Accrual-Based Earnings Management and Corporate Governance
--China Evidence in the Pre- and Post-Code Periods

By
Haitao Zhang

A thesis submitted in fulfilment of the requirements for Ph.D
Abstract

This thesis aims to investigate the impact of implementation of *The Code of Corporate Governance for Listed Companies in China* (or the Code) in 2002 upon the accrual-based earnings management (hereafter EM) practices in China's listed companies. Based on Transaction Cost Economics (TCE) and Agency Theory (AT), it is hypothesised that, due to the improvement of the corporate governance Code, Chinese listed companies engage less in EM. In particular, it is hypothesised the relationships between the main corporate governance (or CG) mechanisms arranged from the executive compensation to the characteristics of controlling shareholders (shareholdings and ownership type) and EM prior to and after the Code.

Drawing upon a panel data of 447 non-financial Chinese listed companies over the period of 2000-2006, the results provide robust evidence suggesting that while the magnitude of discretionary accruals (or DAs—proxy of EM) measured by the Modified Jones Model (Dechow et al., 1995) and the Larcker and Richardson (2004) (or L&R) Model respectively decreases over time, the reduction is more pronounced after the Code compared with it prior to the Code. In addition, the findings show that companies engage in larger earning-decreasing DAs are followed by smaller positive reversals. The findings also document that: (1) the performance-based compensation is neither statistically nor economically related to the magnitude of DAs; (2) the independent non-executives on the board significantly constrain the magnitude of DAs, and such effect is increased significantly in the post-Code period; (3) while both the audit committee and the institutional investors significantly reduce earnings-increasing DAs, especially in the post-Code period, they do not significantly mitigate the earnings-decreasing choices; (4) the use of the international reputable auditor (Big 4) is not significantly correlated to the magnitude of DAs; and (5) the controlling shareholders especially who are ultimately controlled by the State significantly engage in DAs before and after the Code.

This thesis has made important theoretical and managerial implications. Theoretically, it implies that as TCE and AT are complementary theories, a theoretical
framework by incorporating TCE with AT should be robust in investigating the relationships between CG and EM in China’s stock markets. Managerially, it implies that investors should be aware of the EM behaviours and need to check firms’ financial statements with great caution. For stock market regulators, they may need to: (1) enforce more transparent compliance with the CG Code, and extend the requirements and duties of non-executives so that greater oversight is provided; (2) strengthen the independence and expertise of the audit committee; and (3) be cautious of promoting the participation of international audit firms as these firms do not necessarily help China with improving its monitoring system. For policy makers, they may need to consider improving the legal environment so as to make expropriation of minority shareholders more difficult.
Declaration of Originality

I hereby declare that this thesis entitled “Accrual-Based Earnings Management and Corporate Governance—China Evidence in the Pre- and Post-Code periods” has been composed by myself and has not been presented or accepted in any previous application for a degree. The work, of which this is a record, has been carried out by myself unless otherwise stated and where the work is mine, it reflects personal views and values. All quotations have been distinguished by quotation marks and all sources of information have been acknowledged by means of references including those of the Internet.
Table of Contents

List of Tables .............................................................................................................. P.v
List of Figures ............................................................................................................. P.vii

Chapter 1: Introduction
1.1. The Starting Point of the Current Thesis ............................................................ P.1
1.2. The Focusing Point of the Current Thesis (China’s Listed Companies) .......... P.3
1.3. Motivations of the Current Thesis ...................................................................... P.4
1.4. Research Question and Objectives..................................................................... P.6
1.5. Organisation of the Current Thesis .................................................................... P.8

Chapter 2: Theoretical Review: Transaction Cost Economics (TCE)
2.1. Introduction ........................................................................................................ P.10
2.2. Some Rudiments of TCE ..................................................................................... P.12
  2.2.1. Transaction and Transaction Costs ............................................................. P.12
  2.2.2. Behavioural Assumptions of Human Actors ............................................... P.13
  2.2.3. Dimensionalizing Transaction ..................................................................... P.14
  2.2.4. Fundamental Transformation ..................................................................... P.16
2.3. Governance Structures of TCE ............................................................................ P.17
  2.3.1. The Simple Contractual Schema ................................................................. P.17
  2.3.2. A Comparative Analysis of Different Modes ............................................... P.20
    2.3.2.1. Contract Law ........................................................................................ P.20
    2.3.2.2. Adaptation as the Central Economic Problem .................................... P.23
    2.3.2.3. Incentive and Control Instruments ..................................................... P.24
2.4. Comparative Statics of TCE ................................................................................. P.27
  2.4.1. Property Rights ........................................................................................... P.27
  2.4.2. Excuse and Forbearance Doctrine (Contract Law)....................................... P.29
  2.4.3. Reputation Effects....................................................................................... P.29
  2.4.4. Uncertainty ................................................................................................. P.30
  2.4.5. Simultaneous Parameter Shifts .................................................................. P.31
  2.4.6. A Three-Level Schema ................................................................................. P.33
2.5. TCE’s Basic Approach Corporate Governance .................................................... P.34
  2.5.1. The Contract-Framework of the Firm ......................................................... P.34
  2.5.2. Corporate Governance in Perspective of TCE ............................................. P.36
2.6. Summary ............................................................................................................. P.39

Chapter 3: Theoretical Review: Agency Theory (AT)
3.1. Introduction ........................................................................................................ P.41
3.2. Some Fundamentals of AT .................................................................................. P.43
  3.2.1. Agency Relationship.................................................................................... P.43
  3.2.2. Agency Costs ............................................................................................... P.44
  3.2.3. Behaviour Assumptions of Human Actors ................................................ P.45
  3.2.4. Moral Hazard and Adverse Selection......................................................... P.48
    3.2.4.1. Moral Hazard ....................................................................................... P.48
    3.2.4.2. Adverse Selection ................................................................................. P.50
3.3. The Role of Law and Corporate Governance .................................................... P.51
### Chapter 4: Corporate Governance (Codes, Guidelines and Rules)

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1. Introduction</td>
<td>64</td>
</tr>
<tr>
<td>4.2. Defining Corporate Governance</td>
<td>66</td>
</tr>
<tr>
<td>4.3. Two Distinctive Board Structures (One-tier or Two-tier Model)</td>
<td>67</td>
</tr>
<tr>
<td>4.4. Governance Codes in China</td>
<td>69</td>
</tr>
<tr>
<td>4.4.1. An Overview of China's Economy and Stock Market</td>
<td>70</td>
</tr>
<tr>
<td>4.4.2. The Code of Corporate Governance in China (2002)</td>
<td>73</td>
</tr>
<tr>
<td>4.5. An Evaluation of China's Corporate Governance System</td>
<td>81</td>
</tr>
<tr>
<td>4.5.1. The Implementation and Enforcement of the China’s 2002 Code</td>
<td>81</td>
</tr>
<tr>
<td>4.5.2. Several Concerns of China's Corporate Governance System</td>
<td>84</td>
</tr>
<tr>
<td>4.6. Summary</td>
<td>88</td>
</tr>
</tbody>
</table>

### Chapter 5: Earnings Management (EM)

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1. Introduction</td>
<td>89</td>
</tr>
<tr>
<td>5.2. Earnings Management</td>
<td>91</td>
</tr>
<tr>
<td>5.2.1. Definition of EM</td>
<td>91</td>
</tr>
<tr>
<td>5.2.2. Applying AT and TCE to EM</td>
<td>93</td>
</tr>
<tr>
<td>5.3. Incentives of EM</td>
<td>97</td>
</tr>
<tr>
<td>5.3.1. An Overview</td>
<td>97</td>
</tr>
<tr>
<td>5.3.1.1. Capital Market Motivations</td>
<td>97</td>
</tr>
<tr>
<td>5.3.1.2. Contracting Motivations</td>
<td>103</td>
</tr>
<tr>
<td>5.3.1.3. Regulatory Motivations</td>
<td>111</td>
</tr>
<tr>
<td>5.3.2. Incentives of EM in China</td>
<td>113</td>
</tr>
<tr>
<td>5.3.2.1. Capital Market Incentive of EM in China (ROE Requirements)</td>
<td>115</td>
</tr>
<tr>
<td>5.3.2.2. Regulatory Incentive of EM in China (Delisting Policy)</td>
<td>120</td>
</tr>
<tr>
<td>5.4. Measurements of EM</td>
<td>122</td>
</tr>
<tr>
<td>5.5. Summary</td>
<td>127</td>
</tr>
</tbody>
</table>

### Chapter 6: Earnings Management and Corporate Governance

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1. Introduction</td>
<td>141</td>
</tr>
<tr>
<td>6.2. Executive Compensation</td>
<td>142</td>
</tr>
<tr>
<td>6.2.1. Global Evidence of Executive Compensation</td>
<td>142</td>
</tr>
<tr>
<td>6.2.2. China's Evidence of Executive Compensation</td>
<td>144</td>
</tr>
<tr>
<td>6.3. Board Independence</td>
<td>147</td>
</tr>
<tr>
<td>6.3.1. Global Evidence of Board Independence</td>
<td>147</td>
</tr>
<tr>
<td>6.3.2. China's Evidence of Board Independence</td>
<td>154</td>
</tr>
<tr>
<td>6.4. Internal and External Audit</td>
<td>156</td>
</tr>
</tbody>
</table>
List of Tables

Table 2.1.: Specific aspects in governance structures ............................................... P.26

Table 3.1.: Comparison between AT and TCE ........................................................... p.60

Table 4.1.: Summary of key differences between supervisory and management board ....................................................................................................... P.69

Table 4.2.: Share classes in China .............................................................................. P.72

Table 4.3.: Summary of key characteristics influencing Chinese corporate governance .............................................................................................. P.73

Table 4.4.: A Summary of the corporate governance structure in China ................. P.80

Table 5.1.: Summary of applying AT and TCE to EM ................................................. p.96

Table 5.2.: The CSRC’s five guidelines regulating rights issue activities: 1993-1999 ............................................................................... P.116

Table 5.3.: A summary of the empirical studies about incentives of EM ................. P.128

Table 5.4.: A summary of the empirical studies about incentives of EM in China.... P.136

Table 5.5.: Discretionary accrual proxies ................................................................. P.140

Table 6.1.: A summary of the empirical studies between EM and executive compensation ........................................................................................... P.179

Table 6.2.: A summary of the empirical studies between EM and board independence ........................................................................................... P.179

Table 6.3.: A summary of the empirical studies between EM and audit committee ........................................................................................... P.184

Table 6.4.: A summary of the empirical studies between EM and statutory audit ........................................................................................... P.188

Table 6.5.: A summary of the empirical studies between EM and institutional shareholders ........................................................................................... P.191

Table 6.6.: A summary of the empirical studies between EM and controlling shareholders ........................................................................................... P.194

Table 8.1.: Definitions of variables ............................................................................ P.234

Table 9.1.: Descriptive statistics for the explanatory variables ................................. P.254
Table 9.2.: Descriptive statistics for the control variables ........................................ P.259

Table 9.3.: Regression fit statistics of the parameters using Modified Jones Model and L&R Model ............................................................................. P.261

Table 9.4.: Univariate Analysis for the discretionary accruals ......................... P.269

Table 9.5.: Tests for skewness, kurtosis, multicollinearity, and heteroscedasticity. P.273

Table 9.6.: Discretionary accruals and corporate governance mechanisms: multivariate regression analysis ............................................................... P.286

Table 9.7.: Robustness test of earnings management activities of SUSPECT firms in the pre- and Post-Code periods ................................................................. P.290

Table 9.8.: Robustness test-using 2002 to 2004 as post-Code period .................. P.292
List of Figures

Figure 2.1.: The simple contractual schema .............................................................. P.19

Figure 2.2.: A three-level schema .............................................................................. P.33

Figure 7.1.: The structure of the corresponding hypotheses ..................................... P.215

Figure 8.1.: Time periods analysed ............................................................................ P.230

Figure 8.2.: China’s standard industry classification (2001) ...................................... P.238

Figure 9.1.: The trends in discretionary accruals across the study period ............... P.268
Acknowledgement

First of all, I would like to thank my family for their constant encouragement and support. Especially, I would like to thank my parents and my fiancé (Binmei Shi) for their endless love and supports that allow me to fully concentrate on my research without worrying about other things. And, I would also like to thank my grandfather, Prof. Suochun Zhang who is a famous Mathematician in China, for his highly valuable suggestions on my research.

Secondly, I would like to take this opportunity to thank my supervisor Dr. Jean Chen for all her assistances and guidance. Without her constant supports which are highly appreciated, I may not reach this level. And I also would like to thank Dr. Gang Li (University of Surrey) and Dr. Yilmaz Guney (University of Hull) for their valuable recommendations and suggestions.
Chapter 1: Introduction
1.1. The Starting Point of the Current Thesis

The very nature of accounting accruals provides a great deal of discretion in determining the earnings a firm reported in any given period because of information asymmetry between insiders and outsiders. Insiders can manipulate earnings to dress-up their companies’ apparent performance in order to maximise their own interests or to signal their private information, thus influencing the informativeness of earnings (Chung et al., 2002; Gul et al., 2003; Healy, 1985; Holthausen et al., 1995). Earnings management (hereafter EM) can be defined as the alternation of firms’ reported economic performance by insiders to either mislead some stakeholders or to influence contractual outcomes (Healey and Wahlen, 1999; Leuz et al., 2003; Shen and Chih, 2007). Furthermore, investors who are concerned with the stock returns and regulators who set the regulations related to companies’ performance (e.g. the thresholds of stocks issuing) frequently focus on the reported earnings. Since it heightens the pressure for firms to obtain funds in the capital markets, they are said to be motivated to manipulate the reported earnings in order to meet the investors’ expectations and regulatory thresholds (Chou et al., 2006; Lee and Msaulis, 2009; Wright and Guan, 2004). In addition, regular scrutiny of firms’ financial performance by financial analysts in the past decades puts further pressure on firms to maintain earnings momentum to fulfil the expectations of the market (e.g., Barth et al., 1999; Myers et al., 2006). And finally, in regard to the use of performance-related executive compensation, it is argued that executives increase the earnings-based awards, especially the equity-based components, through artificially manipulating firms’ reported earnings (Bergstresser and Philippon, 2006; Cohen et al., 2008; Gao and Shrieves, 2002).

On the other hand, it is proposed that any improvements of corporate governance (CG) can be seen as the efforts to minimise agency costs and transaction costs among different groups according to the different risk bearing and asset-specialised transactions respectively (Fama and Jensen, 1983a,b; Williamson, 1984a; 2005b). CG constrains managers from behaving opportunistically by aligning their interests with those of shareholders and by providing constant monitoring on their actions (García-Meca and Sanchez-Ballesta, 2009; Watts and Zimmerman, 1986). Thus, the reliability and integrity of the financial reporting process will be enhanced if the opportunistic
behaviours can be controlled by an efficient CG system (Dechow et al., 1996; Wild, 1996).

Fuelled by a series of high-profile financial scandals, such as Enron, Xerox, and WorldCom, there has been an international trend towards developing and implementing an effective CG system to fight against EM practices that have undermined investors’ credibility in financial information. Numerous initiatives have been proposed and launched by countries to enhance their CG practices, for example, new listing and disclosure rules, mandatory training for the board directors, enforced codes/guidelines of CG, and so forth (Bai et al., 2004; Clarke, 2007; Mallin, 2007). Advocating higher governance standards has become a regular campaign with the participation of an increasing number of parties, such as, academics, regulatory authorities, corporations, and so forth. International organisations are also very keen on governance issues. The International Monetary Fund has demanded that governance improvements be included in its debt relief program. The OECD Principles of Corporate Governance was originally issued by the Organisation of Economic Co-operation and Development (OECD) in 1999 and further revised in 2004. More generally, the Principles are to assist Member and non-Member governments in their efforts to evaluate and improve the legal, institutional and regulatory framework for CG in their countries, and to provide guidelines and suggestions for stock exchanges, investors, corporations, and other parties that have a role in the process of developing good CG (preamble of OECD, 2004).

