicting its moderating impact on the relationship between ownership structure and earnings management. The negative impacts of independent directors on earnings management have been found in the existing research (e.g., Klein, 2002; Xie et al., 2003; Peasnell et al., 2005). Fama and Jensen (1983) pointed out that the board plays a critical role in supervising management and establishing other mechanisms to reduce managers' opportunistic behaviors. There are some ways to strengthen their oversight function, such as increasing its independence (Fama & Jensen, 1983; Klein, 2002). If one party has the dominant control over the board, it will lead the board to pursue their interests. Independent directors can help address the issues of rights distribution within the board and limit managers' opportunistic behaviors.

Since Chinese POEs have stronger incentives than Chinese SOEs to manage earnings, their opportunistic behaviors should be affected more by independent directors. In fact, the existing research has shown that Chinese POEs have stronger incentives to improve the board's effectiveness by appointing more independent directors. Chen, Firth, and Xu (2009) pointed out that many privatized companies in the economic reform had poor performance and weak corporate governance before privatization, so they are motivated to strengthen the supervision of the board. Besides, the controlling shareholders of Chinese POEs usually face non-diversified investment risks because they typically hold non-diversified investment portfolios, leading them to pay particular attention to liquidity in management decisions (e.g., Wang, Wang, & Yang, 2012; Panousi & Papanikolaou,

2012). Therefore, if higher board independence can help increase company value and improve stock liquidity and risk sharing, they are motivated to appoint more independent directors. In contrast, the controlling shareholders of Chinese SOEs cannot directly benefit from higher stock price and risk sharing because of the separation of voting rights and cash flow rights, which results in a lower incentive for them to increase board independence. Thus, this study proposes the following hypothesis:

H2a: The divergence in earnings management between the Chinese SOEs and POEs becomes less evident with higher board independence.

3.3.2.2 The Impact of Audit Committee Independence

Similarly, the constraining effect of audit committee independence on earnings management should be clarified before discussing its moderating effect. Many previous studies, such as Klein (2002), Baxter and Cotter (2009), and Inaam and Khamoussi (2016), have found that an independent audit committee can effectively limit earnings management. The audit committee assumes the responsibility of supervising financial porting and maintaining the credibility of financial statements, thereby providing maximum supervision to shareholders. Although corporate governance standards stipulate different requirements for audit committee independence, such as 50% (e.g., CSRC, 2001) and 100% (e.g., Cadbury Report, 1992; Blue Ribbon Committee, 1999; SOX, 2002), almost all of them emphasize the audit committee's responsibilities in accounting practices and improving financial information quality.

However, due to the different severity of agency conflicts and the different strength of earnings management motivations between SOEs and POEs, the significance of audit

committee independence in constraining their earnings management should also be different. Audit committee independence would perform better in limiting the earnings management of Chinese POEs with more severe principal-agent interest conflicts and stronger earnings management motivations than Chinese SOEs. Therefore, the expected impact of ownership structure on earnings management is likely to be moderated by an independent audit committee, which can be hypothesized as follows:

H2b: The divergence in earnings management between the Chinese SOEs and POEs becomes less evident with higher audit committee independence.

3.3.2.3 The Impact of External Auditors

The prediction on the moderating impact of external auditors should also be based on their restraining effect on earnings management. External auditing is an important governance mechanism in constraining agency costs (Jensen & Meckling, 1976). Becker et al. (1998) proposed that external auditors reduce the information asymmetry between preparers and users of financial statements. However, the effectiveness of external auditing in limiting earnings manipulation varies with auditing quality. Large accounting firms have more resources and expertise, resulting in their stronger ability to detect earnings management and stronger incentives to protect reputation (Krishnan, 2005). Although examples like Enron may indicate that this is not the case, empirical evidence suggests that Big 4 firms usually perform better than small audit firms in auditing financial statements (Alzoubi, 2016).

However, compared with Chinese SOEs, the impact of external auditors on earnings management in Chinese POEs should be more pronounced because of their stronger

earnings management motivations. Besides, Chinese POEs rely more on external auditors' assurance to verify financial statements and enhance investors' confidence. In contrast, as the ultimate guarantor of Chinese SOEs, the government reduces their investors' reliance on external auditor assurance even under the risk of bankruptcy. Therefore, if both Chinese POEs and SOEs are subject to higher-quality external auditing, the difference in earnings management between the two groups is expected to be reduced. Hence, it is hypothesized that:

H2c: The divergence in earnings management between the Chinese SOEs and POEs becomes less evident with auditing from Big 4 auditors.

3.4 Chapter Summary

This chapter first deduces the conceptual framework of the study. Based on the agency theory and SOEs' political and social goals which reduce the principal-agent interest conflicts within them and alleviate their earnings management motivations, this study deduces that SOEs are less likely than POEs to perform earnings management. From the perspective of agency theory, corporate governance can effectively reduce agency costs. This study proposes that internal governance mechanisms (i.e. board independence and audit committee independence) and external governance mechanisms (i.e. external auditor) play a more significant role in the context with more severe principal-agency conflicts and stronger motivations to manipulate earnings. Accordingly, corporate governance would play a more prominent role in constraining the earnings management

of POEs, in which agency conflicts are more stringent and managers' motivations to manipulate earnings are more robust.

This chapter then develops hypotheses based on the proposed conceptual framework to fill the research gaps identified in the literature review in Chapter 2. Specifically, this chapter assumes that Chinese SOEs perform fewer earnings management than Chinese POEs. This chapter also assumes that board independence, audit committee independence and external auditors can narrow the divergence in earnings management between Chinese SOEs and POEs.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

This chapter provides an overview of the research methodology of the study. Section 4.2 presents data collection and sampling. Variable measurement is discussed in Section 4.3, while the study's empirical model is presented in Section 4.4. Section 4.5 presents the data analysis method. Finally, Section 4.6 concludes this chapter.

4.2 Data Collection and Sampling

This study selects a sample of A-share firms from the Shanghai Stock Exchange (SHSE) and the Shenzhen Stock Exchange (SZSE) between 2015 and 2018.[6] This study employs the China's Stock Market and Accounting Research (CSMAR) database as the data resource. The sample period begins in 2015 because the data on the audit committee characteristics of the Chinese listed companies were included in the CSMAR database since this year. R statistics program is employed as the data analysis tool in this study.

Based on the initial population of 12,998 firm-year observations in the CSMAR database during 2015-2018, data collection of this study is garnered by eight steps, as shown in Panel A of Table 4.1.

[6] In China, firms listed on the SHSE and the SESE issue A shares to domestic investors and B shares for foreign investors. Firms listed on the SHSE and the SESE are also allowed to cross-list in Hong Kong Stock Exchange and issue H shares. The Chinese government formulated different disclosure requirements for A-share, B-share and H-share markets. A-share firms are required to prepare financial statements following the CAS, while B-share and H-share firms shall prepare annual reports following the IFRS/IAS. In order to eliminate the possible impacts of different reporting framework, this study selects a group of listed firms only issuing A shares and preparing annual reports in compliance with the CAS.

Table 4.1: Sample selection and sample distribution of ownership type and industry

Panel A. Sample selection						
		2015-2018	**2015**	**2016**	**2017**	**2018**
The initial population in the CSMAR database		12,998	2,823	3,118	3,494	3,563
Step 1: exclude firms in the financial industry		288	50	68	79	91
Step 2: exclude firms issuing B shares or H shares		590	148	145	148	149
Step 3: exclude "PT" and "ST" firms		279	55	64	72	88
Step 4: exclude firms with the initial public offering of less than one year		1,079	234	299	455	91
Step 5: exclude firms without an audit committee or information about the audit committee		6,118	1,326	1,495	1,555	1,742
Step 6: exclude firms without information about ultimate controlling shareholders		102	26	22	23	31
Step 7: exclude firms without financial information		148	69	42	35	2
Step 8: exclude firms without complete four-year data and in the industry with less than 10 observations per year		1,958	307	378	516	757
Final sample		2,328	582	582	582	582
Panel B. Sample distribution of ownership type						
		2015-2018	**2015**	**2016**	**2017**	**2018**
State-owned enterprises		1,269	319	318	316	316
Private-owned enterprises		1,059	263	264	266	266
Panel C. Sample distribution of industry						
Industry	**Code**	**2015-2018**	**2015**	**2016**	**2017**	**2018**
Agriculture, forestry, husbandry and fishing	A	44	11	11	11	11
Mining	B	98	25	24	24	25
Manufacturing	C	1,363	343	342	340	338
Electricity, heat, gas and water production and supply	D	141	34	36	36	35
Construction	E	87	23	21	21	22
Wholesale and retail trade	F	217	54	54	54	55
Transportation, warehousing and postal services	G	110	27	27	28	28
Technology	I	104	24	26	27	27
Real estate	K	164	41	41	41	41

As shown in Table 4.1 above, this study first removes firms in the financial industry because the Chinese government designs different accounting standards for the financial sector (Cullinan, Wang, Wang, & Zhang, 2012; Cheng et al., 2015).

Second, this study deletes A-share companies issuing B shares or H shares and preparing financial statements according to the IFRS/IAS. These firm have different financial reporting and regulatory environment with the firms only issuing A shares and preparing financial statements in compliance with the CAS (Wang, Wong, & Xia, 2008; Cullinan et al., 2012).

Third, this study deletes the companies classified as "Particular Treatment" (PT) and "Special Treatment" (ST) firms by the CSRC because they have been generating losses for three or two consecutive years. Most PT firms are suspended from operations and planned for mergers or delisting (Huafang & Jianguo, 2007; Guo & Ma, 2015). Besides, it is challenging for the ST firms to manage earnings by manipulating accounting methods under the high supervision of the CSRC.

Fourth, the stock price of the initial public offering firms in China usually fluctuates sharply, which affects the market-to-book ratio that investors typically consider when making decisions, thus strengthening earnings management of listed firms in the capital market competition (Cullinan et al., 2012). Therefore, this study excludes companies with the initial public offering of less than one year.

Fifth, this study deletes firms without an audit committee or available information about the audit committee because missing data usually reduces the statistical power of research and produces biased estimates.

Sixth, this study excludes firms without controlling shareholder or available information about controlling shareholder. Further exclusions include the firm-year observations that lack information about other variables. Although these restrictions may be biased towards successful companies, this bias helps prevent the hypothesis testing from being affected by missing data and make hypothesis results more conservative (Cohen, Dey, & Lys, 2008; Doukakis, 2014).

Finally, this study excludes the firms without complete four-year data to get a balanced sample, which can reduce the confounding effects of firm-year observations from different companies (Wang & Yung, 2011). Simultaneously, firms in the industry with less than ten observations per year are deleted, because evidence from few observations in a particular industry cannot represent the whole industry (Ho, Liao, & Taylor, 2015).

Imposing all the data-availability requirements yields 2,328 firm-year observations, covering 9 industries and 582 individual firms. The sample distribution by the ownership type is presented in Panel B of Table 4.1. In the final sample of this study, the firm-year observations of SOEs and POEs are approximately equivalent (1,269 and 1,059, respectively), which is attributed to the rapid increase in the number of POEs in recent years (Song, 2018). This study further divides the sample into 9 categories based on the Industry Code of the CSRC 2012 in Panel C to control the industry's potential influence. The final sample exhibits a concentration of observations in the manufacturing industry with 1,363 firm-year observations. This result is consistent with the vital role of the manufacturing industry in China's economy.

4.3 Variable Measurement

4.3.1 Dependent Variable (Earnings Management)

The existing studies commonly employ discretionary accruals to measure earnings management because managers can manage earnings by manipulating accruals through their discretions in financial reporting. Many previous studies have found opportunistic earnings management behaviors by accruals manipulation (e.g., Cohen & Zarowin, 2010; Zang, 2012). The existing models measuring discretionary accruals include the Healy model (1985), the DeAngelo model (1995), the Industry model (1991), the Jones model (1991), and the modified Jones model (1995). The robustness of the hypothesis test on earnings management cannot be disentangled from the performance of the chosen models in classifying total accruals into non-discretionary and discretionary components.

The Healy model (1985) and the DeAngelo model (1995) assume that non-discretionary accruals are fixed. The Jones model (1991) breaks this assumption and considers the impacts of economic and corporate environmental factors on discretionary accruals, such as firm size and operating income. However, the Jones model (1991) assumes that revenue cannot be manipulated. As an important part of revenue, credit sales can be manipulated in practice. For example, enterprises can increase the current period's revenue by manipulating accounts receivable. Therefore, earnings management is underestimated if credit sales are classified into non-discretionary accruals. In this regard, Dechow, Sloan, and Sweeney (1995) proposes the modified Jones model (1995) that assumes that revenue from credit sales can be manipulated, and classifies accounts

receivable into discretionary accruals by adding an adjustment item for accounts receivable to the Jones model (1991).

Many previous studies have verified that the performance of the modified Jones model (1995) is better than other models in measuring discretionary accruals. For example, Dechow et al. (1995) studied the extent to which the discretionary accruals calculated by the above five models can detect earnings management. Dechow et al. (1995) compared the probability of wrong rejection (Type I error) and wrong acceptance (Type II error) of the five models in the hypothesis test, and they found that the modified Jones model (1995) performs best with a minimum probability of Type I and Type II errors. Guay, Kothari, and Watts (1996) proposed three hypotheses regarding discretionary accruals measurement: the performance measurement hypothesis that accrual-based earnings provide more reliable and timely information on performance, the opportunistic accruals management hypothesis that discretionary accruals are employed to manipulate earnings, and the noise hypothesis that discretionary accruals are noise in earnings. They tested whether the signs and magnitudes of coefficients of discretionary accruals calculated by the five models are consistent with these three hypotheses. They found that only the discretionary accruals estimated by the Jones model (1991) and the modified Jones model (1995) support the hypotheses of performance measurement and accruals management.

Since 1999, China has adopted the conservatism principle, which requires the listed companies to make provisions for potential losses. The new CAS in 2007 has brought China's accounting system much closer to the IFRS, providing Chinese companies with opportunities to manage earnings through traditional discretionary accruals (Ding et al.,

2007). Therefore, it is suitable to measure earnings management by discretionary accruals in China. Managers may increase (positive discretionary accruals) and decrease (negative discretionary accruals) earnings for different reasons. The absolute value of discretionary accruals indicates the extent to which earnings are managed, while direction indicates whether a company increases or decreases earnings. This study employs the absolute value of discretionary accruals as a proxy for accrual-based earnings management. Since revenue-based earnings management is a commonly-used method in Chinese firms (Aharony et al., 2010), the modified Jones model (1995) is employed in this study to measure discretionary accruals.

$$\frac{TA_{it}}{A_{i,t-1}} = k_1 \frac{1}{A_{i,t-1}} + k_2 \frac{\Delta Rev_{it}}{A_{i,t-1}} + k_3 \frac{PPE_{it}}{A_{i,t-1}} + \varepsilon_{it} \qquad (1)$$

Where t represents fiscal year; i represents firm; $TA_{i,t}$ represents the total accruals in year t; $A_{i,t-1}$ is the total assets in year t-1; $\Delta Rev_{i,t}$ is the change in revenues from the preceding year t-1 to t; $PPE_{i,t}$ is the gross value of property, plant, and equipment in year t.

The coefficient estimates from Equation (1) are then used in Equation (2) to estimate the firm-specific normal accruals (NA) for sample firms:

$$NA_{it} = \hat{k}_1 \frac{1}{A_{i,t-1}} + \hat{k}_2 \frac{\Delta Rev_{it} - \Delta AR_{it}}{A_{i,t-1}} + \hat{k}_3 \frac{PPE_{it}}{A_{i,t-1}} \qquad (2)$$

Where ΔAR_{it} is the change in accounts receivable.

The discretion measure of discretionary accruals (DA) is the difference between total accruals and normal accruals:

$$DA_{it} = \frac{TA_{it}}{A_{i,t-1}} - NA_{it} \qquad (3)$$

The previous studies mainly use two methods to calculate discretionary accruals: the time series method (Dechow et al., 1995) and the cross-sectional method (Wang & Yung, 2011). The time series method calculates the company's parameters based on each firm's data during the whole sample period. The cross-sectional method is based on the classification of samples by industry and year and estimates firms' parameters within a specific industry for each year.

Bartov, Gul, and Tsui (2000) compared the performance of the discretionary accruals estimated by several models in detecting earnings management, such as the cross-sectional models (i.e. the cross-sectional Jones model and the cross-sectional modified Jones model) and other models (i.e. their time-series counterparts, the Healy model, the DeAngelo model and the Industry model). In their study, the two cross-sectional models are found to have the strongest ability to detect earnings management. Thus, this study chooses the cross-sectional modified Jones model (1995) to measure discretionary accruals. Specifically, this study employs the cross-sectional ordinary least square regression to estimate the coefficients in Equation (1) within each industry for each year. These coefficients are then taken into Equation (2) to calculate the regression value (i.e. normal accruals). Finally, the abnormal value (i.e. discretionary accruals) is obtained by subtracting the regression value from the actual value (i.e. total accruals).

According to Bartov et al. (2000), K1 in the modified Jones model (1995) should be zero on average, K2 should be positive because there is a positive relationship between the changes in working capital and the changes in sales, while K3 should be negative because higher fixed assets will lead to more depreciation expenses and deferred taxes. Before the statistical tests, this study tests whether the cross-sectional modified Jones model (1995)

can correctly measure the discretionary accruals in this study. Table 4.2 below presents the summary statistics for the parameters - K1, K2 and K3. As can be seen from Table 4.2, K1 is insignificantly different from zero, and K2 and K3 have correct signs with 63.89% and 11.11% positive values, respectively. Therefore, the cross-sectional modified Jones model (1995) is appropriate in measuring discretionary accruals in this study.

Table 4.2: Summary of parameters of the cross-sectional modified Jones model (1995)

$$\text{Model: } \frac{TA_{it}}{A_{i,t-1}} = k_1 \frac{1}{A_{i,t-1}} + k_2 \frac{\Delta Rev_{it}}{A_{i,t-1}} + k_3 \frac{PPE_{it}}{A_{i,t-1}} + \varepsilon_{it}$$

	Predicted Sign	Mean	S.D.	Median	Min	Max	%Positive	T: Mean=0
K_1		0.172	0.655	0.069	-1.048	3.158	63.89%	-1.573
K_2	+	0.070	0.143	0.048	-0.239	0.401	63.89%	-2.948***
K_3	-	-0.106	0.107	-0.095	-0.355	0.174	11.11%	5.937***

Note:

This table reports the summary of parameters of the modified Jones model (1995). For each parameter K_1, K_2 and K_3, mean, standard deviation (S.D.), median, minimum value (Min), maximum value (Max) and the percentage of positive value (%Positive) are reported. T represents the t statistics, indicating whether the mean value of K1, K2 and K3 is different from zero.

*, ** and *** denote significance levels at 10%, 5% and 1%, respectively.

4.3.2 Independent Variable (Ownership Structure)

There are some different measurement methods of ownership structure in the previous studies conducted in China. Ding et al. (2007) and Cullinan et al. (2012) defined a SOE by distinguishing the nature of the largest shareholder. The firms with the state as the largest shareholder are defined as SOEs, and otherwise POEs. Wang and Yung (2011) classified SOEs and POEs based on the proportion of state shares, and a firm is defined

as a SOE if the state holds more than 30% of the total shares. Wang et al. (2008) and Huang, Li, Tse, and Tucker (2018) defined a SOE based on the nature of the ultimate controlling shareholder. In order to eliminate the possible influences of methods used to define a SOE on the results, Huang et al. (2018) used the China Center for Economic Research database from the Peking University as another data source, which classifies SOEs and POEs based on whether the largest shareholder's ultimate controller is the state. They finally obtained a classification result similar to the CSMAR database.

This study employs the CSMAR database as the data resource, and it is available to get the information about the ultimate shareholder of Chinese listed firms from the CSMAR database (calculated by the equity control chain). Following Wang et al. (2008) and Huang et al. (2018), this study employs a dummy variable to measure ownership structure, which equals 1 if the firm is a POE, and 0 if the firm is a SOE. The classification between SOEs and POEs is based on whether the firm is ultimately controlled by the government.

The CSMAR database classifies the nature of the ultimate controlling shareholders and codes them as follows: 1000 (enterprise), 1100 (state enterprise), 1210 (collectively-owned enterprise), 1200 (private enterprise), 1220 (enterprise funded by Hong Kong, Macao and Taiwan), 1230 (foreign enterprise), 2000 (administrative agency and institution), 2100 (central institution), 2120 (local institution), 2500 (social organization), 3000 (personal), 3110 (domestic personal), 3120 (personal from Hong Kong, Macao and Taiwan) and 3200 (foreign personal) and 9999 (others).

Based on this classification, this study excludes sample firms that are ultimately controlled by 1210 (collectively-owned enterprise) and 2500 (social organization)

because they are not state-owned and private-owned due to their unique nature in China. Further exclusion includes the firms ultimately controlled by 9999 (others) because there is no information about their ultimate controlling shareholders in the database. Then, this study classifies the firms ultimately controlled by private parties or personals as POEs, including 1000 (enterprise), 1200 (private enterprise), 1220 (enterprise funded by Hong Kong, Macao and Taiwan), 1230 (foreign enterprise), 3000 (personal), 3110 (domestic personal), 3120 (personal from Hong Kong, Macao and Taiwan) and 3200 (foreign personal). Finally, the firms are classified as SOEs that are ultimately controlled by 1100 (state enterprise), 2000 (administrative agency and institution), 2100 (central institution) and 2120 (local institution).