Theoretically, although Agency Theory (AT) (Jensen and Meckling, 1976) has been the dominant financial economics theory for CG research, other theoretical schools have emerged to complimenting AT in recent years. One prominent school is Transaction Cost Economics (TCE) originally advanced by Williamson in the 1980s. This thesis will review and apply both TCE and AT to the theoretical framework. In brief, while TCE considers how to “align transactions, which differ in their attributes, with governance structures, which differ in their costs and competences, in a discriminating (mainly, transaction cost economizing) way” (Williamson, 1985, p.79), AT mainly deals with how to “design the contractual relation between the principal and the agent to provide appropriate incentives ex ante to minimise the agency costs so that the agent could maximise the principal’s welfare” (Jensen and Meckling, 1976, p.7).
1.2. The Focusing Point of the Current Thesis

--China’s Listed Companies

In the past 25 years, China has experienced rapid economic growth although political change has been relatively slow (Hussain and Chen, 1999; Farah, 2006; Zhang, 2004). With average growth at around 9% and GDP quadrupled, China has become the largest and fastest-growing emerging economy in the world. Central to the strong growth in the economy has been the reform of the market and State-owned Enterprises (SoEs). In particular, many SoEs have been transformed into corporations with share capital and with profit and efficiency objectives. Some of the corporatized SoEs have been allowed to issue shares to individual investors. Here, the State does not own 100% of these enterprises’ shares and in some cases its ownership has dropped to very low level.

In the early 1990s, the Shanghai (SHSE) and Shenzhen (SZSE) Stock Exchanges were launched, with the aim of raising finance from the domestic and foreign investors to provide listed companies with new funds. A company may issue five different types of shares: State shares, legal person shares, employee shares, A-shares and B-shares. Only A- and B-shares are publically tradable. They may also issue shares in Hong Kong (H-shares) and on other overseas exchanges (e.g. N- and S-shares). By the end of 2009, with a stock-market capitalization of US$3.21 trillion generated by over 1,500 listed companies on SHSE and SZSE, China’s stock market had overtaken Japan as the world’s second-largest stock market by value (after the US) for the first time since its birth (Bloomberg, 2009).

Nevertheless, EM is found to be prevalent in Chinese listed companies. Chinese investors and regulators are un-sophisticated: they are usually fixated on reported earnings, thus may not be able to see through EM practices (e.g., Chen and Yuan, 2006; Chen et al., 2001; Ding et al., 2007; Liu and Lu, 2007; Yu et al., 2006). These empirical studies provide evidence suggesting that Chinese listed companies manipulate their earnings dramatically in order to: (1) gain authorization to issue IPOs or SEOs, and (2) avoid being delisted from the stock markets. The implicit assumption is that meeting the regulatory and market thresholds are companies’ incentives to manage their earnings. In order to curb such practices, researchers argue that CG plays an important role in it. For instance, Liu and Lu (2007) propose that the pervasiveness of EM in China is largely determined by the level of CG. Good CG practices help resolve agency problems, which
in turn reduce firms’ incentive to manage earnings. And, Firth et al., (2007) argue that
good CG framework can promote the transparent and efficient stock markets in China.
It should consist with the rule of law and clearly articulates the division of
responsibilities among different supervisory, regulatory and enforcement authorities.

Based on the OECD principles of corporate governance (2004), the Code of
Corporate Governance for Listed Companies in China (hereafter the Code) that intends
to enhance the integrity of financial statements through improving CG system and bring
forward the healthy development of the stock markets in China was published by the
China Securities Regulatory Commission (CSRC) in January 2002. The Code which is
the first official document regarding CG in the mainland China serves as the yardstick
by which a company is able to measure its CG, and if there are deficiencies in CG, the
regulatory authorities will instruct the company to correct its CG to comply with the
Code. There are seven chapters that included in the Code dealing with: shareholders and
shareholders’ meetings; the listed company and its controlling shareholders; directors
and the board of directors; the supervisors and the supervisory board; performance
assessments and incentive and disciplinary systems; stakeholders; and information
disclosure and transparency.

1.3. Motivations of the Current Thesis
Although the China’s 2002 CG Code proposes sweeping changes (e.g., independence,
and structure of the board, duty of controlling shareholders), the consequences of these
changes have yet to be systematically studied. With regard to EM activities which have
been proved to be rampant in China’s listed companies (e.g., Chen and Yuan, 2006;
Chen et al., 2001; Ding et al., 2007; Liu and Lu, 2007; Yu et al., 2006), mitigating such
opportunistically discretionary behaviours through improving the quality of financial
reporting is laid at the heart of the Code. However, there is very little research to
investigate the impact of the Code on EM which is of important policy implication. In
particular, it is unclear whether EM activities are reduced after the passage of the Code.
Chen and Cheng (2007), and Chen and Zhang (2010a) consider the discretion in
applying different accounting standards between the Chinese GAAP and IFRS as a
means that used by firms to opportunistically manipulate reported earnings. In particular,
they study the trend in earnings gap which is the differences between reported earnings
under the Chinese GAAP and those under the IFRS and the impacts of several CG
mechanisms enforced by the Code on it of 103 B-share companies over the period of 1999 to 2006. More generally, they find a decreasing trend in earnings gap over time and establishment of audit committee among others contributes to such trend significantly. While their findings indicate the possibility of linking earnings gap to EM practices, however, the accrual-based items at operating level across the Code period in China still remain unclear since earnings gap and EM may not be necessarily the same, and EM is a more important topic to investigate. Thus, the current thesis is motivated by the gap of lacking an investigation in the extent of EM activities prior to and after the Code.

Several mechanisms of CG are specifically enforced by the Code, including executive compensation, board independence, audit committee, external (statutory) audit, institutional investors, and controlling shareholders. Among them, the role played by executive compensation deserves particular attention. As mentioned by researchers (Chen et al., 2010; Maillin, 2007), in the past 10-plus years, there is an increasing tendency as well as a demand particularly from the upper-level employees of establishing a rewarding system that links the compensation for management personnel to company’s performance and to individual’s work performance. However, to my best knowledge, there is no published study to empirically investigate the impact of executive compensation on EM practices in China’s listed companies. It still remains unclear how EM practices in China are affected by tying executive compensation to firms’ performance over time, and especially after the passage of the Code. For the monitoring mechanisms arranged from the independent non-executives to the institutional investors, their impacts on EM practices in China still remain unclear as the empirical studies have found mixed results. Whereas Chen et al., (2006) provide evidence suggesting that increasing the proportion of outsiders on the board is one way to reduce financial frauds, however, Chen and Cheng (2007). Chen and Zhang (2010a), Clarke (2006) argue that independent directors remain inactive in mitigating firm’s opportunistic behaviours. And, Chen and Zhang (2010a) argue that institutional shareholder activism is very similar to the market activism and both suffer from the lack of effective market discipline. In addition, although the empirical studies have provided evidence suggesting that other than managers controlling shareholders may also engage in EM practices due to the highly concentrated ownership structure in China’s listed companies (e.g., Chen and Yuan, 2006; Ding et al., 2007; Liu and L.u, 2007), it is still
unclear how such activities are affected by the passage of the Code as there is still paucity of study to investigate such an important issue. By putting all together, this thesis is motivated by the gap of lacking a comprehensive study of examining the impacts of the main mechanisms of CG (especially executive compensation) on EM activities between the pre- and post- Code periods.

In the theoretical literature, AT is widely applied to the empirical problems of EM and CG in the Western countries (e.g., Eisenhardt, 1989; Lambert, 2001) as well as in the China’s stock markets (e.g., Chen et al., 2007; Ding et al., 2007; Liu and Lu, 2007). Another prominent theory that has emerged recently is TCE. However, the application of it to investigate the relationships between CG and EM practices is much more underdeveloped (Marcher and Richman, 2006), especially in the case of China. The current thesis is motivated by the gap of lacking an alternative theoretical framework to AT for EM and CG research.

Furthermore, prior literature shows that China’s listed companies may engage in the discretionary accruals (DAs) to manipulate their reported earnings. As argued by Baker and Barbu (2007) that the harmonization of accounting policies has brought the Chinese accounting language closer to the international standards, while also offering Chinese firms the opportunity to manage their earnings via more conventional DAs. In order to measure DAs, most empirical studies apply the Modified Jones Model that advanced by Dechow et al.’s work in 1995 (e.g., Ding et al., 2007; Liu and Lu, 2007; Lo et al., 2010). However, the misclassification issues in this model, in particular the extreme growth and performance of the firms (Bernard and Skinner, 1996; Dechow et al., 2003), seem not to be properly addressed. This thesis is motivated by the gap of lacking an alternative model to the Modified Jones Model to properly measure DAs in China’s listed companies.

1.4. Research Question and Objectives

Motivated by the gaps that existed in the literature, the research question coupled with the relevant research objectives are formulated for the current thesis. Each of them aims to examine one specific area in relation to EM and CG in Chinese listed companies. Specifically,
Research Question:

How does the passage of the Code with regard to the mechanisms of CG (especially executive compensation) affect EM activities in China’s listed companies?

Research Objectives (A-G):

A: It is to investigate the prevalence of EM and compare the magnitude of EM between two contrasting governance regimes (pre and post- Code periods) in China’s listed companies.

As enforced by the China’s 2002 Code, it aims to investigate the impact of the:

B: performance-related executive compensation on constraining EM by aligning the interests of managers with those of shareholders between the pre and post- Code periods;

C: independent non-executives on the board on constraining EM activities by providing effective monitoring between the pre and post- Code periods;

D: establishment of audit committee on the board on limiting the level of EM through effective monitoring between the pre and post- Code periods;

E: international reputable auditor (or the Big 4 auditor) on mitigating EM practices by providing effective monitoring between the pre and post- Code periods;

F: institutional investors on constraining EM activities by providing effective monitoring between the pre and post- Code periods;

G: investor protection on constraining the controlling shareholders from engaging in EM practices between the pre and post- Code periods.

Through addressing these research question and objectives, the current thesis contributes to the literature from the following aspects. Theoretically, it contributes to the literature by applying both AT and TCE to the theoretical framework of CG and EM research in the Chinese setting. Empirically, this thesis contributes to the literature by analysing the trend in EM activities over time and by providing a comprehensive investigation through directly linking EM practices with the major mechanisms of CG (especially executive compensation) enforced by the Code in China’s listed companies. Methodologically, it contributes to the literature by comparing the consistency and by
investigating the applicability offered by two major models used to capture EM practices in China’s listed companies, namely the Modified Jones Model (Dechow et al., 1995) and Larcker and Richardson (or L&R) (2004) Model.

1.5. Organisation of the Current Thesis

The rest of the thesis is structured as follows, the next two Chapters (2 and 3) provide the theoretical review on TCE and AT respectively.

Chapter 4 starts with defining CG and analysing different board structures (one-tire board model vs. two-tire board model), which is followed by the demonstration of the China’s 2002 Code and the in-depth evaluation of CG system in China.

Chapter 5 firstly defines EM by reviewing the empirical literature and by applying the elementary insights of AT and TCE to EM. And next, it analyses the incentives of EM coupled with the empirical studies which are mostly based on the Western experiences, such as capital market incentives (e.g., management buyouts, leveraged buyouts, IPOs, SEOs, expectations of the financial analysts), contracting incentives (e.g., lending covenants, executive compensation), and regulatory incentives (e.g., import relief, tariff, quota). It then focuses on the specific motivations of conducting EM practices in China’s stock markets, namely the ROE requirement (capital market incentive) and delisting policy (regulatory incentive). The rest of Chapter 5 provides a brief analysis of the methods that are used in the accounting literature to measure accrual-based EM practices.

Chapter 6 gives a survey of the recent empirical studies that investigate the correlations between the main CG mechanisms arranged from the executive compensation to the controlling shareholders and EM practices based on the global evidence and the China’s evidence respectively.

Built upon both the theoretical review and the empirical analysis, Chapter 7 formulates the research question, the research objectives, and the hypotheses in relation to the trend in EM activities and the impacts of the main CG mechanisms on EM practices before and after the Code.
Chapter 8 provides the research design by reviewing the fundamentals of quantitative research, defining the key variables, demonstrating the study period, describing the sample and data collection, and establishing the statistical approaches to test the hypotheses.

Chapter 9 demonstrates the descriptive statistics of the explanatory and the control variables, and the empirical results coupled with robustness tests of testing the hypotheses formulated.

And finally, Chapter 10 concludes the thesis by reviewing the main findings, demonstrating the contributions and implications of the findings, and discussing the limitations and suggestions for the future research.
Chapter 2: Theoretical Review: Transaction Cost Economics (TCE)
2.1. Introduction

In his presidential address to the Royal Economic Society in 1986, R. C. O. Matthews stated that "the economics of institutions has become one of the liveliest areas in our discipline" (Matthews 1986, p.903). The New Institutional Economics (hereinafter referred to as NIE) (1) "holds that institutions matter and the determinants of institutions are susceptible to analysis by the tool of economic theory" (Matthews 1986, p.903), (2) is different from but not hostile to orthodoxy, and (3) is an interdisciplinary combination of law, economics, and organisation in which economics is the first among equals (Macher and Richman, 2006). The NIE comes in two parts. Part one deals with the institutional environment, the so-called rules of the game. The second, in more microanalytic way, focuses on the structures of governance. Transaction cost economics (hereinafter referred to as TCE) is principally concerned with the latter—structures of governance (market, hybrid, and hierarchy) (Macher and Richman, 2006). TCE argues that "taking the institutional environment as given, economic agents purportedly align transactions with governance structures to affect economizing outcomes" (Williamson, 1996, p.5).

The conceptual move to TCE is to describe firms not in technical terms as a production function but in organisational terms as an alternative mode of governance (Williamson, 2005c). The essential insight or working hypothesis of TCE is to "align transactions, which differ in their attributes, with governance structures, which differ in their costs and competencies, in a discriminating, mainly transaction cost economizing way" (Williamson, 1991, p.79). Simply put, TCE tries to explain how trading partners choose, from a set of feasible governance structures ex post, the arrangement that provides effective monitoring and control for mitigating opportunistic behaviours occurred during the business transactions at the lowest total cost (Shelanski and Klein, 1995). All in all, as Williamson noted "TEC...by which I mean the comparative contractual approach to economic organisation in which economizing on transaction costs is treated as the main case..." (Williamson, 2005b, p. 20).
For the applications of TCE, Williamson (1996, p.17) argues that “...any issue that can be formulated as a contracting problem can be investigated in transaction cost economizing terms. Every exchange relation qualifies.” TCE is an expansive concept; applications include non-standard contracting practices (customer and territorial restrictions, exchange agreements), regulation (deregulation), multinational economic organisation, corporate strategy, corporate governance, and so forth (Williamson, 2005a). Rather than analysing each of these applications and ramifications, firstly, this chapter will provide a review of some fundamental concepts of TCE and governance structures. And then, emphases will be drawn on the financial-contract framework of firms and TCE’s application to corporate governance respectively.

<table>
<thead>
<tr>
<th>2.1. Introduction</th>
<th>Section 2.1. provides an introduction;</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2. Some Rudiments of TCE</td>
<td>section 2.2. reviews some rudiments of TCE. Having these rudiments been set,</td>
</tr>
<tr>
<td>2.3. Governance Structures of TCE</td>
<td>section 2.3. demonstrates the different governance structures (market, hybrid, and hierarchy) through a simple contractual schema. Correspondingly, different contract law, adaptability, and instruments of each governance structure are discussed.</td>
</tr>
<tr>
<td>2.4. Comparative Statics of TCE</td>
<td>Section 2.4. describes the comparative statics of TCE. The main purpose is to evaluate the effects of some environmental changes (e.g., property rights, contract law, reputation effects, and uncertainty) on the parameter shifts of each governance mode. The analysis in section 2.5. emphasises on the financial-contract of firms and TCE’s elementary application to corporate governance. Section 2.6. summarises the whole chapter.</td>
</tr>
<tr>
<td>2.5. TCE's Basic Approach to Corporate Governance</td>
<td></td>
</tr>
<tr>
<td>2.6. Summary</td>
<td></td>
</tr>
</tbody>
</table>


2.2. Some Rudiments of TCE

2.2.1. Transaction and Transaction Costs

According to Commons (1932, p.4), “the unit of activity...must contain in itself the three principles of conflict, mutuality, and order. This unit is a transaction”. Not only does TCE agree that the transaction is the basic unit of analysis, but it views governance as an economizing response to Commons' triple. In general, governance is a means by which to infuse order in a relation where potential conflict threatens to undo or upset opportunisms to realize mutual gains (Williamson, 1985). A transaction occurs when a good or service is transferred across a technological separable interface. One stage of activity terminates and another begins. With a well-working interface, as with a well-working machine, these transfers occur smoothly (Williamson, 1981a,b; 1999).