4.3.3 Moderating Variables

The first moderating variable in this study is board independence (Board_Indep). The CSRC (2001) stipulates the ratio of independent directors (i.e. one third) in the board to enhance its independence and monitoring. Therefore, this study measures board independence on the percentage of independent directors in the board (e.g., Idris et al., 2018; Liu, Miletkov, Wei, & Yang, 2015; Chen & Al-Najjar, 2012), which means board independence increases with the increase of the proportion of independent directors in the board. This measurement method allows exploring whether the mandatory requirement of the CSRC (2001) for board independence help strengthen the board's monitoring of earnings management, especially its joint role with ownership structure in reducing earnings management.

The second moderating variable is audit committee independence (AC_Indep), which is measured on the percentage of independent directors in the audit committee. The existing research mainly uses two methods to measure audit committee independence. One approach is to measure audit committee independence by the percentage of independent directors in the audit committee, which means the higher proportion of independent directors in the audit committee would result in higher audit committee independence (e.g., Xie et al., 2003; Vafeas, 2005; Sultana, 2015; Juhmani, 2017; Alzoubi, 2018). Another method is to set audit committee independence as a dummy variable which equals 1 when the audit committee is completely independent with 100% independent directors, and 0 otherwise (e.g., Bédard et al., 2004; Krishnan, 2005; Zgarni, Hlioui, & Zehri, 2016). Unlike the requirements of the USA regulations (i.e. Blue Ribbon Committee, 1999; SOX, 2002) for audit committee independence that the audit committee should be completely independent, the CSRC (2001) stipulates that the independent directors' percentage in the audit committee should be more than 50 per cent. Therefore, the proportion of independent directors in the audit committee is more appropriate to measure audit committee independence in the context of China.

The third moderating variable employed in the study is external auditor (Big 4). This study focuses on investigating the constraining effect of audit quality on earnings management. High-quality external auditors have stronger abilities to detect and report accounting standards violations (DeAngelo, 1981). The audit standards have stipulated external auditors' performance such as competence and independence, but these qualities are unobservable and cannot be used to measure audit quality in practice. In the existing

research, audit quality is proxied by various variables. DeFond and Zhang (2014) summarized the researches on auditing from 1996 to 2013. They found that the current studies usually adopt output-based measures (e.g., going concern opinion, accrual quality and financial report quality) and input-based measures (e.g., Big N, auditor tenure, industry specialization and audit fees) to measure audit quality, but they provide mixed evidence on which variable is the best. DeFond and Zhang (2014) suggested that the choice of the proxies for audit quality should take research context into consideration, and they proposed a selection principle that the output-based measures are more suited to test audit quality supply while the input-based measures are more suitable for testing audit quality demand. This study aims to adopt audit quality as a moderating variable to study whether it impacts the difference in earnings management between the Chinese SOEs and POEs. Besides, as discussed in Chapter 1, one of the motivations to conduct this study is to examine whether international accounting firms perform better than local audit firms to reduce earning management in China with relatively new local auditing profession. Therefore, this study selects one of the most commonly-used input measures (i.e. Big 4) as a proxy for audit quality. The higher audit quality of Big 4 firms than non-Big 4 firms have been found in the existing research. This is because Big 4 firms usually have higher audit fees that expose them to higher litigation risk (Skinner & Srinivasan, 2012; DeFond & Zhang, 2014). Besides, their auditors are usually more independent (Koh, Rajgopal, & Srinivasan, 2013) and have easier access to training and facilities (Chaney, Jeter, & Shivakumar, 2004; Khurana & Raman, 2004). To conclude, this study sets external

auditor as a dummy variable, which equals 1 if a firm's external auditors come from Big 4 firms, and 0 otherwise (Alhadab & Clacher, 2018; Alzoubi, 2016).

4.3.4 Control Variables

Following previous studies (e.g., Roychowdhuruy, 2006; Wang & Yung, 2011; Zang, 2012; Alhadab & Clacher, 2018), this study includes several control variables.

First, the natural logarithm of total assets (Size) is employed to control the impact of firm size on earnings management. In the previous literature investigating earnings management, firm size is often employed as a control variable. Some studies proposed that firm size negatively impacts earnings management (e.g., Gerayli et al., 2011; Alzoubi, 2018). External markets usually have easier access to information about large companies from their publicly-published financial statements. Therefore, large companies are more susceptible to investors and regulators' scrutiny, thereby reducing their earnings management opportunities (Albrecht & Richardson, 1990; Lee & Choi, 2002). Besides, the internal control system of large companies is usually relatively complete, and they are under more other monitoring mechanisms such as government and bank monitoring. These factors can help reduce the opportunistic earnings management behaviors within large companies. However, some other studies found that firm size is positively related to earnings management (e.g., Moses, 1987; Michelson, Jordan-Wagner, & Wootton, 1995; Alves, 2014; Alhadab & Clacher, 2018). Watts and Zimmerman (1986) proposed that the government is usually more likely to pay attention to larger companies. Thus, these large companies' managers generally tend to postpone profits of the current period to later periods to reduce political costs (Alzoubi, 2016). Moreover, compared with small

companies, the complicated organizational structure and the intertwined interest relationships of large enterprises result in higher information asymmetry, more severe agency problems and more opportunities to manage earnings (Bushman, Chen, Engel, & Smith, 2004).

This study's second control variable is the book-to-market ratio (Growth). Previous studies have shown that firms' earnings management motivations become stronger with their higher growth ability (e.g., AlNajjar & Riahi-Belkaoui, 2001; Madhogarhia, Sutton, & Kohers, 2009; Lee, Li, & Yue, 2006; Gerayli et al., 2011; Alzoubi, 2018). Growth enterprises often have large capital needs. However, the negative impacts of disappointing performance on investors are usually more significant in growth enterprises (Madhogarhia et al., 2009). Thus, these growth companies tend to manipulate earnings to raise funds from the stock market and achieve specific profit targets such as meeting analyst forecast (McNichols, 2002) and generating positive earnings (Roychowdhury, 2006). The high information asymmetries within growth firms resulting from weak internal control systems provide their managers with opportunities and incentives to manage earnings (Madhogarhia et al., 2009). AlNajjar and Riahi-Belkaoui (2001) also proposed that growth companies usually have more investment opportunities and attract more attention from the government. In order to reduce the political costs and risks associated with these investment opportunities, growth companies tend to reduce reported earnings by changing accounting choices.

This study takes the ratio of total debt divided by the total asset (Leverage) as the third control variable to control the impact of debt contracts on earnings management. As

discussed earlier, debt covenants are one of the important motivations for Chinese companies to manage earnings. Many studies have suggested that when companies have a high level of leverage, their managers are likely to perform earnings management to avoid defaulting on debt terms. The motivations to manage earnings become more robust as the debt-to-asset ratio and contract restrictions increase (DeFond & Jiambalvo, 1994; Sweeney, 1994; Klein, 2002; Franz, HassabElnaby, & Lobo, 2014; Alzoubi, 2016). For example, Franz et al. (2014) found that companies close to violating debt covenants, especially those with low credit rating and unable to meet analyst expectations, often manipulate earnings to avoid defaulting on debt covenants. Jaggi and Lee (2002) found that firms' accounting choices for increasing or decreasing earnings are affected by the nature of their financial distress. Specifically, when a company's financial distress is only a temporary phenomenon, it tends to manage earnings positively to avoid breaching debt contracts. Conversely, if the financial distress is severe in nature, its managers are driven to decrease earnings in the hope of emphasizing their financial difficulties and renegotiating debt covenants with creditors.

Fourth, this study adopts the ratio of return on assets (ROA) to control the effect of profitability. Many existing studies have found a negative relationship between ROA and discretionary accruals (e.g., Habbash, 2010; Alzoubi, 2018). DeFond and Park (2001) also found that the company's executives usually shift earnings to make the overall performance looks relatively smooth. For example, if managers predict that future performance will be worse than that of the current period, they will transfer the current income to the future. In contrast, if the management predicts a poor performance in the current period, they are motivated to shift the future earnings to the current period. As discussed before, the return on assets is a critical accounting indicator employed by the

CSRC in China to evaluate the listing, rights offering and delisting. Since its calculation is based on the accounting data of financial statement, the management is motivated to manipulate accounting numbers to increase reported earnings.

Table 4.3: Definition of variables

Variable	Variable Sign	Definition
Independent variable		
Earnings Management	EM	The absolute value of discretionary accruals measured by the modified Jones model (Dechow et al., 1995).
Dependent Variable		
Ownership Structure	Private	Dummy variable, which equals 1 if the firm is private-owned, and 0 (i.e. state-owned) otherwise.
Moderating Variables		
Board Independence	Board_Indep	The proportion of independent directors in the board.
Audit Committee Independence	AC_Indep	The proportion of independent directors in the audit committee.
External Auditor	Big 4	Dummy variable, which equals 1 if a firm's external auditors come from Big 4 firms, and 0 otherwise.
Control Variables		
Size		The natural log of total assets.
Growth		The book-to-market ratio.
Leverage		The ratio of total debt divided by the total asset.
ROA		The ratio of return on assets.
Industry		Industry dummies based on the Industry Code of the CSRC 2012.
Year		Year dummies (2015-2018).

Finally, this study employs year dummies (Year) and industry dummies (Industry) based on the Industry Code of the CSRC 2012 to control the impacts of year and industry. Table 4.3 summarizes the definition of variables, including the dependent variable (i.e. earnings management), the independent variable (i.e. ownership structure), moderating variables (i.e. board independence, audit committee independence and external auditor) and control variables (i.e. size, growth, leverage, ROA, year and industry).

4.4 Empirical Model

This study proposes the following regression to examine how ownership structure and its interactions with board independence, audit committee independence and external auditors affect earnings management.

$$EM = \partial_0 + \partial_1 Private + \partial_2 Board\_Indep + \partial_3 Private \times Board\_Indep + \partial_4 AC\_Indep + \partial_5 Private \times AC\_Indep + \partial_6 Big\ 4 + \partial_7 Private \times Big\ 4 + \partial_8 Size + \partial_9 Growth + \partial_{10} Leverage + \partial_{11} ROA + \sum Industry + \sum Year + \varepsilon$$

This empirical model includes the dependent variable (i.e. EM), the independent variable (i.e. Private), the three moderating variables (i.e. Board_Indep, AC_Indep and Big 4) and their interaction terms with the independent variable.

4.5 Data Analysis Method

First, descriptive statistics will be conducted to provide a summary of data by ownership type. This part will also examine the difference in variables between SOEs and POEs in China.

Second, Pearson correlation analysis will be employed to analyze the correlations between variables, which indicates the linear relationship between two variables. The strength of correlations will be evaluated by the p-value of the t statistic.

Third, before conducting a regression analysis, this study will conduct a multicollinearity test to check whether there is a severe multicollinearity problem between independent variables. Meanwhile, the unit roots/stationarity test will be employed to test whether the variables are stationary. Then, the pooled ordinary least square (OLS) regression analysis will be conducted to test hypotheses preliminarily.

The heteroskedasticity of independent variables indicates that panel data models (i.e. random effects model and fixed effects model) are more appropriate than the pooled OLS model which does not consider heterogeneity across groups or time (Park, 2011). Thus, this study will employ the Breusch-Pagan test to check the heteroskedasticity of independent variables. If there is a heteroskedasticity of independent variables, this study will utilize the F test, the Lagrange multiplier test (Breusch & Pagan, 1980) and the Hausman test (1978) to select the appropriate panel data model for this study. This study will finally conduct a panel data regression analysis and draw conclusions on the hypotheses testing accordingly.

4.6 Chapter Summary

This chapter presents the research methodology of the study, including data collection, sampling, variable measurement and empirical model. This chapter also introduces the data analysis method in the following chapter.

CHAPTER 5: RESULTS

5.1 Introduction

As described in Chapter 4, empirical strategies in this study focus on carrying out three distinct sets of analyses to achieve the research objectives and test hypotheses. Section 5.2 provides an overview of data and describes the comparative analysis of the differences in variables between Chinese SOEs and POEs. Section 5.3 presents the correlation analysis, which analyzes the correlations between variables. Section 5.4 introduces the multivariate regression analysis of the relationship between ownership structure and earnings management, and the moderating impact of board independence, audit committee independence and external auditors on this difference. Finally, Section 5.5 concludes this chapter.

5.2 Descriptive Statistics

Table 5.1 reports the summary statistics of variables by ownership type. Following Wang et al. (2008), this study winsorizes continuous variables at the top and bottom 1% to avoid the potential influence of outliers. As presented in Table 5.1, all variables are distributed within a reasonable range.

In Table 5.1, the level of earnings management of SOEs and POEs is 0.058 and 0.052, respectively, which indicates that both SOEs and POEs are actively engaged in earnings management in China, and supports that earnings management is a rampant phenomenon in Chinese firms (Liu & Lu, 2007).

Table 5.1: Descriptive statistics of variables partitioned by ownership type

Variables	Ownership type	Mean	S.D.	Min.	1st Qu.	Median	3rd Qu.	Max.
EM	POEs	0.058	0.079	0.000	0.018	0.037	0.071	1.366
	SOEs	0.052	0.055	0.000	0.016	0.036	0.065	0.422
Board_Indep	POEs	0.373	0.048	0.250	0.333	0.333	0.429	0.600
	SOEs	0.371	0.053	0.286	0.333	0.357	0.400	0.800
AC_Indep	POEs	0.671	0.085	0.250	0.667	0.667	0.667	1.000
	SOEs	0.676	0.095	0.333	0.667	0.667	0.667	1.000
Big 4	POEs	0.048	0.214	0.000	0.000	0.000	0.000	1.000
	SOEs	0.072	0.258	0.000	0.000	0.000	0.000	1.000
Size	POEs	22.480	1.087	20.180	21.760	22.440	23.160	25.180
	SOEs	23.000	1.201	20.180	22.090	22.990	23.900	25.180
Growth	POEs	0.567	0.253	0.023	0.369	0.550	0.760	1.249
	SOEs	0.694	0.265	0.052	0.491	0.704	0.907	1.249
Leverage	POEs	0.425	0.199	0.029	0.276	0.414	0.572	0.925
	SOEs	0.512	0.197	0.059	0.357	0.515	0.664	0.925
ROA	POEs	0.041	0.036	-0.035	0.016	0.039	0.072	0.095
	SOEs	0.030	0.032	-0.035	0.009	0.025	0.047	0.095

Note:

This table reports the summary statistics of variables by ownership type. For each variable, mean, standard deviation (S.D.), minimum value (Min), 1st percentile (1st Qu.), median, 3rd percentile (3rd Qu.) and maximum value (Max) are reported.

Table 5.1 shows that the average board independence of POEs and SOEs is 0.373 and 0.371, respectively, suggesting that the board independence of Chinese listed firms generally just meets the threshold ratio (i.e.one third) of independent directors in the board set by the CSRC (2001). Similarly, the proportion of independent directors in the audit committee of both SOEs and POEs only meets the CSRC (2001)'s regulatory audit committee independence (i.e.50 per cent) with 0.671 and 0.676, respectively. Therefore, both the board independence and the audit committee independence of Chinese listed firms are generally lower than that of companies in the USA and the UK, which require the board and the audit committee to be composed of a majority of members and all independent directors, respectively (e.g., Cadbury Report,1992; SOX, 2002). Regarding audit quality, only 4.8% of SOEs and 7.2% of POEs employ Big 4 auditors, which indicates that although Big 4 firms are perceived to be in higher quality (DeFond & Jianmbalvo, 1993), their shares in the Chinese auditing market are not high. This result is attributed to the highly competitive auditing market in China, which has led to the low market concentration of each audit firm, including local and international audit firms (Chen et al., 2011).

For the control variables, in Table 5.1, the sample SOEs and POEs have large firm sizes (the natural logarithm of total assets of 22.48 and 23.00, respectively), reasonable market valuation (book-to-market ratio of 0.567 and 0.694, respectively), appropriate level of debt (leverage of 0.425 and 0.512, respectively) and reasonable performance (ROA of 0.041 and 0.030, respectively). These results stem from the sample selection process, which deletes those firms with negative operating income, the initial public offering of less than a year, or failure to survive the entire study period.

Table 5.2: Mean difference between POEs and SOEs

Variables	POEs	SOEs	Mean Diff. (POE-SOE)	t-value for Mean Diff.	p-value for Mean Diff.
Number of obs.	1,059	1,269			
EM	0.058	0.052	0.006**	-2.109	0.035
Board_Indep	0.373	0.371	0.002	-1.080	0.280
AC_Indep	0.671	0.676	-0.005	1.314	0.189
Big 4	0.048	0.072	-0.024**	2.406	0.016
Size	22.48	23.00	-0.520***	11.016	< 0.01
Growth	0.567	0.694	-0.127***	11.760	< 0.01
Leverage	0.425	0.512	-0.087***	10.581	< 0.01
ROA	0.041	0.030	0.011***	-8.180	< 0.01

Note:
This table reports whether the mean values of SOEs and POEs are significantly different.
*, ** and *** denote significance levels at 10%, 5% and 1%, respectively.

Table 5.2 reports the mean difference of variables between Chinese POEs and SOEs. In Table 5.2, the average level of earnings management of SOEs is 0.006 lower than POEs at the 0.05 significance level (0.052 relative to 0.058), which indicates that SOEs are less likely than POEs to perform earnings management.

As presented in Table 5.2, the average board independence of POEs is higher than SOEs (0.373 relative to 0.371), but it is insignificant. Although the average audit committee

independence of POEs is lower than SOEs (0.671 relative to 0.676), it is still insignificant. Therefore, both the board independence and the audit committee independence of SOEs and POEs are similar in China. However, the average percentage of SOEs that employ Big 4 firms is significantly higher than POEs at the 0.05 significance level (0.072 relative to 0.048), suggesting that SOEs are more likely than POEs to employ Big 4 firms in China.

For the first control variable (i.e. Size), in Table 5.2, the average level of SOEs is significantly higher than POEs at the 0.01 significance level (23.00 relative to 22.48). This is because a series of reform measures in the privatization reforms, such as retaining large SOEs while privatizing small SOEs and reorganizing and merging the state sector, have created the conditions for the emergence of many large SOEs in China (Song, 2018). The second control variable (i.e. Growth) measured at average book-to-market ratio is significantly higher in SOEs than in POEs at the 0.01 significance level (0.694 relative to 0.567). This indicates that the average market valuation of POEs is higher than SOEs, and competing for market valuation in the capital market may be a factor driving Chinese POEs to increase stock price through earnings management. For the third control variable (i.e. Leverage), Table 5.2 shows that SOEs have a significantly higher leverage level than POEs at the 0.01 significance level (0.512 relative to 0.425). This difference suggests that SOEs are more aggressive in financial decisions and rely more on external debt. In contrast, POEs are relatively conservative and rely more on internal financing. The reason may be that the Chinese government provides SOEs easier access to loans such as from the four state-owned banks (Wang &Yung, 2011). However, the last control variable (i.e. ROA) shows that the Chinese POEs seems to be more significantly profitable than SOEs

at the 0.01 significance level (0.041 relative to 0.030), which supports the finding of Song (2018) that despite the emergence of many large SOEs during the privatization reform, POEs outperformed SOEs in past years in China.

5.3 Correlation Analysis

Pearson correlation analysis is conducted to identify the relationship between variables. The correlation coefficient determines the magnitude of the linear relationship between two variables, while the signs of the coefficient indicate a positive or negative relationship. The significance of the linear relationship between two variables is determined by the p-value in this study. Table 5.3 reports the Pearson correlations of variables.

In Table 5.3, private ownership has a significantly positive correlation with earnings management (0.045 at the 0.05 significant level), which suggests that POEs are more likely than SOEs to perform earnings management.

As shown in Table 5.3, board independence and audit committee independence have insignificant correlations with earnings management (0.009 and -0.025, respectively), indicating that board independence and audit committee independence cannot constrain the earnings management of Chinese firms. However, Big 4 firms can effectively reduce earnings management in China with a significant negative correlation with earnings management (-0.036 at the 0.1 significance level).

Table 5.3: Pearson correlation of variables

	EM	Private	Board_Indep	AC_Indep	Big 4	Size	Growth	Leverage	ROA
EM	1.000								
Private	0.045** (2.174)	1.000							
Board_Indep	0.009 (0.428)	0.022 (1.071)	1.000						
AC_Indep	-0.025 (-1.215)	-0.027 (-1.302)	0.106*** (5.148)	1.000					
Big 4	-0.036* (-1.750)	-0.049** (-2.366)	0.079*** (3.818)	0.075*** (3.643)	1.000				
Size	-0.057*** (-2.745)	-0.221*** (-10.917)	0.030 (1.432)	0.027 (1.317)	0.204*** (10.053)	1.000			
Growth	-0.073*** (-3.547)	-0.236*** (-11.711)	-0.007 (-0.346)	0.036* (1.730)	0.099*** (4.775)	0.678*** (44.434)	1.000		
Leverage	0.109*** (5.291)	-0.214*** (-10.590)	0.011 (0.511)	-0.004 (-0.171)	0.052** (2.515)	0.499*** (27.797)	0.429*** (22.905)	1.000	
ROA	-0.020 (-0.964)	0.169*** (8.271)	-0.017 (-0.807)	-0.047** (-2.260)	0.010 (0.488)	-0.046** (-2.219)	-0.243*** (-12.078)	-0.428*** (-22.814)	1.000

Note:

This table presents the Pearson correlation between variables and the t value of the correlation.

*, ** and *** denote significance levels at 10%, 5% and 1%, respectively.