Transaction costs, on the other hand, which are often referred to as the economic counterparts of friction raise the questions, such as do parties to the exchange operate harmoniously? Are there frequent misunderstandings and conflicts that lead to delays, breakdowns, and other malfunctions? Arrow (1969, p.48) defines transaction costs as the “costs of running the economic system”. Viewing the economic system from the standpoint of contract, transaction costs can be considered as the costs of setting and maintaining the terms and conditions in the contract. In particular, the ex ante transaction costs cover the costs of “drafting, negotiating, and safeguarding an agreement or a contract”, and “the ex post costs of maladaptation and adjustment that arise when contract execution is misaligned as a result of gaps, errors, omissions, and unanticipated disturbances” (Williamson, 1996, p.379). Among the costs occurring in different contracting stages, TCE emphasises on economizing the transaction costs ex post where maladaptation costs are the key features. The study of economizing transaction cost is a comparative institutional undertaking which recognises that there are a variety of different transactions on one side and alternative governance structures on the other. The objective is to match governance structures to the attributes of transactions in a discriminating way (Williamson, 1981b).
2.2.2. Behavioural Assumptions of Human Actors

If “nothing is more fundamental in setting our research agenda and informing our research methods than our view of the nature of the human beings whose behaviour we are studying” (Simon, 1985, p.303), then social scientists should be prepared to name the key features of human actors to which their research project relates. TCE names three: (1) the recognition that human actors are subject to bounded rationality; (2) the assumption that parties to a long-term contract possess feasible foresight; and (3) the belief that at least some parties are given to opportunism (Williamson, 2002a;b). In the following analysis, each of these assumptions is reviewed briefly.

Simon (1961) takes the early notion that human actors are described as boundedly rational, by which he means that they are “intendedly rational, but only limitedly so” (p.xxiv). Human actors are thus neither non-rational nor irrational, but are attempting effectively to cope. TCE fully concurs with this concept. In the perspective of contracting, Williamson (2005, a;b) argues that the main lesson of bounded rationality is that all complex contracts are unavoidably incomplete. Moreover, TCE also draws attention to another attribute of human actors—the feasible foresight. Specifically, it is argued that the parties to a long-term contract possess feasible insight as they may gain ability to look ahead, uncover possible hazards, and work out the ramifications, thereupon to incorporate hazard-mitigating mechanisms (Williamson, 2005b). For the third behaviour assumption, opportunism takes provision for self-interest seeking with guile and includes calculated efforts to mislead, deceive, obfuscate, and otherwise confuse. In the perspective of contracting, opportunism refers to that economic agents who make false or empty, that is, self-disbelieved threats or promises, cut corners for undisclosed personal advantage, cover up tracks, and the like (Williamson, 1983). It is not necessary to consider that all agents are equally opportunistic, however, it is sufficient to assume that less opportunistic agents are difficult and costly to ascertain ex ante and that “even among the less opportunistic, most have their price” (Williamson 1979, p.234).
Economic agents that are simultaneously subject to bounded rationality and (at least some) are given to opportunism does not by itself, vitiate autonomous trading. On the contrary, when effective *ex ante* and *ex post* competition can both be presumed, autonomous contracting will be efficacious. Of these two, effective *ex ante* competition is a much easier condition to satisfy: it merely requires that there will be large number of qualified bidders at the outset. However, the subsequent transformation of an exchange relation involving large numbers to one involving small numbers during contract execution or renewal stage (Fundamental Transformation) is what causes problems. Whether *ex post* competition is equally efficacious or breaks down as a result of contract execution depends on the characteristics of the transactions in question, which leads to the matter of dimensionalizing transaction (Williamson, 1981b).

### 2.2.3. Dimensionalizing Transaction

Having the transaction been set as the basic unit of analysis, TCE argues that a fundamental move to the operationalisation of the theory is to name the principal dimensions with respect to which significant transaction cost consequences accrue. The important dimensions for describing transactions are: (1) the uncertainty or disturbances to which transactions are subject; (2) the frequency with which transactions recur; and (3) the degree to which durable, transaction-specific investments are required to realise least cost supply. Although all are important, TCE attaches special significance to this last (Grossman and Hart, 1986; Williamson, 1979; 1993).

Asset specificity has reference to the degree to which an asset can be redeployed to alternative uses and/or by alternative users without sacrifice of the productive value. This has a relation to the notion of sunk costs. The reason why asset specificity is crucial is that, as expressed by Williamson (1981a,b; 2005a), once the specific investments have been made, both parties are effectively operating in a bilateral (or at least quasi-bilateral) exchange relation for a considerable period thereafter (for the reason of Fundamental Transformation). Since the value of specific capital in other uses
is much smaller than the specialised use for which it has been intended, the supplier is effectively locked into transaction to a significant degree. This is symmetrical in that the buyer cannot turn to alternative sources of supply and obtain the item on favourable terms, since the cost of supply from unspecialised capital is presumably great. Accordingly, “where asset specificity is great, buyer and seller will make special efforts to design an exchange that has good continuity properties” (Williamson, 1981a, p.555). Without purporting to be exhaustive, asset specificity distinctions of six kinds have been made: (1) site specificity, as where successive stations are located in a cheek-by-jowl relation to each other so as to economize on inventory and transportation expenses; (2) physical asset specificity, such as specialised dies that are required to produce a component; (3) human asset specificity that arises in a learning-by-doing fashion; (4) dedicated assets, which are discrete investments in general purpose plant that are made at the behest of a particular customer; to which (5) brand name capital and (6) temporal specificity have been added (Williamson, 1998b).

The frequency with which transactions recur refers to as the number of times a transaction takes place between the parties to a contract per unit of time. As expressed by Williamson (2005a), frequency is mainly relevant in two respects: reputation effects among the involved groups and set-up costs of carrying a specific transaction, the net effects of which will vary with the parties. The prospect of recovering the set-up costs associated with specialised governance structures varies with the frequency with which transactions recur. Specialised governance structures are much easier to justify for recurrent transactions than for identical transactions that occur only occasionally. The transactions that TCE usually emphasizes on are of the recurring kind.

Uncertainty in terms of TCE is described as the source of disturbances to which adaptation is required. Disturbances are misalignments with the original spirit of the contract that may arise due to State-contingent situations (e.g., property expropriation by the State), lack of communication (e.g., one decision maker cannot find out the decisions and plans made by the others), and the behavioural uncertainty attributable to
opportunism (e.g., intentional nondisclosure, disguise or distortion of information) (Williamson, 1998b; 2002b). With regard to the third class of uncertainty, Williamson (1993, p.461) argues that hazards due to the behavioural uncertainties “arise when incomplete contracting and asset specificity are joined”. Thus, of special importance to TCE is the mitigation of hazards orientated from uncertainty accompanied by opportunistic behaviour of parties involved in transactions through allocation of governance structures that can offer the lowest transaction costs.

2.2.4. Fundamental Transformation

The bilateral dependence normally has its origins in the Fundamental Transformation. It is an intertemporal phenomenon and alters the nature of contractual relation during the contract implementation interval. Before analysing the different modes of governance structures, the concept of bilateral dependence originated from the Fundamental Transformation is still required to be clarified.

Fundamental Transformation applies to that subset of transactions for which large number of qualified suppliers at the outset are transformed into what are, in effect, small number of actual suppliers during contract execution and at the contract renewal interval (Williamson, 1979; 1996; 2002b). The key factor here is whether the transaction in question is supported by investment in different types of transaction-specific assets (Williamson, 1996). Where no such specialised investments are incurred, the initial winning bidders realise no advantage over nonwinners. Although it may continue to supply for a long period of time, this is only because, in effect, it is continuously meeting competitive bids from qualified rivals. Rivals cannot be presumed to operate on a parity, however, once substantial investments in transaction specific assets are put in place. Winners in these circumstances enjoy advantages over nonwinners, “which is to say that parity at renewal interval is upset” (Williamson, 1996, p.61). Consequently, both parties are locked into the specific assets in the transactions. By stating differently, they are bilaterally dependent on each other during contract
execution and at the contract renewal interval as the transaction costs from redeploying the specialised assets involved to alternative uses and/or by alternative users are considerably great. Accordingly, the incentives of parties to work things out by providing appropriate safeguards rather than prematurely terminating the transaction are apparent.

By following the concept of Fundamental Transformation, value-preserving governance structures are sought. Simple market exchange gives way to credible contracting, which includes penalties for premature termination, mechanisms for information disclosure and verification, specialised dispute settlement procedures and the like. Unified ownership (vertical integration) is predicted as bilateral dependence hazards build up and serves as the last resort (Williamson, 2005c).

2.3. Governance Structures of TCE

Having the rudiments of TCE which are composed of the basic unit of analysis-transaction, transaction costs, behaviour assumptions of human actors (bounded rationality, feasible foresight, and opportunism), dimensions of describing a transaction (asset specificity, frequency and uncertainty), and Fundamental Transformation been demonstrated, different governance modes will be analysed in below. The structure of this section is composed of two parts: while part one demonstrates different modes of governance structures by concentrating on a simple contractual schema, the other part provides a comparative analysis in contact law, adaptability, and incentive and control instruments of each governance mode.

2.3.1. The Simple Contractual Schema

Assume that a good or service can be supplied by either of two technologies. One is a general purpose technology and the other is a special-purpose technology. Furthermore, the special-purpose technology requires greater investment in transaction-specific durable assets and is more efficient for servicing steady-state demands (Williamson,
Using $k$ as a measure of transaction-specific assets, the transactions that use the general-purpose technology are ones for which $k=0$. Node A which is located in Figure 2.1. corresponds to this ideal transaction in law and economics: with an absence of dependence, prices are set competitively in the market (by supply and demand), and in the event of contractual breakdown, the courts award damages. Whereas classical market contracting—"sharp in by clear agreement; sharp out by clear performance" (Macneil, 1974, p.738)—suffices this kind.

If instead transactions use the special-purpose technology, and $k>0$ condition exists. Since assets here are specialised and bilateral dependence between parties in transactions is created, productive value would be sacrificed if transactions are to be prematurely terminated. Parties have incentives to promote continuity and safeguard investments. By putting it in another way, cooperative adaptation comes to the fore (Williamson, 1996; 2005a). Now, let $s$ denote the magnitude of any safeguards. An $s=0$ condition is one in which no safeguards are provided; and a decision to provide safeguards is reflected by an $s>0$ result (Williamson, 1991). TCF further classifies two forms of safeguards. One takes the form to provide added supports (applies to both inter- and intra- firm contracting): penalties to deter breach are introduced, added information disclosure is provided, and specialised dispute settlement machinery (e.g., arbitration) is devised. This form of safeguards is the credible commitment option (Williamson, 2005a,c). A second form is to take transactions out of markets and organise them under unified ownership where hierarchy is used to affect coordination (Williamson, 1981a).
Node B of Figure 2.1. poses unrelieved contractual hazards in that specialised investments are exposed \((k>0)\) for which no safeguards \((s=0)\) have been provided. According to the behaviour assumption about feasible foresight, parties to a long-term contract may gain ability to look ahead, uncover possible hazards, and work out the ramifications, hence such hazards can be recognised by foresighted players who will price out the implied risks. Node C and D are those for which additional safeguards have been provided \((s>0)\), either in form of contractual safeguards—form one safeguard (node C) or unified ownership—form two safeguard (node D). Due to lack of additional contractual supports (safeguards), the price of node B is greater than the price of either node C or D \((P_B>P_{C\text{ or } D})\) (Williamson, 1985; 1996; 2005a:c). In the event that costly breakdowns continue in the face of efforts to craft safeguards at node C, the transaction may be taken out of the markets and organised under unified ownership (vertical integration) instead. Inasmuch, however, as added bureaucratic costs accrue upon taking a transaction out of the markets and organising it internally, internal organisation is usefully thought of as the “organisation form of last resort: try market, try hybrids, and have recourse to the firm only when all else fails” (Williamson, 1983, p.357). All in all, the hierarchy form comes in only as higher degrees of asset specificity and added uncertainty require greater needs for cooperative adaptation.
Having the different governance structures (market, hybrid, and hierarchy) been demonstrated through a simple contract schema, some queries still remain to be answered. What are the different contract laws according to the different modes of governance? What are the factors that are responsible for the different costs and competencies of each mode? How do alternative modes of governance differ in contract implementation and enforcement respects? Can large firms always do as well as a collection of small firms and sometimes do better? (Williamson, 1991; 2005c). The answers to such questions can be obtained by conducting a comparative analysis of the different modes.

### 2.3.2. A Comparative Analysis of Different Modes

A comparative analysis approach in TCE applies to that any single governance structure is not stand-alone but has to examine in relation to alternative modes. TCE argues that the real import of the proposition that moving from one generic form of organisation to another is attended by discontinuities is that alternative modes of governance have different characteristics by reason of these discontinuities (Williamson, 2005b). Thus, as being developed below, each form of governance (market, hybrid, and hierarchy) is defined by a syndrome of attributes—distinctive strengths and weaknesses—that can not be replicated. The main idea is that there is no, in all purpose, superior form of governance structure. However, using a simple mode of governance to manage a complex transaction would be to risk contractual breakdown, whereas using a complex mode of governance to manage a simple transaction would be to incur costs without gain (Macher and Richman, 2006). The differences of the governance modes are examined in three major aspects: contract-law, adaptability, and incentives and control instruments.

#### 2.3.2.1. Contract Law

In terms of contract law, two major points have been proposed by TCE. First, each generic form of governance needs to be supported by a different form of contract law.
Second, the form of contract law that supports hierarchy is that of so-called forbearance or private ordering (Williamson, 1991).

Macneil (1974; 1978) states that classical contract law is congruent with and supports the autonomous market form of organisation—the market mode. The market mode applies to the ideal transaction in law and economics—"sharp in by clear agreement; sharp out by clear performance" (Macneil, 1974, p. 738)—in which the identity of the parties is irrelevant. The identity of parties plainly matters if premature termination or persistent maladaptation happened on one or both parties. According to the simple contractual schema, because no transaction-specific investments are involved, market modes are thus the ones in which parties bear no dependent relationship to each other. Indeed, each party can go its own way at negligible cost to another (Williamson, 2002a; b). If contracts are renewed period by period, that is only because current suppliers are continuously meeting bids in the spot market. Such transactions require the contract law to be interpreted in a very legalistic way. In particular, more formal terms supersede less formal should disputes arise between formal and less formal features (e.g. written agreements versus oral amendments), and hard bargaining to which the rules of contract law are strictly applied (Williamson, 1991).

The neo-classical contract law, which relieves parties from strict enforcement, applies to contracts in which parties to the transactions maintain autonomy but are bilaterally dependent to a nontrivial degree (Williamson, 2002a). The hybrid mode of governance which has transaction-specific investments but safeguards on the contrary is supported by the neo-classical contract law. While the parties to such contracts maintain autonomy, the contract is mediated by an elastic contracting mechanism (Williamson, 2000). This regime better facilitates continuity and promotes efficient adaptation compared with the classical contract law (Williamson, 1998a). The forum to which this neo-classical contract refers disputes is that of arbitration rather than the courts. While the benefits and costs of arbitration are not within the scope of this thesis, the main reason that puts arbitration at such a primary level is that "there are open to the
arbitrator...quick methods of recognising and educating the disputes not open to the courts” (Williamson, 1991, p.272).