In Table 5.3, there is a significant negative correlation between firm size and earnings management (-0.057 at the 0.01 significance level), which supports the previous research's findings that more transparent information (Albrecht & Richardson, 1990; Lee & Choi, 2002) and more complete governance system (Yeo, Tan, Ho, & Chen, 2002; Bushman et al., 2004; Suto, 2003) of the large company help suppress their managers' earnings management activities. However, leverage has a significant positive correlation with earnings management (0.109 at the 0.01 significance level), which supports that debt covenants motivate managers to conduct earnings management, and their motivations become stronger as the level of leverage increases (Sweeney, 1994; Klein, 2002; Franz et al., 2014). Contrary to previous research findings, the book-to-market ratio (indicated by "Growth" in Table 5.3 above) is significantly correlated with earnings management (-0.073 at the 0.01 significance level). This suggests that companies with lower market valuation are less likely to manipulate earnings, and supports the finding in the sample comparison that Chinese SOEs receive lower market valuation than Chinese POEs and perform fewer earnings management. Finally, there is an insignificant correlation between ROA and earnings management (-0.020), which is attributed to a series of sample selection criteria that have deleted those firms that have a negative income or fail to survive during the sample period. As a result, the firms that are close to zero income and therefore have strong incentives to manipulate earnings to meet or beat the CSRC's performance requirements for right issues and delisting are excluded in this study. As can be seen from Table 5.1, the sample SOEs and POEs in this study have reasonable performances with ROA of 0.041 and 0.030, respectively.

Table 5.3 also clearly presents some other important relationships. For example, private ownership is negatively correlated with firm size (-0.221), growth represented by the book-to-market ratio (-0.236) and leverage (-0.214) at the 0.01 significance level. This supports the findings in the sample comparison that POEs are smaller in firm size on average, whilst having higher market valuation and lower leverage level.

In Table 5.3, all the correlation coefficients between independent variables are below the limit of 0.9 from which serious multicollinearity problems are generally considered to rise (Dohoo, Ducrot, Fourichon, Donald, & Hurnik, 1997). Therefore, there are no severe multicollinearity problems of independent variables in this study.

5.4 Regression Analysis

5.4.1 Multicollinearity Test

Since multicollinearity reduces the power of the model to identify statistically significant exploratory variables, this study further checks whether there are severe multicollinearity problems of independent variables. This study employs the "Variance Inflation Factor" (VIF) to evaluate the severity of multicollinearity. In general, the VIF value of 5 is usually set as the threshold for assessing the severity of multicollinearity. If the VIF value of a variable is greater than 5, it is generally considered that there is a severe multicollinearity problem of this variable with other variables (Kennedy, 2003). Table 5.4 presents that the VIF values of all independent variables are lower than 5, further verifying that there are no severe multicollinearity problems of independent variables in this study.

Table 5.4: Variance inflation factor of independent variables

Variables	VIF
Private	1.0912
Board_Indep	1.0197
AC_Indep	1.0208
Big 4	1.0599
Size	2.3875
Growth	2.0377
Leverage	1.7186
ROA	1.3892

5.4.2 Unit Roots/Stationarity Test

Unit roots/stationarity test examines whether variables are non-stationary, which influences the robustness of the hypothesis test. In this study, the stationarity of variables is tested by the Dickey-Fuller test (Dickey & Fuller, 1979). In the Dickey-Fuller test, the null hypothesis is the presence of unit roots and non-stationarity, and the alternative hypothesis is no unit roots and stationarity. If the Dickey-Fuller statistic has a p-value below the appropriate threshold (i.e. 0.05), then the null hypothesis should be rejected.

Table 5.5 reports the Dickey-Fuller test results in this study. In Table 5.5, the values of Dickey-Fuller of all variables are significant at the 0.01 significance level. Thus, the null

hypothesis can be rejected. This indicates that the variables are stationary in this study, and there are no units roots in variables that would undermine the robustness of the hypotheses test.

Table 5.5: Results of unit roots/ stationarity test

Variables	**Unit Roots Test (Dickey-Fuller Test)** H0: presence of a unit root / non-stationarity H1: no unit roots / stationarity	**Results**
EM	Dickey-Fuller = -27.331 (p<0.01)	Reject
Private	Dickey-Fuller = -19.425 (p<0.01)	
Board_Indep	Dickey-Fuller = -28.415 (p<0.01)	
AC_Indep	Dickey-Fuller = -28.596 (p<0.01)	
Big 4	Dickey-Fuller = -28.812 (p<0.01)	
Size	Dickey-Fuller = -23.320 (p<0.01)	
Growth	Dickey-Fuller = -22.023 (p<0.01)	
Leverage	Dickey-Fuller = -21.423 (p<0.01)	
ROA	Dickey-Fuller = -25.083 (p<0.01)	

5.4.3 Pooled Ordinary Least Square Regression Analysis

This study first conducts a pooled ordinary least square (OLS) regression analysis to test hypotheses preliminarily. Table 5.6 presents the pooled OLS regression of the ownership structure and its interactions with corporate governance on earnings management.

Table 5.6: Pooled ordinary least square (OLS) regression examining earnings management with ownership type and its interactions with corporate governance

Variables	Coefficient	t value
Intercept	0.1442***	3.6563
Private	0.0499*	1.7792
Board_Indep	0.0508	1.4225
Private×Board_Indep	-0.0846	-1.5295
AC_Indep	-0.0052	-0.2654
Private×AC_Indep	-0.0193	-0.6182
Big 4	-0.0073	-0.9905
Private×Big 4	0.0058	0.4830
ROA	0.0844*	1.8156
Leverage	0.0733***	8.2828
Growth	-0.0193***	-2.6374
Size	-0.0058***	-3.2314
Observations	2,328	
Adjusted R-square	0.0343	

Note:

This table reports the pooled OLS regression of ownership structure on earnings management with each of the three moderating variables and their interaction terms with the ownership structure.

*, ** and *** denote significance levels at 10%, 5% and 1%, respectively.

As presented in Chapter 3, H1 in this study predicts that Chinese SOEs perform a lower level of earnings management than Chinese POEs. As shown in Table 5.6, the coefficient on Private is significantly positive (0.0499 at the 0.1 significance level), which supports H1 that POEs are more likely than SOEs to perform earnings management in China.

Chapter 3 proposed H2a, H2b and H2c to examine whether the impact of ownership structure on earnings management varies with the level of board independence, committee independence and the auditing of Big 4 firms. H2a, H2b and H2c predict that when **a)** board independence is higher, **b)** audit committee independence is higher, or **c)** external auditors come from Big 4 firms, the difference in earnings management between SOEs and POEs would become less evident. Therefore, the coefficients on the interactions of the ownership structure with board independence, audit committee independence and Big 4 are expected to be significantly negative if H2a, H2b and H2c are accepted.

Table 5.6 shows that the coefficients on Board_Indep and the interaction term between Private and Board_Indep are insignificant (0.0508 and -0.0846, respectively), which fails to support H2a that board independence can help reduce the difference in earnings management between SOEs and POEs. In Table 5.6, the coefficients on AC_Indep and its interaction with Private are also insignificant (-0.0052 and -0.0193, respectively). This indicates that audit committee independence cannot reduce the difference in earnings management between SOEs and POEs as predicted in H2b. Moreover, the coefficients on Big 4 and the interaction term between Private and Big 4 are insignificant (-0.0073 and 0.0058, respectively), which is inconsistent with H2c that Big 4 firms play a more

significant role in reducing the earnings management of POEs and thus help reduce the divergence in earnings management between SOEs and POEs.

To conclude, in pooled OLS regression analysis, H1 is supported, but H2a, H2b and H2c are not supported. This indicates that SOEs perform a lower level of earnings management than POEs in China as predicted. However, board independence, audit committee independence and external auditor have no moderating effects on the difference in earnings management between SOEs and POEs and cannot help reduce this difference.

5.4.4 Heteroscedasticity Test

This study then employs the Breusch-Pagan test to test the heteroscedasticity of independent variables (Breusch & Pagan, 1979). In the Breusch-Pagan test, the null hypothesis is homoscedasticity; that is, the variance of regression errors depends on the value of independent variables. If the test statistic (i.e. Breusch-Pagan Lagrange multiplier statistic) has a p-value below the appropriate threshold (i.e. 0.05), the null hypothesis of homoskedasticity should be rejected. Table 5.7 presents the results of the Breusch-Pagan test in this study.

As shown in Table 5.7, the p-value of the Breusch-Pagan Lagrange multiplier in this study's empirical model is less than 0.05, which indicates that the null hypothesis should be rejected and subsequently confirms the presence of heteroscedasticity problems of independent variables in this study. This result suggests that the random or fixed effect model may perform better than the pooled OLS regression in hypotheses test in this study because pooled OLS regression does not consider the heterogeneity across groups or time (Park, 2011).

Table 5.7: Results of heteroscedasticity test

	Heteroskedasticity Test **(Breusch-Pagan test)** H0: homoskedasticity H1: heteroskedasticity
Empirical Model	Breusch-Pagan = 22.003 (p=0.024)
Test Results	Reject

5.4.5 Panel Data Model Test

Following Park (2011), this study adopts a three-step test, including F test, Lagrange multiplier test (Breusch & Pagan, 1980) and Hausman test (1978), to compare pooled OLS model, random effects model and fixed effects model. Table 5.8 below reports the results of the panel data model test.

Table 5.8: Panel data model test

	F test H0: pooled OLS model H1: fixed effects model	**Lagrange multiplier test** H0: pooled OLS model H1: random effects model	**Hausman test** H0: random effects model H1: fixed effects model
Empirical Model	F=2.3516 (P<0.01)	Chi-square=78.023 (P<0.01)	Chi-square=273.46 (P<0.01)
Test Results	Reject	Reject	Reject

As shown in Table 5.8, the F test is employed to compare the pooled OLS model and the fixed effects model in the first step. In the empirical model, the F value is significant at the 0.01 significance level, which suggests that H0 should be rejected. Therefore, the fixed effects model is superior to the pooled OLS model in this study.

The comparison between the pooled OLS model and the random effects model by the Lagrange multiplier test (Breusch & Pagan, 1980) is conducted in the second step. As presented in Table 5.8, the Chi-square value in the empirical model is significant at the 0.01 significance level. Therefore, the null hypothesis H0 should be rejected, and the random effects model is superior to the pooled OLS model in this study.

The F test and Lagrange multiplier test results confirm that the fixed effects model and the random effects model are more suitable than the pooled OLS model if there is a heteroskedasticity of independent variables (Park, 2011). Therefore, this study finally conducts the Hausman test (1978) to compare the random effects model and the fixed effects model. In Table 5.8, the Chi-square is significant at the 0.01 significance level, so the null hypothesis H0 should be rejected. This result indicates that the fixed effects model should be utilized in the empirical model of this study, which supports Baltagi (2008) finding that the random effects model is more suitable to infer the characteristics of a population approaching infinity, and therefore is not suitable for most accounting studies.