The implicit contract law of internal organisation or hierarchy mode of governance is that of forbearance. As stated by Williamson (1998b, p.41), “transaction cost economics makes that move by studying contract laws (plural) rather than contract law (singular). This entails going beyond legal rules and legal centralism to include private ordering.” By definition, private ordering is “…efforts to craft governance structure supports for contractual relations during the contract implementation interval…” (Williamson, 2002a, p.174). Moreover, TCE argues that ultimate appeal is important, in that it delimits threat position, but the main contractual action nevertheless takes place in the context of private ordering. Most disputes, including many that under current rules could be brought to a court are resolved by avoidance, self-help, and the like. Thus whereas courts routinely grand standing to firms should there be disputes over prices, the damages to be ascribed to delays, failures of quality, and the like, courts will refuse to hear disputes between one internal division and another over identical technical issues. The firm becomes its own court of ultimate appeal in this way, which explains why hierarchies differ significantly in dispute settlement (fiat) respects (Williamson, 1981a;b; 2002a;b). Williamson (2005c) points out that the underlying rationale for forbearance law is twofold: (1) parties to an internal dispute have deep knowledge—both about the circumstances surrounding a dispute as well as the efficiency properties of alternative solutions—that can be communicated to the court only at great cost, and (2) permitting internal disputes to be appealed to the court would reduce the efficacy and integrity of hierarchy. Thus, the application of forbearance doctrine to internal exchange can work out their differences themselves or appeal unsolved disputes to the hierarchy for a decision.

By putting all together, it is argued that different types of contract law, in particular, the classical, neoclassical, and forbearance contract law, play important roles in explaining the differences in governance modes. But there is more to governance than
contract law. Crucial differences in adaptability and in the use of incentive and control instruments are also germane (Williamson, 1991).

2.3.2.2. Adaptation as the Central Economic Problem

While both Hayek (1945) and Barnard (1962) agree that adaptation is the central problem of economic organisation, the type of adaptation to which they have reference differs. On one hand, Hayek (1945) mentions the adaptation of autonomous economic actors who adjust spontaneously to changes in the market mainly as signalled by changes in relative prices. In contrast, Barnard (1962) appeals to intentionality. He features cooperative adaptation made by economic actors with assistance of hierarchy within a firm. TCE submits that adaptability is the central problem of economic organisation and both Hayek and Barnard are correct, because they are referring to adaptations of different kinds, both of which are needed in a high-performance organisation system. Correspondingly, TCE argues that while the market adapts to changes in autonomous ways, the hierarchy adapts in coordinated ways, and the hybrid displays semi-strong adaptation of both kinds (Williamson, 1991).

In particular, TCE refers to Hayek's kind of adaptation as adaptation (A), where (A) denotes autonomy. This is the situation in which parties respond independently to parametric price changes so as to maximise their utility and profits respectively (Williamson, 1993). Adaptation (A) would entirely suffice if all disturbances are of this kind. Some disturbances, however, require coordinated responses, lest individual parties operate at cross-purposes or otherwise suboptimize. More generally, parties that bear a long-term bilaterally dependent relationship to each other must recognise that incomplete contracts (by the reason of bounded rationality) require gap-filling and sometimes to take transactions out of the alignment. Although it is always in the collective interest of autonomous parties to fill gaps, correct errors, and establish efficient alignments, it is also the case that the distribution of the resulting gains is indeterminate. Self-interested bargaining (for the reason of opportunism) predictably obtains. Such bargaining is itself costly (Williamson, 1991).
Since the needs for coordinated investments and uncontested or less contested coordinated realignments increase, the recourse to a different adaptation mechanism is thus required. This calls for Barnard’s type of adaptation which will be referred to as adaptation (C), where C denotes cooperation. By definition, it means that “the conscious, deliberate, and purposeful efforts to craft adaptive internal coordinating mechanisms” (Williamson, 1991, p.279). Independent adaptations here would at best realise imperfect realignments and could operate at cross-purposes. Lest the concerns with costs and delays associated with self-interest bargaining be incurred, the relation is reconfigured by supplanting autonomy with hierarchy. The authority relation (fiat) has adaptive advantages over autonomy for transactions of a bilaterally (or multilaterally) dependent kind (Williamson, 2002a:b).

The hybrid mode displays the semi-strong form of adaptation. It encourages type (A) adaptation by preserving ownership autonomy; one party involved in the transactions can respond efficiently to the price changes without consulting the other one. On the other hand, because there is a circumstance of bilateral dependence due to the specific assets investments, long-term contracts are supported by added contractual safeguards and administrative apparatus, such as information disclosure, dispute-settlement mechanisms, and so forth. These facilitate adaptation of type (C) (Williamson, 1991).

2.3.2.3. Incentive and Control Instruments

In the market mode with adaptation type (A), prices can serve sufficiently to a disturbance and parties involved in non-specific assets transactions can reposition autonomously. Appropriating, as they do, individual streams of net receipts, each party has a strong incentive to reduce costs and adapt efficiently. Thus, as stated by Williamson (2005a;b), high-powered incentives result in such a situation. Moreover, other autonomous traders have neither legitimate claim against the gains nor can they be held accountable for the losses (Williamson, 1991). In terms of administrative controls, as the asset-specific investments do not exist in the transactions, market mode does not
offer any administrative control mechanisms, such as monitoring, career rewards, penalties, and so forth.

Matters get more complicated when bilateral dependence intrudes. As illustrated by Williamson (1991) that hierarchy mode introduces an opportunity to realise gains when bilateral dependence and uncertainty accompanied with opportunism become intense. Comparing with the market, “the use of formal organisation to orchestrate coordinated adaptation to unanticipated disturbances enjoys adaptive advantages as the condition of bilateral dependence progressively builds up” (Williamson, 1991, p.279). However, these gains through adaptation (C) come at cost. Not only can related divisions within the firm make plausible claims that they are causally responsible for the gains, but division that report losses can make plausible claims that others are culpable. In the field of accounting, the headquarters may use accounting system to affect strategic redistributions through transfer pricing changes, overhead assignments, inventory and tax conventions, and so forth, whatever the preferences of the parties. The upshot is that internal organisation structure degrades incentive intensity, and added bureaucratic costs result (Williamson, 1986). Thus, in contrast to the market mode, hierarchy is buttressed by the differential efficacy of administrative controls within firms (Williamson, 2000).

The hybrid mode shows the intermediate value in these two instruments. In particular, because of the preservation of ownership autonomy, the hybrid form elicits strong incentives. On the other hand, because of the bilateral dependence, added administrative control mechanisms or safeguards are provided to protect parties involved in transactions. Williamson (1998a; 2002a) emphasises the distinctive feature of the hybrid mode regarding the incentive and control instruments that if added incentive intensity gets in the way of bilateral adaptability, then weaker incentive intensity supported by the added administrative controls can be optimal. Table 2.1 provides a summary of each governance structure with regard to contract law, adaptation, and incentive and control instruments.
Table 2.1.: Specific aspects in governance structures

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Market Mode</th>
<th>Hybrid Mode</th>
<th>Hierarchy Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contract Law</strong></td>
<td>Classical Contract Law: sharp in by clear agreement; sharp out by clear performance. And, the identity of the parties is irrelevant.</td>
<td>Neo-classical Contract Law: it relieves parties from strict enforcement and applies to contracts in which the parties to the transactions maintain autonomy but are bilaterally dependent to a nontrivial degree.</td>
<td>Forbearance: this entails going beyond legal rules and legal centralism to include private ordering.</td>
</tr>
<tr>
<td><strong>Adaptation</strong></td>
<td>Adaptation A: the adaptations of autonomous economic actors who adjust spontaneously to changes in the market mainly as signalled by changes in relative prices.</td>
<td>Semi-strong form of adaptation: it preserves ownership autonomy which encourages adaptations of type A. On the other hand, because there is a bilateral dependence, long-term contracts are supported by added contractual safeguards and administrative apparatus, these facilitate adaptations of type C.</td>
<td>Adaptation C: it means the conscious, deliberate, and purposeful efforts to craft adaptive internal coordinating mechanisms.</td>
</tr>
<tr>
<td><strong>Incentive and Control Instruments</strong></td>
<td>High-Powered Incentives but No Administrative Control Mechanisms: individual streams of net receipts, each party has a strong incentive to reduce costs and adapt efficiently. And, markets do not have any of the administrative control mechanisms.</td>
<td>Intermediate Value in Incentive and Control Instruments: because of the preservation of autonomy, the hybrid mode elicits strong incentives. On the other hand, because of bilateral dependence, added administrative control mechanisms (safeguards) are provided to protect both parties.</td>
<td>Low-Level Incentives plus High-Level Administrative Controls: because of the managerial discretion or self-fulfilment, the internal organisation structure degrades incentive intensity and added bureaucratic costs result. And, it is buttressed by the administrative controls.</td>
</tr>
</tbody>
</table>
2.4. Comparative Statics of TCE

In the last section, different modes of governance—market, hybrid, and hierarchy—are briefly described through a simple contractual schema. In addition, by conducting a comparative analysis of contract law, adaptability, incentive and control instruments, the distinctive features in strength and weakness of each mode are demonstrated. The main statement is that there is no, in all purpose, superior form of governance structure. Transactions vary in their attributes, governance structures vary in costs and competencies, efficient alignment in a cost economizing way is where the predictive action resides. The unchanging lesson of TCE for all feasible forms of organisation is this: “a place needs to be made for each generic form, but each form needs to be kept in its place” (Williamson, 1998b, p.46).

This section focuses on some predictions of TCE concerning with how the choice of a cost effective contractual framework can be affected by the shifts in certain factors of the external environment. In other words, rather than concentrating on the specific characteristics of each mode, the followings aim to evaluate the effects of external changes on each governance mode. Four different kinds of changes are examined: property rights, excuse and forbearance doctrine, reputation effects, and uncertainty.

2.4.1. Property Rights

There are two major concerns of property rights in examining the parameter shifts of governance structure, specifically, the governmental expropriation and information leakage. For the former, the effect—a shift in institutional environment from strong to weak property rights—on the choice of cost effective contractual framework depends on whether the durability and immobility of the assets implicated are correlated with their asset specificity. If duality and immobility are uncorrelated with asset specificity, then the transaction costs of all forms of private-sector governance increase together as expropriation hazards increase (Williamson, 1991). In other words, no real change in the comparative choice of cost effective contractual frameworks is expected to take place.
In such a situation, TCE argues that the government sector will have to bear a large durable investment burden, while the private sector durable investments will favour assets that can be smuggled or are otherwise mobile—such as general-purpose human assets (skilled machinists, physicians) that can be used productively if immigration law can be more flexible to other countries (Williamson, 1991). An example is taken from the latest laws on government expropriation of institutional and private houses in China. In August 2007, the lawmakers of China voted to add one clause to the Law on the Management of Urban Real Estate, allowing the government to expropriate institutional and private houses on the State-owned land for public interests. Although the economic consequences of such legislation have yet to be studied, an anonymous Chinese entrepreneur remarks, “I don’t want to get too deep into the real estate businesses. If the situation changes, I’ll get stuck with them.” In this situation, as stated by Williamson (1996, p.113), “…the objectivity of law is placed in jeopardy if the law and its enforcement are under control of a one-party State.”

Not only may property rights be devalued by the government, but the value of specialised knowledge and information may be appropriated and/or dissipated by suppliers, buyers, and rivals (Williamson, 2005a). If investments in knowledge cannot lawfully be protected or if nominal protection (e.g., patent) is ineffective, then the *ex ante* incentives to make such investments are impaired and the *ex post* incentives to embed such investments in protective governance structures are increased. Vertical or lateral integration into related states of production in which the hazards of information leakage are greatest is sometimes undertaken for the precisely protective purposes. Trade secret protection is an example. Interpreted in terms of comparative governance costs apparatus, not only the adaptation (A) of autonomy suffers due to the increased risk of information leakage, but also the costs of hybrid contracting compared with hierarchy increase. Consequently, the distribution of transactions favours greater reliance on trade secret protection as a form of hierarchy (Williamson, 2005c).
2.4.2. **Excuse and Forbearance Doctrine (Contract Law)**

Improvements or not in a contract law regime can be used to judge how relevant governance structures shift. In particularly, TCE concentrates on the possible variations in the excuse doctrine—a contract law doctrine which relieves parties to a contract from strict enforcement. For instance, an improvement in excuse doctrine could shift the costs of hybrid governance mode down. The idea here, as proposed by Williamson (1991, p.290), is that “excuse doctrine can be either too lax or too strict.” If it is too strict, then parties will be reluctant to make specialised investments in support of each other because of the added risk of truly punitive outcomes should unanticipated events materialise and the opposite party insist that the letter of the contract be observed. If it is too lax, then incentives to think through contracts, choose technologies judiciously, share risks efficiently, and avert adversity will be impaired (Williamson, 1991). Whether a change in excuse doctrine is an improvement or not depends on the initial conditions and on how these trade-offs play out. However, assuming that an improvement is introduced in both cases, TCE predicts that the effect will be to lower the costs of hybrid contracting—especially at higher value of asset specificity. The effect of such improvements would be to increase the use of hybrid contracting, especially as compared with hierarchy (Williamson, 2005a).

In addition, a change in forbearance doctrine would be reflected in governance costs of hierarchy. For example, mistaken forbearance doctrine—a willingness by the courts to litigate intrafirm technical disputes—would have the effect of shifting the costs of hierarchical governance up (Williamson, 1991). This would disadvantage hierarchy in relation to hybrid mode of contracting.

2.4.3. **Reputation Effects**

Reputation effects are important in transactions as parties involved can consult not only from their own experiences but also benefit from the experiences of others. As expressed by Williamson (1993), one way of interpreting a network is as a
non-hierarchical contracting relation in which reputation effects are quickly and accurately communicated. In a community of traders in which reputation effects take place, any improvements in such effects can attenuate incentives to behave opportunistically in transactions since the immediate gains from opportunism in the regime must be traded off against future costs. The ethic communities will predictably displace non-ethic communities. Non-ethic communities, to be viable, will resort to market or hierarchy (Williamson, 1991). It is argued that improvements in reputation effects reduce the hazards due to opportunistic behaviour, thus the costs of hybrid governance mode. Hybrid contracting outperforms the other two governance modes in the regime where reputation effects are more highly perfected, ceteris paribus.

In addition, as argued by Williamson (1995), reputation effects are pertinent within firms as well. If internal reputation effects improve, then managerial opportunism will be reduced and the costs of hierarchical governance will fail.

2.4.4. Uncertainty

Alchian and Woodward (1988) in their works argue that in Williamson’s TCE framework, “he implicitly but not analytically distinguishes between two kinds of hazards, namely, the holdup and moral hazards” (p.121). Although the elementary ideas of these two different types of hazards have been described with regard to opportunism in most of Williamson’s works, Alchian and Woodward (1988) still provide a definition for each of them. Holdup hazards refer to as an attempt to expropriate by refusal to pay or serve when specific assets are employed in transactions. And, moral hazards “arise in agreement in which at least one party relies on the behaviour of the other and information about that behaviour is costly” (Alchian and Woodward, 1988, p.122). This section mainly focuses on how different governance modes are affected by uncertainty or the increased degree of uncertainty.

In transactions without specific assets involvement (or the market mode),
continuity of such transactions has little value since new trading relations can easily be arranged among large number of qualified suppliers. Market exchange continues and the discrete-contracting paradigm (classical contract law) holds across standardised transactions of all kinds, whatever the degree of uncertainty (Williamson, 1979). However, degree of uncertainty matters in transactions with specialised asset investments. Whenever investments are idiosyncratic (for the reason of asset specificity) in nontrivial degree, uncertainty makes it to be imperative for trading parties to devise a mechanism to work things out since the contractual gaps will be larger and the occasions for sequential adaptations will increase in number and importance (Williamson, 1981a).

In the situation of increased uncertainty, trading parties in transactions with low-level specific assets involvement may choose to sacrifice valued design features in favour of a more standardised good or service. Market governance would then be applied as the increased degree of uncertainty does not alter this governance mode. As specific assets involvement deepens, increased uncertainty raises the costs of hybrid mode since parties have to design an elaborated governance structure which facilitates more effective, adaptive, and sequential decision making in order to preserve the valued design features in transactions. As uncertainty increases to high level, hybrid apparatus often gives way to the unified ownership governance structure or hierarchy mode. Correspondingly, the hybrid mode is to be devised for the semi-strong uncertainty (Williamson, 1979).

2.4.5. Simultaneous Parameter Shifts

The comparative statics analysis set out above treats each form of governance structure as a syndrome of attributes and introduces parameter shift one at a time. Suppose, instead, that a series of shifts are to occur together. Could theses be processed as a sequence of independent changes? If, however, a related set of changes is made simultaneously, it would not do to treat these independently. If strong interaction effects
exist, these must be treated as a cluster (Williamson, 1991).

The phenomenon of the simultaneous parameter shifts can be explained by the following examples. One of them is the success story of Japanese corporations in the 1980s-1990s. The key factors here are employment, subcontracting, and banking. As argued by Williamson (1996), because these three factors bear a complementary relation to each other and the changes are linked, the American corporations cannot expect to replicate the Japanese corporations by making changes in only one of these practices and not in the others. Thus, exact replication of individual practices will be suboptimal, however, if linkages are important. Similar consideration applies to the economic reforms in China. If, for example, the efficacy of privatization turns crucially on the manner in which banking is organised and on the security of property rights, then the piecemeal proposals that merely focus on these features by ignoring the relevant supporting institution and infrastructures are fraught with hazards (Sun et al., 2002). Williamson (1991, p.294) argues that “applications to economic reform need to make express provision for contextual differences between alternative forms of capitalism.” In conclusion, the study of viable cluster of organisation is a combined law, economics, and organisations undertaking.

It is worth mentioning that the study of corporate governance and earnings management in China which is the main focus of the current thesis calls the similar inspirations as proposed by Williamson in above. In particular, certain features of corporate governance and earnings management which have been proved to be applicable and representative in American and European markets may not be appropriate in China due to differences in culture, law, economics, and so forth. By building upon the existing literature, this study adopts a comparative analysis approach to investigate the specific institutional features of China’s security markets in the following chapters.
2.4.6. A Three-Level Schema

Before moving to the applications of TCE, this section summarises the fundamental concepts through a three-level schema which is proposed by Williamson (1996). The three-level schema is shown in Figure 2.2.

Based on the previous discussions, the main clue is that governance does not operate in isolation. The comparative efficacy of alternative governance modes varies with the institutional environment on one hand and the attributes of economic actors on the other. The institutional environment is treated as the locus of shift parameters, changes in which shift the comparative costs of governance, and the individual is where the behaviour assumptions originate (Williamson, 1996). As indicated, the institutional environment defines the rules of the game. If changes in property rights, contract laws, norms, customs, and the like induce changes in the comparative costs of governance, then a reconfiguration of organisation is usually implied. This is shown by the solid arrow named "shift parameter" in Figure 2.2. The solid arrow from the individual to governance carries the behavioural assumptions within which TCE operates, and the circular arrow within the governance sector reflects the proposition that structure has a life of its own due to differences in contract laws, adaptability, and incentive and control instruments (Williamson, 1996).

The feedback effects are drawn as dashed arrows in Figure 2.2. In particular, the feedback effects from governance to the institutional environment can either be instrumental or strategic. An example of the former is the improvement in contract law, brought about at the request of parties who find that extant law is poorly suited to support the integrity of contract. Strategic changes could take the form of protectionist
trade barriers against domestic and/or foreign competition. Feedbacks from governance to the level of the individual can be interpreted as endogenous preference due to advertising or other forms of “education”. The individual is also influenced by the environment, in that endogenous preferences are the product of social conditioning (Williamson, 1996).

2.5. TCE’s Basic Approach to Corporate Governance

As argued by Williamson (1985, p.17), “…any issue that formulated as a contracting problem can be investigated in transaction cost economizing terms. Every exchange relation qualifies.” There are numerous applications and ramifications that TCE applied to, such as non-standard contracting practices, regulation, labour-market organisation, and so forth. Instead of focusing on all of them, this section will draw particular attention to the applications of TCE to corporate governance. The discussions below are primarily based on two academic studies of Williamson—Corporate Governance (1984) and Corporate Finance and Corporate Governance (1988). Briefly, this section starts with discussing the financial contract-framework of the firm, and then it provides an analysis of TCE’s essential approach to corporate governance.

2.5.1. The Contract-Framework of the Firm

The definition of firm can be visualised as an organisation construct, where a legal person (a fictitious person) called the firm contracts with each of its constituencies in order to secure the resource (e.g. labour and capital) necessary for production and related business activities. TCE predicts that the type of contractual framework that is established between the firm and its constituents will vary as a function of the attributes to each individual transaction. As expressed by Williamson (2002b, p.182), “TCE maintains that the contractual relation between the firm and its ‘stakeholders’-customers, suppliers and workers along with financial investors-can be interpreted as variations of the basic contractual theme.”
Moreover, TCE makes two further observations which are important to understand the economics of the firm as an organisational construct. The first matter concerns the interdependencies between the constituent parties of the firm. As Williamson (1988, p.1201) pointed out, the study of “corporate financing is complicated by interdependencies within and between contracts, [and therefore] changes in one set of terms commonly require realignments in others.” For instance, if the CEO of a firm perceives that the risks to his human specific assets have increased as a consequence of mechanisms (e.g., corporate takeovers, proxy contests, managerial competition) in corporate control market, one of his responses is to seek for further safeguards in order to secure his post and protect himself from losses. However, these increased safeguards proposed by the CEO may come at expense of reductions in the effectiveness of shareholders’ safeguards. The CEO may attempt to reduce the efficacy of the board by offering high paid consulting jobs to its members or try to increase the number of directors that are friendly to him. In general, these measures are intended for reducing board interdependence, and in such situation, investors’ benefits may be jeopardised by managerial discretion (Williamson, 1984). Thus, the notion of interdependence as proposed by TCE facilitates the analysis on the financial contract-framework of the firm as it aims to investigate some issues (e.g. the contractual relationship between the firm and its independent directors) without losing sight of other important subjects (e.g. the relationship between the firm and its audit committee or external auditors).

The second observation focuses on the management and ownership matters of the firm. Instead of holding the belief that firms are “owned, controlled and administered by capital rather than labour” (Alchian and Woodward, 1988, p.72), TCE predicts that the manager is the member with comparative advantage in deciding what the firm and its members should do, and this manager need not be an owner. Accordingly, Williamson takes the so-called managerial discretion hypothesis. This hypothesis “ascribes de facto control to those who are knowledgeable, strategically situated, and disposed to be actives” (Williamson, 1984, p.1221). Thus, upon examination of the groups that potentially qualify under the above characteristics, the management in the large and
diffusely owned corporation enjoys nontrivial degree of discretion. However, recent
corporate governance theory has proved the argument that outside United States,
particular at countries with poor shareholder protection, even the largest firms tend to
have controlling shareholders. For instance, La Porta et al. (1998); (1999) study the
shareholding structure among 49 and 27 wealth nations respectively. By using various
variables, such as antidirector index, Widely Held (1 if there is no controlling
shareholder), Family (1 if a family person is the controlling shareholder), State (1 if the
domestic or foreign State is the controlling shareholder), and so forth, their results are
consistent with the argument that ownership concentration is extremely high around the
world. In an average country, close to half equity in a publicly traded company is owned
by the three largest shareholders. In addition, Claessens et al. (2000) (2002), Leuz et al.
(2003), Shen and Chih (2007) study the ownership construction among Asian countries.
They all reach a similar argument that the voting rights frequently exceed cash-flow
rights via pyramid and cross-holdings. More than two-thirds of firms are controlled by a
that the central problem in China’s firms is the expropriation of minority shareholders
by controlling shareholders. Accordingly, instead of merely focusing on managerial
discretion, an investigation of controlling-shareholders’ expropriation may be more
interesting and appropriate in the case of China.

2.5.2. Corporate Governance in Perspective of TCE

According to the simple contractual schema, when a transaction is characterised by the
specific-asset investments, both parties incur losses if the relationship is prematurely
terminated (for the reason of bilateral dependence), and hence both parties have the
incentives to work things out by providing extra safeguards. In terms of corporate
governance, TCE predicts the inverse relationship between good corporate governance
(higher safeguard intensity) and financing costs: the higher (lower) the safeguard
intensity/corporate governance the lower (higher) the external equity financing costs,
other things equal. Thus, if the corporation is to perform well financially for its owners,
an appropriate level of safeguard intensity (good corporate governance) will be essential. Based on such arguments, Williamson (1984a; 2005b) focuses on the important role played by the board of directors as safeguard to protect stockholders’ value. Additionally, he also mentions several other measures, such as audit committee, external auditors, debt-holders (banks), and institutional investors.

As argued by Williamson (1984a), in general, the board is created and awarded to equity that is elected by the pro-rata votes of those who hold tradable shares: has the power to replace the management; decides on management compensation; has access to internal performance measures on a timely basis; can authorise audits in depth for special follow-up purposes; is apprised of important investment and operating proposals before they are implemented, and in other respects bears a decision-review and monitoring relation to the firm’s management. The board of directors thus evolves as a way by which to reduce the cost of capital for projects that involve limited redeployability. The “board of directors should be considered as a governance structure whose principal purpose is to safeguard those who face a diffuse but significant risk of expropriation because the assets in question are numerous and ill-defined, and cannot be protected in a well-focused, transaction-specific way” (Williamson, 1984a, p. 1197). Moreover, Williamson (1984a) compares the inside board of directors with the independent non-executive directors. On one hand, he argues that while management participation on the board can often facilitate shareholder monitoring of the management and can also help to safeguard the employment relation between firm and management. On the other hand, he points out that since managers enjoy more informational advantages because of their full-time status and inside knowledge, the participating board easily becomes an instrument of the management. This calls for the participation of the independent non-executive directors on the board. The independent non-executive board members are invited to join with the board to enhance the quality of strategic decision monitoring and control. By putting all together, Williamson (1988) argues that the efficient board (safeguard) should consist of both inside and outside directors.
In addition to the board safeguarding, some alternative control mechanisms are also qualified to protect investors’ value. For instance, as argued by Williamson (1984a), corporate charter restrictions and informational disclosure requirements are the examples. Some managements, however, play “end games” (undisclosed strategic decisions to cut and run before corrective measures can be taken) and individual managers commonly disclose information selectively or distort data. In order to minimise the transaction costs derived from such concealment and distortion, additional checks are thus required to be created. Williamson (1984a) mentions the important roles played by two monitoring governance mechanisms to limit management’s tendency of channelling benefits to themselves through disclosing misleading information, namely the audit committee and the statutory auditor. He points out that “…an audit committee composed of outside directors and the certification of financial reports by an accredited auditing firm can mitigate management’s opportunistically discretionary behaviours in information disclosure” (Williamson, 1984a, p.1211). Another control instrument is the required disclosure of financial reports to a public agency with the power of investigation (Williamson, 1984a). These administrative agencies are akin to The Securities and Exchange Commission (U.S.), Financial Services Authority (U.K.), China Securities Regulatory Commission, and so forth.

Furthermore, Williamson (1984a) argues that as the exposure to risk increases, debt holders become more concerned with the details of firms’ operating decisions and strategic plans; “with high debt-equity ratios the creditors become more like shareholders and greater consultation between the management and its major creditors results” (p.1197). While TCE originally considers the monitoring role played by the banks, institutional shareholders such as pension funds, mutual funds, hedge funds, and so forth have recently been emphasised. Williamson (2007) states that corporate monitoring by institutional investors can constrain managers’ self-serving behaviours. Large institutional investors have the opportunity, resources, and ability to monitor, discipline, and influence managers. Thus, corporate monitoring by institutional investors can force managers to focus more on corporate performance and less on
opportunistic or self-serving behaviours. And, he also points out that in order to secure the value of ultimate beneficiaries (stakeholders) through consistent monitoring of firms’ performance, the institutional investors are required to be active. This is backed up by direct involvement in firms where appropriate. If companies persistently fail to respond to the queries proposed by the stakeholders (e.g. the reliability of firm’s accounting policies made by the management), institutional investors will vote against the board at general meetings.

2.6. Summary

Transaction Cost Economics (TCE) proposed by Williamson in the 1980s focuses on how trading parties choose, from a set of feasible governance structures ex post, the arrangement that provides effective monitoring and control for mitigating opportunistic behaviours occurred during the business transactions at the lowest total costs. The asset specificity involved in the transactions and safeguards provided by different governance modes are the deciding factors of selection of governance structure.

In brief, when specific assets are at stake, bilateral coordination of investment decisions may be desirable, and market modes may give way to hierarchy modes or the fully integrated firms. In comparison with the market modes, although hierarchies offer greater protection for specific investments, they provide managers weaker incentives to maximise profits and normally incur additional bureaucratic costs. Between the two poles of market and hierarchy are a variety of hybrid modes, such as complex contracts and partial ownership agreement.

TCE predicts that the type of contractual framework between the firm and its stakeholders/constituents varies as a function of the attributes to each individual transaction. Given the notion that ownership and control in the large and diffusely owned corporation are not fully coincide, managers enjoy nontrivial degree of discretion. Due to the concentrated ownership structure in the Chinese setting, instead of merely focusing on managerial discretion based on TCE, an investigation of
controlling shareholders’ expropriation may also be interesting and relevant.

In regard to the application of TCE to corporate governance, it predicts the inverse relationship between good corporate governance (higher safeguard intensity) and financing costs: the higher (lower) the safeguard intensity/corporate governance the lower (higher) the external equity financing costs, other things equal. Among the mechanisms of corporate governance, while TCE particularly emphasises the importance of the board, it also mentions several other mechanisms, such as audit committee, external auditor, debt-holders (banks), and institutional investors.
Chapter 3: Theoretical Review: 
Agency Theory 
(AT)
3.1. Introduction

The classical agency problem was firstly proposed by Adolf Berle and Gardiner Means in 1932. They observed that ownership and control in large corporation were often separated and inquired whether this had organisational and public-policy ramifications. Although the agency problem was subject to repeated public-policy scrutiny during the ensuing 35 years, there was very little conceptual headway. More microanalytic and operational approaches to it awaited developments in the 1970s. The remarkable academic work on this issue was conducted by Jensen and Meckling in 1976. Their study on Agency Theory (hereafter referred to as AT) expressly considers with the separation of ownership from control and problems resulting from the conflicts of interest that may emerge in contractual relationships when parties are differently informed or uncertain. More generally, it mainly deals with “how to structure the contractual relation [ex ante] between the principal and the agent to provide appropriate incentives for the agent to make choices which will maximize the principal’s welfare” (Jensen and Meckling, 1976, p.7). State differently, the main objective of AT is to explain how contracting parties design contracts ex ante to minimize the costs associated with the opportunistic behaviours.

As expressed by Jensen and Meckling (1976) and Jensen (1983; 2000), agency costs/problems arise in any situation involving cooperative effort by two or more people even though there is no clear-cut principal-agent relationship. This chapter mainly focuses on the application to corporate governance. In particular, it starts with analysing the factors which can differentiate the magnitude of different agency problems/costs across countries regarding the differences in property right and contract law. And then, it demonstrates the important roles played by the mechanisms of corporate governance in mitigating the agency problems/costs.

In comparison with TCE, AT shares the argument that managers operate under bounded rationality and are profit maximisers, the concern that all complex contracts
are unavoidably incomplete, the problem that managers enjoy nontrivial degree of
discretion, and the assumption that managers are given to opportunism and moral
hazard that may expropriate the benefits of shareholders. However, AT examines
contract predominately from an *ex ante* incentive-alignment point of view while TCE is
more concerned with crafting *ex post* governance structures within which the integrity
of contract is decided. Differences between two theories with respect to their choice unit
of analysis, focal cost concern, risk factor, and contractual focus are largely responsible
for the above incentive/governance difference. The main argument is that although these
two theories concentrate on different perspectives of contracting (*ex-ante* vs. *ex-post*),
they are mainly complementary rather than contradictory or on form can supersede the
other. As proposed by Stiles and Taylor (2001), Williamson (1996) that both helped and
will continue to inform the understanding of economic organization.