5.4.6 Fixed Effects Regression Analysis

This study then performed fixed effects regression on the empirical model. The results of the fixed effects regression are presented in Table 5.9. As shown in Table 5.9, the coefficient on Private is significantly positive (0.1151 at the 0.1 insignificance level), which supports H1 that SOEs perform fewer earnings management than POEs. H1 can also be verified indirectly. Compared with POEs, SOEs are bigger in firm size and have a higher book-to-market ratio, as shown in Table 5.2. Consequently, firm size and the book-to-market ratio are negatively correlated with earnings management at the 0.01 significance level (-0.057 and -0.073, respectively), as shown in Table 5.3.

Table 5.9: Fixed effects regression examining earnings management with ownership type and its interactions with corporate governance

Variables	Coefficient	t value
Private	0.1151*	1.9400
Board_Indep	-0.0222	-0.3564
Private×Board_Indep	-0.0697	-0.6757
AC_Indep	0.0011	0.0307
Private×AC_Indep	-0.0450	-0.7338
Big 4	0.0439	1.5849
Private×Big 4	-0.0640*	-1.7508
ROA	0.1343**	2.0292
Leverage	0.0848***	3.8112
Growth	-0.0014	-0.0919
Size	0.0001	0.0107
Year	Control	
Industry	Control	
Observations	2,328	
Adjusted R-square	0.1392	

Note:

This table reports the fixed effects regression of ownership structure on earnings management with each of the three moderating variables and their interaction terms with the ownership structure.

*, ** and *** denote significance levels at 10%, 5% and 1%, respectively.

In Table 5.9, the coefficients on Board_Indep and its interaction with Private are insignificant (-0.0222 and -0.0697, respectively), which is inconsistent with H2a that board independence has a moderating impact on the difference in earnings management between SOEs and POEs. Similarly, there are insignificant coefficients on AC_Indep and its interaction with Private (0.0011 and -0.0450, respectively), indicating that audit committee independence cannot reduce the difference in earnings management between SOEs and POEs as predicted in H2b. However, although there is an insignificant coefficient on Big 4 (0.0439), the coefficient on the interaction term between Private and Big 4 is significantly negative (-0.0640 at the 0.1 significance level), which supports H2c that Big 4 firms play a more significant role to reduce earnings management in POEs than in SOEs, thereby helping to reduce their divergence in earnings management.

To conclude, H1and H2c are supported in fixed effects regression analysis, but H2a and H2b are not supported. This indicates that SOEs perform fewer earnings management than POEs, and Big 4 auditors can reduce the difference in earnings management between the two groups. However, board independence and audit committee independence cannot mitigate this difference.

5.4.7 Results of Hypotheses Test

The following Table 5.10 summarizes the results of the OLS regression analysis and the fixed effects regression analysis in this study.

Table 5.10: Summary of the results of hypothesis test

Hypothesis	Supported or not	
	Pooled OLS Regression	**Fixed Effects Regression**
H1: The Chinese SOEs are less likely to perform earnings management than the Chinese POEs.	Yes	Yes
H2a: The divergence in earnings management between the Chinese SOEs and POEs becomes less evident with higher board independence.	No	No
H2b: The divergence in earnings management between the Chinese SOEs and POEs becomes less evident with higher audit committee independence.	No	No
H2c: The divergence in earnings management between the Chinese SOEs and POEs becomes less evident with auditing from Big 4 auditors.	No	Yes

The first hypothesis (H1) examines the different incidence of earnings management between Chinese SOEs and POEs and predicts that SOEs perform fewer earnings management than POEs. The results of both the pooled OLS regression analysis and the fixed effects regression analysis support this hypothesis.

The second hypothesis (H2a) examines the moderating effect of board independence on the divergence in earnings management between Chinese SOEs and POEs. This study assumes that the difference between the two groups becomes less evident with higher

board independence. However, the results of both the pooled OLS regression analysis and the fixed effects regression analysis do not support this hypothesis.

The third hypothesis (H2b) examines the moderating effect of audit committee independence on the divergence in earnings management between Chinese SOEs and POEs and predicts that audit committee independence can reduce this divergence. However, the results of both the pooled OLS regression analysis and the fixed effects regression analysis do not support this hypothesis.

The fourth hypothesis (H2c) examines whether external auditors affect the divergence in earnings management between Chinese SOEs and POEs, and the negative moderating effect of external auditors is predicted in this study. The pooled OLS regression analysis results do not support this hypothesis, but the fixed effects regression analysis results support this hypothesis. This study finally takes the fixed effects regression results that support H2c, because OLS regression does not consider the heteroscedasticity problem found in this study's independent variables (Park, 2011).

5.5 Chapter Summary

This chapter mainly tests the four hypotheses. The descriptive statistics, correlation analysis and regression analysis are conducted in this chapter. Overall, out of the four hypotheses in this study, two hypotheses are supported. The following chapter will discuss the hypotheses test results. Based on the study's conceptual framework of the study, these results will be discussed from different perspectives in the context of China, including its policies, regulations, and legal protection for investors. The discussion will also refer to the findings of previous studies.

CHAPTER 6: DISCUSSION

6.1 Introduction

This chapter discusses the study's findings in chapter 5. The finding that SOEs are less likely than POEs to perform earnings management in China is discussed in Section 6.2. Then, the findings that board independence and audit committee independence cannot reduce the divergence in earnings management between the Chinese SOEs and POEs are discussed in Section 6.3 and Section 6.4, respectively, and Section 6.5 discusses the finding that Big 4 firms help narrow the difference in earnings management between the two groups. Finally, Section 6.6 concludes this chapter.

6.2 Ownership Structure and Earnings Management

This study's findings are aligned with the hypothesis that Chinese SOEs perform fewer earnings management than Chinese POEs, which supports the findings of the previous studies conducted in China, such as Ding et al. (2007) and Wang and Yung (2011). The explanations for this phenomenon are that the non-profit goals of Chinese SOEs and government protection alleviate the principle-agent interest conflicts within them, thereby reducing their opportunistic earnings management caused by many factors, such as performance-based compensation, meeting or beating the CSRC's regulatory thresholds of performance for right issues and delisting, and debt contracts.

First, the Chinese SOEs bear the responsibility for achieving social and political goals. Although the activities to fulfil these responsibilities are usually non-profit, the fewer weights are placed on accounting performance when evaluating the compensation of

managers in Chinese SOEs (Fan et al., 2007), which reduces their opportunistic earnings management activities to improve short-term performance. Instead, they are motivated to undertake the responsibility for achieving the social and political goals to improve their political status. Second, previous research has shown that the regulatory thresholds of earnings set by the CSRC for right issues and delisting are essential motivations for Chinese companies to manipulate earnings (Chen & Yuan, 2004). However, for the Chinese SOEs, various economic supports from the government reduce their incentives to meet or beat these regulatory thresholds for right issues through earnings manipulation. Moreover, they are unlikely to face bankruptcy risk because they can obtain government subsidies when they are in financial difficulties (Chen et al., 2013), which reduces their earnings management activities to avoid delisting under the CSRC regulatory thresholds. Finally, SOEs can easily obtain loans from state-owned and commercial banks (Brandt & Li, 2003; Jefferson, 2016), and therefore their incentives to meet the contract terms and avoid debt covenants by manipulating earnings are reduced.

6.3 Ownership Structure, Board Independence and Earnings Management

This study found that board independence has no moderating impact on the divergence in earnings management between Chinese SOEs and POEs as predicted, which indicates that board independence cannot perform better in constraining the earnings management of POEs with more severe principal-agent conflicts and stronger earnings management motivations than SOEs. It is noteworthy that the correlation analysis of this study shows that board independence has an insignificant relationship with earnings management in the entire Chinese firms. Therefore, the hypothesis test result should be explained from

the perspectives of independent directors' performance in improving financial information quality and corporate governance in China. Specifically, independent directors fail to strengthen the board's effectiveness of Chinese firms because of the mandatory rather than voluntary requirement of the CSRC (2001) for board independence, and the overlapping functions between independent directors and the board of supervisors.

First, the mandatory requirement of the CSRC (2001) for the proportion of independent directors (i.e. one third) in the board has not substantially improved the board's effectiveness in China (Lai, 2011; Chen & Al-Najjar, 2012). This is justified by the finding of Lai (2011) that companies that voluntarily introduced independent directors before the CSRC (2001) mandatory requirement have fewer discretionary accruals, while the discretionary accruals of the companies that introduced independent director to meet the mandatory requirement have not changed around this mandatory requirement. Consistent with the proposition of Solomon (2010) on the principle that "one size does not fit all" in designing board structure, Lai (2011) pointed out that voluntarily increasing board independence under economic incentives may be effective. However, the uniform compliance with mandatory requirements for board independence may distort the supply and demand of independent directors, which will damage the overall quality of independent directors in the absence of relevant market and legal environment development. Guest (2008) found similar evidence in UK firms that board structure is driven by economic considerations but not subject to soft regulations. In stark contrast to the context in China, the diversified ownership of UK firms makes voluntary compliance with regulations as a strong tradition, because their compliance is more driven by the market and shareholders than by regulations (Chambers, 2005).

From the demand (i.e. company) perspective, the mandatory requirement of the CSRC (2001) has placed tremendous pressure on China's immature independent director market. Specifically, China's board structure is usually significantly affected by regulations (Chen & Al-Najjar, 2012). Thus, without specific guidance for the number of independent directors related to certain factors like firm size and industry, the statutory minimum ratio of independent directors in the board has led many companies to establish an independent director system which only meets this mandatory requirement. This study found that in most SOEs and POEs, the percentage of independent directors in the board just meets the CRSC (2001)'s regulatory ratio (i.e. one third), as described in Chapter 5. However, the USA and the UK require the board to consist of more than half of independent directors (e.g., Cadbury Report,1992; NYSE, 2002). Therefore, the board independence of Chinese firms is generally lower than that of the USA and UK firms. Moreover, Chinese listed firms are incentivizing to appoint inactive or under-performance independent directors simply to meet the requirement, which is the problem of ''inactive role of independent directors'' as proposed by Lin (2004).

From the perspective of the supply of independent directors, China's less developed independent director market and lower quality of independent directors than the developed countries have limited independent directors' supervisory effectiveness in Chinese firms. Besides, China's weak legal protection environment for investors has also led to the failure of independent directors to achieve the desired performance (Lai, 2011). Fama and Jensen (1983) pointed out that in countries with a more complete legal system such as the USA, the higher risk of litigation resulting from unfulfilled responsibilities prompts independent directors to perform duties actively. Although the Company Law

(1993) and the CSRC (2001) clarify independent directors' responsibilities and obligations in China, the lack of a legal enforcement system results in their weak awareness of fiduciary duties. Finally, independent directors' potential reputation cost in China is relatively low, which reduces their motivations to work diligently to maintain a good reputation.