3.1. Introduction
3.2. Some Fundamentals of AT
3.3. The Role of Law and Corporate Governance
3.4. A Comparison between AT and TCE
3.5. Summary

The structure of this Chapter is organised as: section 3.1. gives the
introduction. Section 3.2. reviews some fundamentals of AT. Section 3.3.
illustrates the role of law and corporate governance from the perspective of AT.
Section 3.4. makes a comparison between AT and TCE. Section 3.5. summaries the
whole chapter.
3.2. Some Fundamentals of AT

3.2.1. Agency Relationship

At the most fundamental level, AT starts with the definition of an organisation. Specifically, an organisation is referred to as “a legal entity that serves as a nexus of contract for a complex set of explicit and implicit contracts among disparate individuals” (Jensen, 2000, p.137). These contracts or internal “rules of the game” specify the rights of each agent in the organisation, performance criteria on which agents are evaluated, and the payoff functions they face. The contractual structure combines with available production technologies and external legal constraints to determine the cost function for delivering an output within a particular form of organisation (Jensen, 1986). Within such a contractual framework, AT mentions that the organisations, including large open corporations, large professional partnerships, financial mutuals, and nonprofits, have the problems that result from separation of decision management (initiation and implementation) and control (ratification and monitoring) of decisions (Fama and Jensen, 1983b).

Having this initial observation been made, AT then emphasizes on the concept of agency relationship. According to Jensen and Meckling (1976, p.5), an agency relationship can be defined as “a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some services on their behalf which involves delegating some decision making authorities to the agent.” Given that individuals are Resourceful, Evaluative Maximizer recognised from the REMM model demonstrated by Jensen and Meckling (1994), there is reason to believe that the agent may not always act in the best interests of the principal(s). As expressed by Jensen and Meckling (1976, p.5) “if parties to the relationships are utility maximizers, there is a good reason to believe that the agent will not always act in the best interests of the principal(s).” That is, since the agent may at most own a fraction of the total residual claims (e.g. the shares of common stock), he doesn’t bear the total wealth consequences stemming from his decisions regarding the operation of company. Instead, the agent
may enjoy the full amount of any perquisites or appropriations from extraction the principals. As a result, the agent has incentives to act on his own benefits and in detriment to the principals’ interests. It is this misalignment between the interests of principal(s) and agent gives the origin to what are designed in AT as agency costs. Based on the arguments proposed by Jensen and Meckling (1976) in their work of *Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure*, the following section emphasizes on the agency costs.

### 3.2.2. Agency Costs

In order to provide a clear picture of the agency costs, the followings present an analysis from the perspectives of both the principal and the agent. On one side, the principal can limit divergence from his interests by establishing appropriate incentives for the agent and by incurring monitoring mechanisms designed to limit the aberrant activities of the agent. On the other hand, in some situations it will pay the agent to expend resources (bonding costs) in making sure that he will not take certain actions which would harm the principal or to ensure that the principal will be compensated if he does take such actions (Jensen and Meckling, 1976). This view is very similar to the argument of bilateral dependence proposed by TCE. In terms of TCE, the principal engages in monetary specific-assets as they have to pay the agent for the services provided and set up the monitoring mechanisms. The agent, on the other hand, engages in the human specific-assets as they may need the specific knowledge or skills to provide services required by the principal. In such a circumstance, both parties are locked into the specific assets, and the incentives for them to work things out by providing appropriate safeguards rather than prematurely terminating the transactions are apparent.

Moreover, AT further argues that it is generally impossible for the principal or the agent at zero cost to ensure that agent will make optimal decisions from the principal’s viewpoint. In most agency relationships, the principal and agent will incur positive monitoring and bonding costs (non-pecuniary as well as pecuniary), and in addition
there will be some divergence between the agent’s decisions and those decisions which would maximize the welfare of the principal (Jensen, 2004). The dollar equivalent of the reduction in welfare experienced by the principal as a result of this divergence is another cost of agency relationship, and it is referred to as the residual loss.

By putting all together, agency costs are defined as the sum of: (1) the expenditures for providing monitoring mechanisms by the principal; (2) the bonding costs by the agent; and (3) the residual loss. The last is the key feature, since the other two are incurred only in the degree to which they yield cost-effective reductions in the residual loss (Jensen, 2000). In particular, residual loss is the reduction in value of firm that obtains when the principal (or investor) dilutes his ownership. The shift out of profits and into managerial discretion induced by the dilution of ownership is responsible for this loss (Jensen, 2005).

It is worth mentioning the generality of agency costs/problems. As argued by Jensen and Meckling (1976, p.6), “the problem of inducing an agent to behave as if he were maximizing the principal’s welfare is quite general.” Agency costs/problems arise in any situation involving cooperative effort by two or more people even though there is no clear-cut principal-agent relationship. It exists at every level of management in firms, in mutual companies, in cooperatives, in governmental authorities and bureaus, in unions, and so forth. As stated earlier, this study confines its attention to only a small part of this general problem—the analysis of agency costs generated by the contractual arrangements between the owners and management of corporation (or between the controlling shareholders and the minority shareholders) with special attention to corporate governance.

3.2.3. Behaviour Assumptions of Human Actors
The view of AT in behaviour assumptions falls extremely on the concept of incentives or creation of incentives of human actors. Indeed, the issue of incentives goes to the
heart of what it means to maximize or optimize, to the very core of what it means to choose. Rational individuals always choose the option that makes them better off as they set it. This is, by definition, the purposeful action—the attempt to accomplish some end. For instance, an individual takes action A over action B because he expects A to result in better outcomes. In a study named *The nature of man*, Jensen and Meckling (1994) use the Resourceful, Evaluative, Maximizing Model (REMM) to explain the behaviour of human actors and further validate their argument in incentives. Some fundamentals of the REMM model are provided below:

*Postulate I. Every individual cares; he is an evaluator.* This is to argue that (a) individual cares about almost everything: knowledge, independence, the plight of others, the environment, honour, interpersonal relationship, status, wealth, culture, and so forth; (b) individual is always willing to make trade-offs and substitutions. Each individual is always willing to give up some sufficiently small amount of any particular good for some sufficiently large quantity of other goods. Furthermore, valuation is relative in the sense that the value of a unit of any particular good decreases as the individual enjoys more of it relative to other goods; and (c) individual preferences are transitive—that is, if A is preferred to B, and B is preferred to C, then A is preferred to C. This is similar to the notion of transitivity in microeconomics.

*Postulate II. Each individual's wants are unlimited.* This is to say that (a) each individual prefers more goods to less. Goods can be anything from art objects to ethical norms; and (b) the individual can not be satisfied. He always wants more of some things either material goods or non-material goods.

*Postulate III. Each individual is a maximizer.* This means that individual attempts to obtain the highest level of value possible. However, individuals are always constrained in satisfying their wants. Wealth, time, and physical laws of nature are examples of important constraints. Individuals are also constrained by the limits of their knowledge about various goods and opportunities. Thus, as illustrated by Jensen and
Meckling (1994, p.4), “the notion of an opportunity set provides the limit on the level of value attainable by any individual.”

Postulate IV: The individual is resourceful. By this, Jensen and Meckling (1994) mean that individuals are creative. They are able to conceive of changes in their environment, foresee the consequences thereof, and respond by creating new opportunities. Human beings are not only capable of learning about new opportunities, they also engage in resourceful, creative activities that expand their opportunities in various ways. Obviously, this is very similar with the argument of feasible foresight proposed by TCE. Both of them argue that individuals have the capacity to look ahead, to work things out, to learn about new opportunities, and so forth.

With regard to the other two behaviour assumptions of TCE, AT proposes the similar arguments. In respect to bounded rationality proposed by TCE, Jensen (1994, p.1) discusses the universal tendency of people to behave in non-rational. He argues that “…though they are Resourceful, Evaluative Maximizer human, they are imperfect in the sense that have inherited a brain that is biologically structured so as to blind them from perceiving and correcting certain types of errors…” Accordingly, Jensen and Meckling (1994) argue that it is costly, if not impossible, to write contracts representing claims on a firm which clearly delineate the rights of holders for all possible contingencies. Thus, due to bounded rationality, complex contracts are also treated as incomplete in AT. For the assumption of opportunism in TCE, it is argued that AT refers to moral hazard and adverse selection rather than opportunism. But the concerns are the same, whence these are merely terminological differences (Williamson, 1996). The upshot is that both AT and TCE work out of substantially identical behaviour assumptions. The followings provide a brief analysis of moral hazard and adverse selection proposed by AT respectively.
3.2.4. Moral Hazard and Adverse Selection

According to the argument stated by Padilla (2004, p.5), “both the principal and the agent are confronted with uncertainty.” And, this uncertainty may appear in various ways. First of all, the principal is uncertain about actions undertaken by the agent and/or information held by the agent. In the mainstream-economic theories, such principal’s uncertainty is usually referred to as the information asymmetry. There is a state of asymmetric information because the agent holds information that the principal does not (Jensen, 2003). Secondly, uncertainty bears on the outcomes of agent’s actions. An agent is uncertain about the outcomes of his actions. For the principal, this latter phenomenon manifests itself more precisely in the fact that the principal is uncertain about the causality between agent’s actions and the outcomes (Jensen, 1986).

Thus, the issues of uncertainty which exist between the principal and the agent impose certain constraints that complicate the forming of complete contract. In particular, two kinds of problems contribute to such constraints, namely, the problem of moral hazard and adverse selection.

3.2.4.1. Moral Hazard

A moral hazard problem arises when the principal cannot observe the agent’s actions because (1) there is a positive cost of monitoring agent’s actions, and (2) he is not even able to perfectly infer agent’s actions by observing the outcomes because the agent’s actions may not completely determine the outcomes (DeMarzo and Fishman, 2007). Traditionally, the literature argues that this latter phenomenon may result from the intervention of an unexpected-random-exogenous occurrence that has influenced the outcomes, that is to say, it would be the consequence of some kind of windfall or misfortune and not of the agent’s actions (Padilla, 2002; 2004).

Due to the problem of moral hazard, the principal faces two major difficulties in designing the contracts completely. First, he cannot design the contracts based on
observing of the agent’s actions because the costs of monitoring such actions are
generally and relatively prohibitive. Second, the principal can not entirely predicate the
contracts on the outcomes of the agent’s actions. That is because he is uncertain about
the causality between the agent’s actions and the outcome. DeMarzo and Fishman (2007)
argue that even if the principal would predicate the contracts on the observation of
agent’s actions anyway, the agent would not sign the contracts because he is risk-averse. All in all, this is to say that such difficulties prevent the principal from designing the
complete contracts contingent on either the agent’s actions or outcomes of these actions.
It is difficult for the principal to contractually assign the full consequences to actions
taken by the agent (Jensen, 2004). Consequently, the agent may be able to engage in
opportunistically discretionary behaviour, that is to say, undertake actions that may
undermine the utility of the principal (Padilla, 2002). Kotowitz (1987, p.549) defines
moral hazard as “actions of economic agents in maximizing their own utility in the
detriment of others, in situations where they do not bear the full consequences or,
equivalently, do not enjoy the full benefits of their actions due to uncertainty and
incomplete or restricted contracts which prevent the assignment of full damages
(benefits) to the agent responsible.”

Moral hazard problems have been identified in various kinds of contractual
relationships. While it may be interesting to consider several different examples in
different areas, the following provides an example in field of corporate finance. In case
of stock issuing by company A through either Initial Public Offerings or Seasoned
Equity Offerings, individuals or institutional investors may wish to invest in this
company in return for a promise of bonuses and profits. As long as there is a possibility
of default which normally results from the actions of company A, as argued by both
Padilla (2004) and Demarzo and Fishman (2007), there is a moral hazard problem since
the diverse and/or minority shareholders cannot afford the costs of providing a system
to efficiently monitor company A’s actions and perfectly observe the outcomes of
actions taken by Company A as these actions may not completely determine the
outcomes.
3.2.4.2. Adverse Selection

An adverse selection problem appears when the agent possesses information that may be useful to his decision-making, but the principal does not acknowledge that. Consequently, the principal cannot know if the agent has made the most appropriate decision in light of the information possessed by the agent precisely because the principal does not have this information. In more standard terminology, the principal faces up to an asymmetric-information situation (Jensen, 2003). In an adverse selection problem, the costs of monitoring the agent’s actions are not at stake insofar as the principal is not in possession of the information held by the agent. Again, he is not able to know if the agent’s actions are appropriate (Shapiro, 2005).

The origin of adverse selection problem can be traced back in articles of Akerlof (1970) and Wilson (1980). The elementary argument is that “…sellers (agents) can better observe the quality of the products that they sell while buyers (the principals) can only observe the average quality. The consequence is that sellers have an informational advantage over the buyers. The sellers then can sell the low-quality products at the same price as high quality products since buyers cannot tell the difference between a good and a bad product” (Akerlof, 1970, p. 489-490). Furthermore, Wilson (1980) argues that when buyers have heterogeneous preferences, there may be multiple equilibria and, in particular, that the nature of equilibrium varies with the nature of the institution or convention which sets the price. Following the arguments of Akerlof (1970) and Wilson (1980), the literature has produced further developments and analysis on the nature of the market and equilibria in presence of adverse selection. These developments tackle adverse selection with different approaches and/or introducing further refinements.

The following example proceeds from Demarzo and Fishman’s work (2007) in the context of investment dynamics. They illustrate that because of the agency problem, the agent may know more about firm’s current cash flow than investors—for example, the agent may privately observe the current cash flow or privately observe his current effort choice. It is argued that except for the agency problem, there is no issue of asymmetric
information. That is, in each period, the agent and investors have symmetric information regarding all investment opportunities, agent and investor payoffs, and so forth. This rules out setting in which the agent knows more than investors about the future cash flows of the firm, for example, because the agent has private information about future investment opportunities or cash flows or because the agent uses hidden savings to alter future cash flows. Another example is earnings management. Earnings management is defined by Healy and Wahlen (1999) as a means that used by the management to either “mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes” (p.368). Obviously, the problem of adverse selection due to asymmetric information is created between the management and stakeholders in such a circumstance.

3.3. The Role of Law and Corporate Governance

More generally, this section starts with analysing the factors which can differentiate the magnitude of different agency problems/costs across countries according to the differences in property right and contract law. With regard to corporate governance, AT proposes the similar argument with TCE by considering it as a set of mechanisms that can offer investors protections in order to mitigate opportunistic behaviour. And, both theories state that any improvements of corporate governance system can be seen as the efforts to minimise opportunistically discretionary behaviour thus lower agency costs and transaction costs among different groups according to the different risk bearing and asset-specialised transactions respectively (Fama and Jensen, 1983a;b; Williamson, 1984a; 2005b). The corporate governance mechanisms proposed by AT can either be external or internal. While the former includes the determinants of the stock market and market of takeovers, the internal mechanisms consider with both incentive and monitoring activities inside the organisation.
3.3.1. The Role of Law: Property Right and Contract Law

3.3.1.1. Property Right

La Porta et al., (1998) examine how legal systems pertaining to investor protection differ across countries and the consequences of such differences. They gather data concerning the legal systems of 49 countries that have listed companies. For each country, they take note on the package of property right that the law assigns to shareholders and use this information to create an “antidirector-rights index”. The core idea is that the higher property right shareholders have the easier it is for them to exercise their power against opportunistic discretion in the firms. Similarly, for debt-holders a “creditor rights index” is created based on the same principle that rights are only appropriate if they are backed by the law. Moreover, a proxy for the quality of law enforcement of property right for the sample countries is also built. In particular, they classify the countries into two main legal families: the civil-law or French tradition and the common-law or English tradition. While the civil law-tradition “uses statutes and comprehensive codes as a primary means of ordering legal material, and relies heavily on legal scholars to ascertain and formulate its rules”, the common law “is formed by judges who have to resolve specific disputes and precedents from judicial decisions, as opposed by contributions by scholars, shape common law” (La Porta et al., 1998, p.1119). Based on the results, they argue that (a) property laws differ markedly around the world, (b) countries whose legal rules originate in the common law tradition tend to protect the property right of investors considerably more than countries whose laws originate in the civil law, and (c) ownership concentration is extremely high around the world; in an average country, close to half the equity in a publicly traded company is owned by the three largest shareholders. Furthermore, they also indicate that concentration is indeed a response to poor level of protection on investor’s property right, as good accounting standards and shareholder protection measures are associated with a lower concentration of ownership.

By following the similar methods in their 1998’s work, La Porta et al., (1999) focus on ownership concentration and investor protection of 27 wealth nations around
Continuing with their study in this area, La Porta et al., (2000a;b; 2002) propose an argument that managers as well as the controlling shareholders are constrained in their expropriations of wealth and perquisites through effectively protecting the property right. To investigate this argument, they utilise portion of 1998 database and complement with accounting and marketing data from the listed companies across countries. They find that poor shareholder protection is penalised with lower stock market valuation, and that higher cash-flow ownership by controlling shareholder improves such valuation, especially in countries with poor investor protection. And finally, they suggest that shareholder protections on property expropriates are important for stock market developments because where laws are protective for outside inventors and well enforced; investors are willing to finance firms, and financial markets are both broader and more valuable.

3.3.1.2. Contract Law

Another important aspect emphasised by the law and finance literature refers to the characteristics of contract law and the way in which it is applied in dispute resolution. By following La Porta et al.,’s argument of controlling shareholders, Johnson et al., (2000) also focus on the action being taken by the controlling shareholders for their own benefit, at the expense of minority shareholders. And, they call this action as “tunneling”. In regard to contract law, they propose that “countries with legal system based on civil-law emphasise the predictability of the law” (Johnson et al., 2000, p.23).
it means that legal rules are quite strict in the sense that controlling shareholders can get away with expropriation of minority shareholders’ wealth as long as their actions rigorously conform to the letter of law. The following admittedly extreme case taken from Brealey et al., (2007) is pertinent. Specifically, a controlling shareholder realises that a reverse stock split can be used to loot the company’s assets. He therefore proposes that the existing shareholders receive 1 new share in place of every 136,000 shares they currently held. Why does the controlling shareholder pick the number 136,000? Because the two minority shareholders own less than 136,000 shares, therefore they do not have the right to any new share(s). Instead they are simply paid off with the par value of their shares and the controlling shareholder is left owning the entire company. As pointed out by Brealey et al., (2007), since a reverse stock split requires only the approval of a simple controlling shareholder in this case, the proposal is voted through. Moreover, Johnson et al., (2000) state that these elements of legal system have weakened the developments of stock markets in civil law countries both rich and poor.

For the common law system, Johnson et al., (2000) suggest that it can offer better protection to the minority shareholders because it emphasises the notion of fairness. In common law countries, as the law is developed by the judges through decisions of courts and similar tribunals rather than through legislative statues, the duties of loyalty and care are thus important. It can cover the unforeseen situations that do not need to be clearly stated in the original letter of contract law. In such a circumstance, insiders of the companies are more likely to be found liable if they engage in self-dealing or other actions destined to expropriate other shareholders’ benefits. In contrast to the legal system of civil law countries, these characteristics in the common law countries can be used to promote the growth and stability of financial markets.

3.3.2. Corporate Governance in Perspective of AT

Corporate governance has been categorised as a set of mechanisms protecting investors from opportunistic behaviour (Fama and Jensen, 1983a). These mechanisms can either
be internal or external. As proposed by Fama and Jensen (1983a; b), it is the fact that the unrestricted nature of common stock residual claims allows special market (external mechanisms) and organisational mechanisms (internal mechanisms) for controlling the agency problems of specialised risk bearing. By following their argument, this section is divided into two subsections—one section focuses on the external mechanisms of corporate governance while the other considers the internal mechanisms.

### 3.3.2.1. The External Corporate Governance Mechanisms -- Stock Market and Market for Takeovers

According to Jensen (2004), the unrestricted alienability of the residual claims of open corporations gives rise to an external monitoring device unique to these organisations—a stock market that specialises in pricing common stocks and transferring them at low cost. Stock prices are visible signals that summarise the implications of internal decisions for current and future net cash flows. This external monitoring exerts pressure to orient a corporation’s decisions process towards the interests of residual claimants.

For the takeover market, Jensen (2004) argues that external monitoring from a takeover market is also unique to the open corporation and is attributable to the unrestricted nature of its residual claims. Because the residual claims are freely alienable and separable from the roles in the decision process, “attacking managers can [thus] circumvent existing managers and the current board to gain control of the decision process” (Jensen, 2004, p.556). This is accomplished by a director offer to purchase stock (a tender offer) or by an appeal for stockholder votes for directors (a proxy fight).

In China, due to the unique cultural and institutional background, Chinese listed companies are regulated by a uniform legal system, and most of them are dominated by one controlling shareholder which is the State (Bai et al., 2004). It is argued that the external controlling mechanisms, such as an effective stock market and market for
merger and acquisitions (M&A) may play very limited role in constraining opportunistically discretionary behaviour comparing with the Western countries. For instance, On Kit Tam (1999, p.3) argues that “…because of the special institutional structure of Chinese listed companies [State domination in most cases], the external stock market for corporate control is effectively limited if not eliminated.” The market for M&A has been relatively quiet in China as well. Statistically, by the end of 2006, the total M&A transaction volume has increased to 2-3% of the China’s GDP from only 1% in 1997. Liu and Lu (2007, p890) state that “…an active takeover market does not exist in China… [and] it still lags behind developed market and most Asian peers.” By putting all together, while the external governance mechanisms may pronounce to be efficient in mitigating the opportunistic behaviour in the Western countries, it is not the case in China. How can agency costs be limited or controlled if these external forces are less pronounced? This calls for the internal controlling forces, specifically, the incentive and monitoring activities.

3.3.2.2. The Internal Corporate Governance Mechanisms

a. The Incentive Activities
According to Jensen (2003; 2004; 2005), the internal controlling forces include both incentive and monitoring activities. The former mainly deals with the compensation strategies for the executives. The components of executive compensation can be grouped into three categories: (1) compensation that does not depend on firm performance (salary, pensions, and insurance); (2) compensation that depends on market measures of firm performance (restricted and phantom stock, stock options, and stock appreciation rights); and (3) compensation that depends on accounting measures of performance (bonus, performance units, and performance shares) (Jensen and Murphy, 1990; 2004). Based on the arguments stated by Jensen (2003), the section below analyses and evaluates each of these three categories in relation to their power in mitigating agency problems/costs.

Firstly, compensation in form of salary payments fixed at the beginning of the
period controls the major sources of conflict, primarily through future adjustments in salary. This will be most effective in controlling younger managers where the present value of future salary subject to renegotiation is large. However, for managers closer to retirement, the control afforded by adjustment in future salary is less; in the extreme case, for managers less than a year from planned retirement, future salary changes provide no control of the effort problem (Jensen, 2003).

For the market-based compensation provisions, Jensen (2003) argues that they are well suited to control the effort and horizon problems, since the market value of stock reflects present value of the entire future stream of expected cash flows. For instance, because the expected payoff to stock options increases with stock variance, options provide manager with incentives to invest in projects that increase the riskiness of firm’s cash flows. Options thus help to control manager’s incentives to take too little risk. Stock options also help control the underleverage problem. Higher leverage becomes more attractive to manager since it increases the variance of equity and thus the value of options. However, as expressed by Jensen (2003, p.146), “unless options are adjusted for dividend paid, they reinforce the overretention incentive associated with fixed claims.” In the situation of overretention, it is argued that managers compensated with fixed claims on the corporation have incentives to retain funds within the firm to increase the coverage on their fixed claims. Thus, if stock options and dividend paid policy is uncorrelated, investors may never get dividends paid.

And finally, Jensen (2003) argues that the accounting-based performance measures will be relatively more important in compensating middle managers than market-based measures of performance, since these measures allow disaggregation of the firm’s total performance among divisions. In particular, bonus plans explicitly tie managers’ compensation to an accounting measure (e.g., net profit, ROE, EPS) of the change in value of the firm. This form of tie to performance reduces the costs resulting from conflicts over the effort and horizon problems between the managers and the shareholders. In addition, since bonus plans are tied to the previous year’s performance,
they can also motivate near-retirement managers to care about performance in their last years.

b. The Monitoring Activities

For the monitoring activities, Jensen (2004; 2005) mainly emphasizes on the role played by the board. In particular, it is argued that monitoring control force in open corporation is delegated by residual claimants to the board. Residual claimants generally retain approval rights (by vote) on such matters as board membership, auditor choice, mergers and new stock issues. Other management and control functions are delegated by the residual claimants to the boards. The board then delegates most decision management functions and many decision control functions to the relevant sub-committees, but it retains ultimate control over them, including the rights to ratify and monitor major policy initiatives and to hire, fire, and set the compensation of top level decisions managers.

Moreover, Jensen (2004) argues that in order to be efficient, the board is to be composed of both internal managers and outside/non-executive directors. On one hand, it is natural to believe that the internal managers are the most influential members since they have valuable specific information, for example the information about the daily operations, the capital structure of a specific investment, the corporate law, the relevant technology and so forth. Such information can act as an important support to top managers in dealing with special decision problems. However, as expressed by Jensen (2004, p.886), “the board is not an effective device for decision control unless it limits the decision discretion of individual top managers…this signals the absence of separation of decision management and decision control, and, in our theory, the organisation suffers in the competition for survival.” In order to handle this, corporate boards should also include outside/non-executive members, that is, members who are not internal managers, and they should hold a majority of seats. The non-executive board members act as arbiters in disagreements among internal managers and carry out tasks that involve serious agency problems between internal managers and residual
claimants, for instance, setting executive compensation or searching for replacements for top managers (e.g., Fama and Jensen, 1983b; Jensen, 2004, 2005; Shapiro, 2005). Moreover, Fama and Jensen (1983b) states that non-executive directors have incentives to develop reputations as experts in decision control. They use their directorships to signal to internal and external markets for decision agents that (1) they are decision experts, (2) they understand the importance of diffuse and separation decision control, and (3) they can work with such decision control systems.

Besides, other mechanisms of corporate governance are also mentioned by Jensen (2004; 2005). He argues that monitoring activities become specialised to those institutions and individuals who possess comparative advantages in these activities. For institutional investors and financial institutions, he mentions the importance of being active to minimise agency costs. “...I mean an [active] investor who actually monitors management, sits on boards, is sometimes involved in dismissing management, is often intimately involved in the strategic direction of the company, and on occasion even manages...and as a response to problems caused by the lack of effective monitoring of corporate managers, [continuing] developments in financial institutions is crucial” (Jensen, 2000, p.64-67). He also points out the importance of auditing with special efforts on audit committee and external auditors. In particular, an audit committee should be an outstanding function in monitoring activities. And, in order to be efficient, it has to be entirely composed of non-executive directors. And, in principle, external auditors could act as a checking point to make sure the financial information provided to the public is comprehensive, punctual, and accurate.

3.4. A Comparison between AT and TCE

Having the fundamentals and applications of AT in the field of law and corporate governance been briefly reviewed in previous sections, this section aims to provide a comparison between AT and TCE. AT shares many similarities with TCE. For instance, both share the argument that managers operate under bounded rationality and are profit
maximisers, the concern that all complex contracts are unavoidably incomplete, the problem that managers enjoy nontrivial degree of discretion, and the assumption that managers are given to opportunism and moral hazard that may expropriate the benefits of shareholders. Stiles and Taylor (2001, p.33) point out that "both theories [AT and TCE] work on nearly symmetric assumptions... [and] both regard the board of directors as an instrument of control." However, there are still differences between these two theories. The most significant one is that AT examines contract predominately from an ex ante incentive-alignment point of view while TCE is more concerned with crafting ex post governance structures within which the integrity of contract is decided (Williamson, 1996). Differences between AT and TCE with respect to their choice unit of analysis, focal cost concern, risk factor, and contractual focus are largely responsible for the above incentive/governance differences. These categories of differences are illustrated in Table 3.1. and relevant explanations are provided in the following analysis.

<table>
<thead>
<tr>
<th>Table 3.1.: Comparison between AT and TCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit of Analysis</strong></td>
</tr>
<tr>
<td>Delegation</td>
</tr>
<tr>
<td>Maladaptation</td>
</tr>
<tr>
<td><strong>Risk Factor</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Contractual focus</strong></td>
</tr>
</tbody>
</table>

Recall from the previous discussion, AT is based on the dyadic contractual relationship between one party, the principal, who delegates certain tasks to another party, the agent. As proposed by Beccerra and Gupta (1999), AT applies to one dyadic vertical relationship from the perspective of one of the parties: the principal. In contrast, the basic unit of analysis is generally referred to as the transaction in TCE. For instance, Williamson (1985) argues that not only does TCE agree that the transaction is the basic unit of analysis, but it views governance as an economizing response to Commons triple
Rather than focusing on the *ex ante* costs where residual loss originated from the divergence of interests between the principal and the agent is the key feature in AT, TCE emphasizes *ex post* costs where maladaptation costs due to misalignments as a result of gaps, errors, omissions, and unanticipated disturbances during contract execution period are the key features. Such costs occur only in an inter-temporal, incomplete-contracting context. Reducing these costs through judicious choice of governance structure (market, hybrid, and hierarchy), rather than merely realigning incentives and pricing them out, is the distinctive TCE orientation.

For the risk factor, AT argues that the principal bears the risk of his delegation to the agent of certain tasks due to the separation of ownership and control. In particular, the principal will carry the benefits and costs of the delegated tasks which entail risks inherent to the task resulting from environmental uncertainty. And, the principal also suffers the risk of the agent not behaving in the best interests of the principal (Jensen, 2003). Both of these types of risk arise from the attitudinal and informational context in which the agency relationship takes place (Beccerra and Gupta, 1999). With regard to asset specificity, TCE defines it as to the degree to which an asset can be redeployed to alternative uses/or by alternative users without sacrifice of productive value. Furthermore, it argues that where asset specificity is great, both buyer and seller will encompass higher risk and the corresponding losses if the contract prematurely terminated (for the reason of bilateral dependency through Fundamental Transformation). Accordingly, both of them are willing to make special efforts to design exchange that has good continuity properties.

For the contractual focus, AT aims to design a contract *ex ante* which can efficiently align the different interests between the principal and the agent in order to minimize agency costs to the principal of the agency relationship. TCE, on the other hand, focuses on how to align transactions, which differ in their attributes, with
governance structures, which differ in their costs and competencies *ex post*, in a discriminating, mainly transaction cost economizing way.

In summary, it is argued that although these two theories concentrate on different perspectives of contracting (*ex ante* vs. *ex post*), they are mainly complementary rather than contradictory or one form can supersede the other. As proposed by Stiles and Taylor (2001), Williamson (1996) that both helped and will continue to inform the understanding of economic organisation.

### 3.5. Summary

In general, the Agency Theory (or AT) developed by Jensen and Meckling (1976) mainly focuses on how to structure the contractual relation between the principal and the agent to provide appropriate incentives and monitoring mechanisms *ex ante* to minimise the agency costs so that the agent could maximize the principal’s welfare.

With regard to the fundamentals of AT, the agency relationship takes place when the principal engages the agent to perform some services on his/her behalf which involves delegating some decision making authorities to the agent. The corresponding agency costs may include the monitoring expenditures, bonding costs, and residual loss. Based on the analysis of behaviour assumptions of human actors through the Resourceful, Evaluative, Maximizing Model (or REMM), there are two specific problems in respect to agency costs, namely the moral hazard and adverse selection.

Differences in both the property right and contract law may contribute to the magnitude of different agency problems/costs across countries. Having the legal background been set, the mechanisms of corporate governance that protect investors from opportunistic behaviours include two major categories: the external and internal mechanisms. While the external mechanisms include the stock market and the market of takeovers, the internal system mainly deals with the executive compensation, board,
institutional investors, audit committee, and external audit.

And finally, this chapter makes a comparison between AT and TCE. The objective is to find out the similarities as well as the differences between these two major theories reviewed. By analysing four major factors (unit of analysis, focal cost concern, risk factor, and contractual focus), it is argued that while AT and TCE share many similarities, the most significant difference is that AT examines contract predominately from an *ex ante* incentive-alignment or monitoring point of view while TCE is more concerned with crafting *ex post* governance structures within which the integrity of contract is decided. By putting all together, these two theories should be viewed as complementary rather than contradictory or one form can supersede the other.
Chapter 4: Corporate Governance
(Codes, Guidelines and Rules)
4.1. Introduction

During the last decade, each year has seen introduction, or revision, of a corporate governance code in a number of countries. These countries have encompassed a variety of legal backgrounds (for example, common law in the U.K., civil law in France), cultural and political contexts (such as democracy in Australia, socialism in China), business forms (for instance, public corporations in the U.S., family-owned firms in Singapore), and share ownership (such as institutional investor-dominated in the U.K. and U.S., State ownership in China). In each of these countries, the introduction of corporate governance codes has generally been motivated by a desire for more transparency and accountability, and a desire to increase investor confidence of both potential and existing investors in the stock markets. In addition, the developments of the codes have often been driven by financial scandals, corporate collapses, or similar crises (Mallin, 2007). For example, the Cadbury Report (U.K.) was published in 1992 following various financial scandals or collapses, such as Coloroll, Polly Peck, and Maxwell. Similarly, after the accounting scandals at Enron, Xerox, and WorldCom, Sarbanes-Oxley Act was taken into force in 2002.