Finally, the overlapping functions between independent directors and the board of supervisors within Chinese companies have weakened independent directors' effectiveness and performance (Yuan, 2007; Chen & Al-Najjar, 2012). Although regulation is one of the decisive factors in determining board independence in China, the decisive role of regulation cannot affect the supervisory board's substitute role for independent directors (Chen & Al- Najjar, 2012). This indicates that the USA's method of designing the independent director system cannot be simply copied in China. Instead, it is necessary to appropriately design the functions of the board of directors and the board of supervisors to minimize their overlapping functions and ensure that they each exert maximum supervisory role.

6.4 Ownership Structure, Audit Committee Independence and Earnings Management

This study found that audit committee independence cannot perform better in reducing the earnings management of Chinese POEs with more severe principal-agent conflicts than Chinese SOEs, and therefore cannot narrow the difference in earnings management between them. As found in the correlation analysis, audit committee independence has an insignificant relationship with the earnings management of Chinese firms. Therefore, this

finding should also be explained from the perspectives of the independent directors' effectiveness in improving the audit committee's supervision in China. It can be further discussed from the following two perspectives, including the regulatory requirement of the CSRC (2001) for audit committee independence and the overlapping functions between the audit committee and the board of supervisors.

First, the CSRC (2001)'s requirement for audit committee independence (i.e. the majority) has not substantially improved the audit committee's effectiveness of Chinese firms. This is because of the generally low audit committee independence and the underdeveloped audit committee practices in China (Chambers, 2005; Lee, 2015; Lin et al., 2008). The CSRC (2001) only recommends rather than mandatorily requires Chinese listed firms to establish an audit committee under the board of directors, but it stipulates that independent directors in the audit committee should be more than 50 per cent. The audit committee independence of many Chinese companies has only met this threshold set by the CSRC (2001). The finding of this study shows that in most of the sample POEs and SOEs, the audit committee independence is only slightly higher than the regulatory threshold. Therefore, the audit committee independence of Chinese companies is also affected by the CSRC (2001), because the requirements for audit committee independence in China are designed and implemented by the government department (i.e. CSRC) and are essentially binding (Chambers, 2005). Besides, many Chinese firms are controlled by the state that is usually a regulator, which further strengthens the CSRC (2001)'s binding power. However, the audit committee independence of Chinese firms is still relatively low, because these Anglo-American countries require all audit committee members to be independent directors. For example, both the Blue Ribbon Committee

(1999) and the SOX (2002) in the USA require the audit committee to be entirely independent, with 100% independent directors. In the UK, although the Cadbury Report (1992) and the Combined Code (1998) do not require complete independence of the audit committee, the Combined Code (2003) finally stipulates the requirement for complete audit committee independence consistent with the USA. Therefore, the generally low audit committee independence of Chinese firms compared to Anglo-American countries may be one reason why this study fails to support the finding of other studies conducted in the USA and the UK. This reason is confirmed by Bédard et al. (2004), which studied how audit committee independence impacts earnings management. They introduce two dichotomous variables to measure audit committee independence. One equals 1 if all the audit committee members are external directors, and 0 otherwise. Another one equals 1 if the audit committee independence is 50-99%, and 0 otherwise. They found that the audit committee with 50-99% independent members has no significant influence on earnings management, but an entirely independent audit committee can significantly reduce earnings management.

Moreover, the CSRC only began to establish an audit committee in Chinese companies in 2001, which means the practices of the audit committee in China lag behind other countries that introduced audit committee much earlier, such as independent directors' incompetence, management-influenced appointment and lower salary. In China, the underdeveloped independent director market has resulted in the relatively lower quality of independent directors. Especially, the independent directors in the audit committee of Chinese firms often lack knowledge of operating, accounting and auditing (Lin et al., 2008). Even those appointed financial experts in the audit committee following the CSRC

(2001)' requirements are often financial scholars and do not know accounting practices well. DeZoort and Salterio (2001) and Bédard et al. (2004) proposed that the low financial qualification for independent directors limit their effectiveness in China. Besides, the appointment of independent directors is generally determined by the management such as officials, the board or its chairman, which impairs their independence (Chamber, 2005). As a result, they usually would not have a tough mind towards some irregularities and incompliance in financial reporting (Lin et al., 2008). Finally, the low level of salaries for the audit committee's independent directors in China further limits their incentives to perform due diligence as desired, while China's weak legal protection for investors makes their non-diligence possible.

Secondly, the overlapping functions between the audit committee and the board of supervisors restrict the audit committee's effectiveness in China, which indirectly limits the role of its independent directors. To improve Chinese firms' corporate governance, the CSRC (2001) adopts the audit committee in the Anglo-American system to complement the board of supervisors' supervision. However, the insufficient consideration of the existing board of supervisors in designing the audit committee's responsibilities and functions leads to the overlapping functions between the two bodies (Lin et al., 2008; Lee, 2015). As a result, the management usually supports the supervisors' work, because they regard the audit committee as a duplicated burden of administrative cost, especially when the shareholders and employee representatives in the supervisory board have closer relationships with the management.

6.5 Ownership Structure, External Auditors and Earnings Management

The previous studies argued that the auditing of Big 4 firms acts as an effective deterrent to earnings management. This is attributed to the fact that Big 4 firms generally have higher independence and stronger ability to monitor and detect earnings management than local accounting firms (e.g., Teoh & Wong, 1993; Khurana & Raman, 2004; Alhadab & Clacher, 2018). In contrast to the previous studies' assumption that external auditors perform uniformly across different firms in reducing earnings management (e.g., Becker et al., 1998; Khurana & Raman, 2004), this study found that Big 4 firms play a bigger supervisory role in Chinese POEs than in Chinese SOEs. Thus, Big 4 firms can help reduce the difference in earnings management between the two groups as predicted. This finding supports the study of Chen et al. (2011), which found that the impact of external auditing on earnings management is not uniform across POEs and SOEs in China. Specifically, they discovered that POE's earnings management reduce more than SOEs when they both hire international or local Big 4 firms.

The more significant role of Big 4 firms in constraining Chinese POEs' earnings management stems from their stronger incentives to manipulate earnings caused by more severe principal-agent conflicts than SOEs. From the agency theory perspectives, the role of corporate governance in limiting earnings management should be evaluated in the context of the principal-agent interest conflicts, which motivates managers to manage earnings for pursing their private interests. The performance of corporate governance depends on the strength of earnings management motivations affected by the severity of agency conflicts. In other words, when the motivations to manage earnings become

stronger because of more severe agency conflicts, corporate governance would perform better. Moreover, the reliance on external audit assurance of Chinese POEs to maintain their investors' confidence further strengthens the external auditors' monitoring on their earnings management. This can be supported by Wang et al. (2008), which found that POEs in China are more inclined to appoint higher-quality auditors than SOEs, especially in areas with under-developed institutions. They attribute this phenomenon to the lower demand of local and central SOEs for higher-quality auditing because of their preferential access to capital and government bailouts.

6.6 Chapter Summary

This chapter mainly analyzes the research findings in Chapter 5. In the context of China, the non-profit social and political goals of SOEs and the government's support and protection alleviate the principal-agent interest conflicts within them, and therefore reduce their incentives to improve short-term financial performance through earnings management.

Board independence and audit committee independence are expected to perform better in constraining the earnings management of Chinese POEs, in which the principal-agent interest conflicts are more severe than in Chinese SOEs, thus narrowing the divergence in earnings management between the two groups. However, these predictions are not supported in this study. The reasons are that independent directors fail to improve the effectiveness of the board and the audit committee in China, and both the functions of independent directors and the audit committee overlap with the board of supervisors in Chinese firms.

This study finds that Big 4 firms can effectively reduce the difference in earnings management between Chinese SOEs and POEs, because corporate governance has a more significant negative effect on the earnings management of POEs with more severe principal-agent interest conflicts and stronger motivations to manage earnings than SOEs.

The following chapter will conclude the study by providing a recapitulation of the research and summarizing the findings. The contributions and research limitations of the study will also be discussed in the following chapter.

CHAPTER 7: CONCLUSION

7.1 Introduction

This chapter summarizes the study and presents its theoretical and practical contributions and limitations. Section 7.2 provides a recapitulation of the study, including the research questions, research objectives and hypotheses. Section 7.3 summarizes the study's main findings that SOEs are less likely than POEs to perform earnings management in China, and Big 4 can help reduce this divergence between the two groups, although board independence and audit committee independence cannot reduce this divergence. Then, Section 7.4 discusses this study's theoretical contributions to agency theory and literature and practical contributions to policymakers and industry watchdogs, while the research limitations of the study are discussed in Section 7.5. Finally, Section 7.6 concludes this chapter.

7.2 Recapitulation of the Study

The Chinese government carried out a series of corporate governance reforms to improve the corporate governance and financial statements quality of Chinese firms. Driven by the different motivations to manage earnings management between Chinese SOEs and POEs, and the potentially different effectiveness of corporate governance in reducing their earnings management, this study is conducted to examine the relationship between ownership structure and earnings management, and the moderating impact of corporate governance on this relationship. Specifically, this study investigates whether Chinese

SOEs perform a lower level of earning management than Chinese POEs and whether board independence, audit committee independence and external auditors perform better in reducing the earnings management of POEs, thus helping reduce their difference in earnings management.

Since Chinese SOEs' non-profit social and political goals and government protection reduce the principal-agent interest conflicts within them, this study predicts that Chinese SOEs perform fewer earnings management than the POEs. This study also assumes that board independence, audit committee independence and external auditors have a more significant impact on the earnings management of POEs in which the principal-agent conflicts are more severe than in SOEs. Accordingly, these three corporate mechanisms can narrow the difference in earnings management between the two groups.

This article selects a group of 582 A-share firms from 2015 to 2018, covering 2,328 firm-year observations and 9 industries. This study provides evidence on the relationships among ownership structure, corporate governance mechanisms and earnings management. Table 7.1 below provides the recap of research questions, research objectives, hypotheses and hypotheses test results.

Table 7.1: Summary of the study's research questions, research objectives and hypotheses

Research Question	Research Objectives	Hypothesis Tested	Result
1. Do the Chinese SOEs perform a lower level of earnings management than the Chinese POEs.	1. To examine whether the Chinese SOEs engage in fewer earnings management practices than the Chinese POEs.	**H1:** The Chinese SOEs are less likely to perform earnings management than the Chinese POEs.	Supported
2. Do board independence, audit committee independence and external auditors moderate the relationship between ownership structure and earnings management in China.	2. To investigate whether board independence, audit committee independence and external auditors significantly moderate the relationship between ownership structure and earnings management in China.	**H2a:** The divergence in earnings management between the Chinese SOEs and POEs becomes less evident with higher board independence.	Not Supported
		H2b: The divergence in earnings management between the Chinese SOEs and POEs becomes less evident with higher audit committee independence.	Not Supported
		H2c: The divergence in earnings management between the Chinese SOEs and POEs becomes less evident with auditing from Big 4 auditors.	Supported

7.3 Summary of Findings

This study found that SOEs perform a lower level of earnings management than POEs in China. The potential explanations for this interesting result are the Chinese SOEs' non-profit goals and the Chinese government's support policies and long-term protection. Agency theory points out that managers are driven by many factors, such as debt covenants, performance-based bonuses and income smoothing, to manage earnings opportunistically in the principal-agent relationships. However, compared to private companies that mainly aim to pursue profit and are motivated to manage earnings driven by the above factors, SOEs' non-profit goals and the government's protection have alleviated the principal-agent interest conflicts within SOEs and their earnings management motivations.

This study also found that Big 4 firms, as an independent external monitoring mechanism, can effectively reduce the difference in earnings management between Chinese SOEs and POEs. Agency theory proposes that corporate governance can effectively mitigate agency problems, such as earnings management, when the principal-agent interest conflicts exist. Its effectiveness is expected to vary with the strength of earnings management motivations affected by the severity of the principal-agent interest conflicts. Specifically, corporate governance performs better in reducing the earnings management of firms with stronger incentives to manage earnings caused by more severe principal-agent interest conflicts. Therefore, Chinese POEs' stronger earnings management motivations than the SOEs would make corporate governance more restrictive on their earnings management, thereby reducing the difference in earnings management between the two groups.

However, this study found that board independence and audit committee independence, as two important corporate governance mechanisms, cannot constrain the Chinese POEs' earnings management more even if their principal-agent interest conflicts are more severe than that of the SOEs. Therefore, audit committee independence cannot reduce their difference in earnings management. The following aspects can explain these findings. First, the regulatory requirements of the CSRC (2001) for board independence and audit committee independence have not substantially improved the effectiveness of the board and the audit committee in China. Second, both the functions of independent directors and the audit committee overlap with the board of supervisors, which has restricted the effectiveness of independent directors.

7.4 Contributions of the Study

The study's potential contributions are discussed in the following subsections.

7.4.1 Theoretical Contributions

7.4.1.1 Contributions to Literature

This study expands the existing literature by examining the relationships among ownership structure, corporate governance and earnings management in the context of China.

First, through a comparative analysis of a sample of Chinese SOEs and POEs covering the period from 2015 to 2018, this study is among the few studies which investigate whether SOEs and POEs exhibit different incidence of earnings management in recent years (e.g., Shao & Zhang, 2009; Wang & Yung, 2011; Guo & Ma, 2015; Kim, 2018).

This study contributes to the conflicting findings of the existing research by making it clear that Chinese POEs perform more earnings management than SOEs. This finding adds to the existing literature and gives implications to the disputes on ownership structure in corporate governance literature that state ownership has a constraining impact on earnings management.

Second, this study investigates how corporate governance and ownership structure jointly influence earnings management. Therefore, this study breaks the inherent framework of previous studies that sets each corporate governance mechanisms as separate explanatory variables to explore their individual impacts on earnings management and adds to the existing research, such as Setia-Atmaja et al. (2011) and Chi et al. (2015), which explored whether the relationship between ownership structure and earnings management can be moderated by corporate governance.

Finally, the existing research assumes that the performance of corporate governance in limiting earnings management is uniform across different firms (e.g., Teoh & Wong 1993; Khurana & Raman, 2004), but this study provides implications for future studies that this assumption may lead to the erroneous conclusion that corporate governance has no impact on earnings management. This study emphasizes the importance of dividing the sample according to ownership structure with different agency relations.

7.4.1.2 Contributions to Theory

This study adds to agency theory by pointing out that earnings management and the effectiveness of corporate governance in constraining earnings management are affected

by the severity of the principal-agent interest conflicts and the strength of earning management motivations.

First, from the perspective of agency theory, managers are motivated by many factors to manage earnings opportunistically. This study proposes that the non-profit goals of SOEs and government protection have alleviated the principal-agent interest conflicts within them, which results in their weaker motivations than POEs to manage earnings opportunistically. This study shows that SOE's weaker motivations to manage earnings make them perform fewer earnings management than POEs in China.

Second, agency theory points out that corporate governance can constrain managers' opportunistic behaviors and reduce agency cost when there are interest conflicts between principal and agent. This study proposes that the effectiveness of corporate governance varies with the severity of the principal-agent interest conflicts. Specifically, corporate governance is more effective in the context with more serious agency conflicts and stronger earnings management motivations. This study shows that Big 4 firms can more effectively constrain POEs' earnings management, in which agency conflicts are more severe than in SOEs.

7.4.2 Practical Contributions

This study's findings are beneficial for the policymakers and industry watchdogs (e.g., regulators, investors and auditors) in their practical work. This is further discussed in the following subsections.

7.4.2.1 Policymakers

The findings can give the Chinese government implications to take corresponding measures to improve corporate governance and financial statements quality, thereby promoting the development of the capital market and attracting widespread attention from domestic and foreign investors in fostering economic growth.

First, this study finds that compared with SOEs, the goal of maximizing profits of POEs drives their managers to pay more attention to financial performance. Motivated by various factors, such as performance-based bonuses, debt covenants and income smoothing, their managers are more inclined to manipulate earnings opportunistically. Therefore, the Chinese government should adopt corresponding measures to support private enterprises, especially those in a relatively weak position, such as financial grants and tax relief.

Second, this study shows that board independence and audit committee independence cannot influence earnings management in Chinese companies. This is because the uniform requirements of the CSRC (2001) for board independence and audit committee independence aimed at improving corporate governance and financial statements quality have not enhanced the effectiveness of the board and the audit committee. Specifically, many Chinese companies set up an independent director system which only meets the regulatory thresholds without taking other economic factors into account. However, the CSRC (2001)'s regulatory board independence and audit committee independence are lower than that of other Anglo-American countries, which has led to generally low board

independence and audit committee independence of Chinese firms. Moreover, China lags behind other countries in the introduction of independent directors and audit committees. The relatively under-developed independent director market and relevant practices have weakened independent directors' effectiveness. This finding can also be attributed to the overlapping functions of supervisors, independent directors and the audit committee within Chinese firms. Therefore, the Chinese government should take relevant measures to improve the effectiveness of corporate governance reform, for example by increasing the regulatory thresholds of board independence and audit committee independence, strengthening the qualification certification of independent directors, minimizing the overlapping functions of independent directors, the audit committee and the board of supervisors, and enhancing market regulation.

7.4.2.2 Industry Watchdogs

Earnings management can stimulate the investors and analysts' positive market response, but excessive earnings management will harm the company and erode market participants' confidence. Earnings management has attracted widespread attention from industry watchdogs. This study's findings can give implications to regulators, investors, auditors and other industry regulators in their practical work.

First, this study found that Chinese POEs have performed more earnings management than Chinese SOEs. This finding can guide regulators to pay more attention to the private sector in supervising listed firms' financial reporting. Since the principal-agent interest conflicts are more severe in POEs than in SOEs, opportunistic behaviors of manipulating

financial reporting are more likely to occur within POEs. If regulators pay more attention to POEs' financial reporting, their opportunistic earnings management behaviors can be discovered timely. This is beneficial to investors, who make their investment decisions mainly based on the financial statements, and the stock market's stability and development.

Second, this study's findings guide investors to consider the impacts of the ownership structure and corporate governance on earnings quality when making investment decisions. For example, the higher reported earnings of POEs may be caused by their aggressive earnings management. However, Big 4 firms can help discover their opportunistic earnings management in preparing financial statements.

Third, this study's findings are conducive to external auditors to pay attention to the relationship between the ownership structure and earnings management, thereby increasing their effectiveness of detecting earnings management and auditing quality. This study indicates that earnings management is more likely to occur in POEs, where the principal-agent interest conflicts are relatively more severe than in SOEs. This finding helps external auditors maintain greater vigilance and prudence when auditing the POE's financial statements, thereby effectively detecting earnings management activities.

7.5 Research Limitations and Future Research

Although this research has made the above contributions, some limitations should be highlighted, giving future studies implications to extend this study.

First, this study's findings are limited to the particular time-frame (i.e. 2015-2018). Since independent directors may experience a steep learning curve, more research should examine independent directors' effectiveness in the future time-frames. The effectiveness of independent directors in suppressing earnings management can be improved with the development of the independent director market by some relevant measures. These measures include increasing the regulatory ratio of board independence and audit committee independence by applicable regulations, implementing the qualification certification for independent directors, redesigning the functions of independent directors and other departments to minimize their overlapping functions, and strengthening regulatory environment. Therefore, the studies conducted in later years are expected to investigate any lag-constrained effects of independent directors on earnings management.

Second, cautions should be exercised in generalizing this study's conclusions to firms in other contexts with less concentrated ownership, less state ownership and higher investor protection. Compared with companies in the USA and European countries, Chinese companies have several unique characteristics. One of the most unique characteristics is the high ownership concentration of Chinese companies, which results in a company being fully controlled by a single owner. Moreover, the legal environment in China is relatively underdeveloped than in developed countries. For example, civil litigation for corporate governance issues is very rare in China (Lin, 2004), and the regulator (i.e. the CSRC) is the prime discipliner of the market. However, in the USA, legal actions against firms' frauds can be criminal and/or civil litigation, with the latter one being a significant factor in influencing corporate behavior. As La Porta et al. (1998, 2002) pointed out that

a country' legal environment can significantly affect corporate governance, the difference in legal protection environment between China and other developed countries may make corporate governance to perform differently across Chinese firms and the firms in developed countries. Therefore, this study is expected to be extended by future research conducted in several different jurisdictional settings, which can help control the research background's influence on the results, thereby making the research results more universal.

Third, this study did not consider the influence of other potential determinants of independent directors' effectiveness in reducing earnings management, such as other characteristics of independent directors and corporate governance mechanisms. More research that examines the interactions of director independence and other components of independent directors are expected to be conducted in the future. As discussed in Chapter 6, the relative lower quality of independent directors in China is cited as an important reason to explain why board independence cannot help reduce Chinese firms' earnings management in the post-regulation (i.e. CSRC, 2001) period. Therefore, future research on the combined effect of the independence and other qualities of directors on earning management will further extend this study. This study suggests several variables which can be employed as proxies for independent directors' quality, such as age, gender, education, working experience and qualification. Moreover, this study did not explore the impact of other corporate mechanisms on independent directors' effectiveness. These corporate mechanisms include internal mechanisms, such as CEO duality, board's activity, managerial ownership and compensation, and external corporate governance mechanisms, such as antitakeover protection and legal protection.

Fourth, this study is limited to examine the effectiveness of independent directors in curbing earnings management. Therefore, this study's findings cannot be a general preconception on independent directors' effectiveness in all cases. Since constraining earnings management is only one of China's objectives to introduce the independent director system, future research in other aspects will help clarify the effectiveness of independent directors in the context of China.

7.6 Chapter Summary

This chapter provides an overview of the study. To conclude, this study successfully examines the research objectives.

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