The corporate governance codes/guidelines have been issued by a variety of bodies arrange from committees, appointed by government departments and usually include prominent respected figures from business and industry, representatives from the investment community, professional bodies, and academics, through to stock exchange bodies, various investor representative groups, such as those representing directors or company secretaries. With regard to the compliance with the codes/guidelines, it is generally based on a voluntary disclosure basis, whilst some codes, such as the U.K.’s Combined Code (2006), are on a ‘comply or explain basis’, that is, either a company has to comply fully with the code and state it has done so, or it explains why it has not (Mallin, 2007; Monks and Minow, 2008).

Based on the OECD principles of corporate governance (2004), the Code of Corporate Governance for Listed Companies in China (hereafter referred to as the Code) that intends to build the integrity of financial statements through improving corporate governance system and bring forward the healthy development of the stock markets in China was published by the China Securities Regulatory Commission (CSRC) in
January 2002. The Code which is the first official document regarding corporate governance in the mainland China serves as the yardstick by which a company is able to measure its corporate governance. There are seven chapters included in the Code. In this chapter, other than briefly reviewing each chapter contained in the Code, an in-depth evaluation of the current corporate governance system in China will also be provided.

Before moving to explore the China’s 2002 Code and its corporate governance system, this chapter starts with defining what it means by the term, corporate governance. Next, it analyses the different structures of the boards, in particular the one-tier board model and the two-tier board model. For the former model, both executive and non-executive directors operate together in one organisational layer. The two-tier board model distinguishes from it by including an additional organisational layer—the supervisory board which is designed to separate executive function of the board from its monitoring function.

<table>
<thead>
<tr>
<th>4.1. Introduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2. Defining Corporate Governance</td>
</tr>
<tr>
<td>4.3. Two Distinctive Board Structures— one-tier or two tier board model</td>
</tr>
<tr>
<td>4.4. Corporate Governance in China</td>
</tr>
<tr>
<td>4.5. An Evaluation of China’s Corporate Governance System</td>
</tr>
<tr>
<td>4.6. Summary</td>
</tr>
</tbody>
</table>

Section 4.1. provides an introduction of the chapter; based on the recent literature, section 4.2. defines corporate governance; section 4.3. distinguishes different models of board structures; section 4.4. analyses corporate governance in China with emphasis on the China’s 2002 Code; section 4.5. provides an in-depth evaluation of the current corporate governance system in China; and finally, section 4.6. summaries the whole chapter.
4.2. Defining Corporate Governance

While the fundamentals of corporate governance have been reviewed and analysed in relation to TCE and AT in the last two chapters respectively, a clear and condense definition of corporate governance is still required to be identified. The followings review the concept of corporate governance from different perspectives based on the literature.

Gillan and Starks (1998, p.5) define corporate governance as “the system of laws, rules, and factors that control operations at a company.” A firm’s governance, they say, comprises the set of structures that provide boundaries for the firm’s operations. This set of structures includes participants in corporate activities, such as managers, workers, and suppliers of capital; the returns to those participants; and the constraints under which they operate. Shleifer and Vishny (1997) define corporate governance in terms of the economic interests of participants. In particular, they refer to corporate governance as dealing “…with ways in which suppliers of finance to corporations assure themselves of getting a return on their investment” (Shleifer and Vishny, 1997, p.13). Similarly, Zingales (1998, p.4) defines corporate governance as “…the complex set of constraints that shape the ex-post bargaining over the quasi-rents generated by the firm.” More recently, Denis and McConnell (2003, p.1-2) define corporate governance as “…the set of mechanisms—both institutional and market-based—that induce the self-interested controllers of a company (those that make decisions regarding how the company will be operated) to make decisions that maximize the value of the company to its owners (the suppliers of capital).” By putting all together, in a much condensed terminology, corporate governance can be described as the set of mechanisms which are composed of laws, rules and factors that control the operations of a company for the purpose of maximising its value to the suppliers of capital.

There have been specific reasons for the increase in general interests in corporate governance. Charkham (2005, p.6-7) identifies three: (1) the liberalisation of capital flows and increased opportunities for cross-boarder investment. He argues that “…governance was recognised as an important medium- and longer-term issue [by investors everywhere]”; “it is economically advantageous, politically stabilizing, and ethically desirable to secure improvements in governance and the rule of law…”[and] the
increased possibilities for cross-border investment accentuate the importance of transparency and the trustworthiness of accounts” (Charkham, 2005, p.6); (2) the second development is the shift to market economy which introduces the whole concept of corporate governance; and (3) the third factor is globalisation, a term can mean many things, from the increased propensity of major companies to trade right around the world. At one time major companies transferred manufacturing plants aboard to capture the benefits of well-trained and low-cost workforces, but now services can be offshore too—U.K. call centres based in India for example. Furthermore, as proposed by Zattoni and Cuomo (2008, p.1), “…the forces of globalisation create competition among governance systems, and increase the anxiety of the political elite concerning the effectiveness of the national governance model.”

Furthermore, Gillan and Starks (2003, p.5) argues that “as the corporate environment has changes, so too have corporate governance practices. Governance changes, although differing by country, have been particularly common in economies where the banking, capital markets, and legal systems have undergone dramatic changes.” Indeed, it can be recognised that changes in corporate governance are likely to arise as endogenous responses to environmental factors, and where the Code of corporate governance is definitely the one. Before analysing the first Code regarding corporate governance in China’s companies implemented in 2002, two distinctive models of the board structures need to be clearly demonstrated.

### 4.3. Two Distinctive Board Structures

---One-tier or Two-tier Board Model

As illustrated by Maassen (2002), regional and international developments have resulted in two leading approaches to the organisation of corporate boards: the Anglo-Saxon one-tier board model and the continental European two-tier board model. In the following section, these two models will be demonstrated correspondingly. There is a continuing debate about the effectiveness of these two models. While some scholars may favour the one-tier board model, others may be against it and consent the effectiveness of the two-tier board model. But, a detailed assessment of the effectiveness of the two models is beyond the scope of this thesis."
In general, Anglo-Saxon countries such as the US, UK, and Canada have adopted variants of one-tier board model. In this model, executive and non-executive directors operate together in one organisation layer, the so-called the one-tier board. Some one-tier boards are dominated by a majority of executive directors while others are composed of a majority of non-executive directors. In addition, while some one-tier boards can have a leadership structure that separates the CEO from the Chair position, others operate under a structure that combines the role of the CEO with that of the Chairman. In literature, the latter is referred to as CEO-duality. One-tier boards also make often use of board committees such as audit, remuneration, nomination committee, and so forth (Stiles and Taylor, 2001).

On the other hand, the continental European countries such as Germany, Finland and the Netherlands have adopted variants of two-tier board model. In this model, an additional organisational layer has been designed to separate executive function of the board from its monitoring function. The supervisory board (the upper layer) is entirely composed of non-executive supervisory directors who may represent labour, the government, institutional investors, and so forth. The management board or the lower layer is usually composed of executive managing directors (Massen, 2002).

Mallin (2007) indicates the key distinctions between the supervisory board and management board which are demonstrated in Table 4.1. The supervisory board (with the head called the Chair) is elected by shareholders and employees and it in turn appoints the management board (leading by the CEO). The supervisory board has a control function whereas the management board manages the business. It is generally not accepted by corporation laws that corporate statutes foresee in the possibility that directors combine the CEO (the head of management board) with the Chairman roles (the head of the supervisory board) in two-tier boards. Because the CEO has no seat in the supervisory board, its board leadership structure is formally independent from the executive function of the board. This is particularly the case in two-tier boards in the Netherlands and Germany. In variants of two-tier board models in these countries, executive managing directors are not entitled to have a position in the supervisory board of the corporation (Monks and Minow, 2008).
<table>
<thead>
<tr>
<th>Supervisory Board: the Chair</th>
<th>Management Board: the CEO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members (shareholder representatives) are elected by the shareholders in general meeting; members (employee representatives) are nominated by the employees</td>
<td>Members are appointed by the supervisory board</td>
</tr>
<tr>
<td>Controls the direction of the business</td>
<td>Manages the business</td>
</tr>
<tr>
<td>Oversees the provision of information and that appropriate systems have been put in place by the management board</td>
<td>Provides various information and reports; and installation of appropriate systems, e.g. a risk management system</td>
</tr>
</tbody>
</table>


In the Chinese setting, the board structure seems to be the two-tier board structure which is similar to that used in the Central-European countries (e.g., Germany, the Netherlands) (Dahya *et al.*, 2003; Firth *et al.*, 2010). A China's listed company is required to have both the supervisory board and the management board. While the former is in charge with overseeing the firm, the latter focuses on the daily operations of the firm. In addition, the management board needs to include the independent non-executives other than the executives with the monitoring aim. In order to facilitate the functionality of the management board, the sub-committees are recommended to be established.

### 4.4. Corporate Governance in China

Having the different structures of the board models been analysed, this section will draw attention to the *Code of Corporate Governance for Listed Companies in China* formulated by the CSRC in January 2002 with the aim to build the integrity of financial statements through improving corporate governance system and bring forward the healthy development of the stock markets. It is the first official document regarding corporate governance practices implemented in mainland China. Prior to 2002, there was no rule regulating corporate governance matters, except for the Company Law, which was promulgated in 1993 originally and further revised in 2005. Before moving to explore the China’s 2002 Code, the following section provides a synopsis of China’s economy and stock markets.
4.4.1. An Overview of China's Economy and Stock Market

China is rapidly developing into the largest industrial economy in the world. The country has sustained the strongest and most consistent economic performance of the region since the 1980s with an annual average economic growth rate in excess of 8% (Clarke, 2007). Statistically, China’s exports reached US$1.22 trillion worth of goods in 2007; it was 25.7% more than that in the previous year (Amiti and Freund, 2007). Amiti and Freund (2007) argue that the sophisticated exports, diversified products, and the growth in varieties are the key factors for China to achieve this high export growth. China’s export dynamism is revealed in a sharp move into the advanced technology products (e.g., electronics, machinery). For instance, in 2007, China’s export volume of advanced technology products (ATP) accumulated to $347.8 billion, more than seven times that of 2001. The percentage of ATP exports of all products increased from 17.5% in 2001 to 28.6% in 2007, and ATPs made by foreign-invested enterprises accounted for nearly 90% of all ATP exports (Amiti and Freund, 2007). For the Foreign Director Investment (FDI), since the 1990s, China has received great amounts of FDIs. Statistically, in 2007, China received a record of $74.8 billion, rose 13.6% from the previous year (Clarke, 2007).

For the stock market, it is organised by the government as a vehicle for its State-owned Enterprises (SoEs) to obtain capital and improve operating performance. Since the primary objective of developing equity market is to help SoEs relaxing external financing constraints, regulations introduced have been asymmetrically in favour of SoEs or the companies with close ties to the government (Ding et al., 2007; Liu and Lu, 2007). In the early 1990s, the Shanghai (SHSE) and Shenzhen (SZSE) Stock Exchange were launched, with the aim of raising finance from domestic and foreign investors to provide listed companies with new funds. By the end of 2009, with a stock-market capitalization of US$3.21 trillion generated by over 1,500 listed companies on both stock exchanges, China’s stock market had overtaken Japan as the world’s second-largest stock market by value (after the U.S.) for the first time since its birth (Bloomberg, 2009). Chinese companies, especially the SoEs, have benefited greatly from rapid equity issuance growth and public enthusiasm for the equity market due to a lack of other attractive investment vehicles (Chen et al., 2005). Tradable shares are mainly held by individuals (retail investors), while the shares held by institutional investors (e.g., mutual funds, pension funds) are relatively small. For individuals, buying equity
stocks is the only feasible investment opportunity outside of low yielding bank deposits. There is very limited bond market and low-convertibility of the Chinese currency, the renminbi (RMB), makes investing in foreign securities impossible for most people (Chen et al., 2005).

Chinese listed company shares are classified as A-, B-, H-, N-, and S-shares. A-shares are issued by domestic companies and available to domestic investors only and traded in the RMB currency on the SHSE and SZSE. B-shares are issued by domestic companies registered in the mainland, but traded in hard currency by foreign investors, including overseas Chinese institutions in Hong Kong and Taiwan on the SHSE and SZSE. Individual domestic inventors have been allowed to trade B-shares since 2001. H-, N-, and S- shares are issued by domestic companies and traded on the Hong Kong, New York, and Singapore Stock Exchange correspondingly (Clarke, 2007). Shares of listed companies are classified further into (in terms of ownership) State shares, legal person shares, and individual shares, with each type accounting for around one-third of all shares. State shares are held by central and local governments, represented by State asset management or investment companies. State shares can also be held by the parent of the listed companies, typically a SOE. These State shares are not tradable, yet they normally form the largest shareholding in the firm.

At beginning of 2005, a program to convert non-tradable shares into A-shares carried out―‘split share reform’. On 24 August 2005, the Guidelines on the Reform on Non-tradable Shares of State-controlled Companies was released, which specifies the guidelines on the proportion of State-owned shares in State-controlled companies in line with the national economic restructuring and layout, as well as the need to facilitate a sound development of the capital markets (CSRC, 2005). According to the guidelines, 1,400 listed companies can gradually convert their non-tradable shares (Cooper, 2008). However, the chief administrator of the CSRC, Fulín Shang said that the reform on non-tradable shares introduced aims at eliminating trading right difference between non-tradable and tradable shares, not floating all non-tradable shares at the stock market. “Making all shares tradable doesn’t mean selling out all shares”[10], said Shang Fulín. In addition, he clarifies that after the non-tradable shares become tradable, whether they come into circulation or not depends not only on the shareholders’ strategic choice, but also on relevant restrictions. According to the 2005 Guidelines, the restrictions are: (1) it
depends on the entire strategic layout of State-owned sectors. After the reform is completed, State-owned shares can be cashed in only upon the approval of the State-owned assets authorities; (2) it depends on the intention of controlling shareholders. Even though there are no restrictions in the laws, the controlling shareholders will hold a substantial amount of shares in the long run in order to control the company (CSRC, 2005). As argued by Clarke, (2007), Cooper, (2008), the State remains the controlling shareholder in most listed enterprises, revealing the limitations of China’s efforts to diversify ownership. As the result, this program may only have minor impacts on the current ownership structure of China’s listed companies, thus the results carried out by the current thesis. The following Table 4.2. provides a summary of the current share classes in China.

Table 4.2.: Share classes in China

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-shares</td>
<td>Domestically listed shares, denominated in local currency. Foreign investors may not own these shares.</td>
</tr>
<tr>
<td>B-shares</td>
<td>Domestically listed shares of China-incorporated companies, denominated in US$ in Shanghai and HK$ in Shenzhen. Served for foreign investors (initially) and domestic institutions and individuals (since 2001), these shares now make up the majority of trading.</td>
</tr>
<tr>
<td>H-, N-, and S-shares</td>
<td>Shares of mainland registered companies listed on the Hong Kong, New York, and Singapore Stock Exchange correspondingly.</td>
</tr>
<tr>
<td>Legal Person shares</td>
<td>Roughly a quarter of every listed firm’s equity is transferred to domestic institutions (joint stock companies, NBFIs (Non Banking Financial Institutions), and SoEs with at least one non-State owner) and cannot be traded.</td>
</tr>
<tr>
<td>State shares</td>
<td>More than one-third of equity is transferred to the State (central and local governments, as well as SoEs, which are wholly owned by the State), the ultimate owners being the State Council. Legal person and State shares are not tradable, though they can be transferred with permission from the CSRC. The non-tradable feature of legal person and State shares allows the government to claim that share issuance is not akin to privatisation.</td>
</tr>
<tr>
<td>Employee shares</td>
<td>Shares are offered to workers and managers of a listed company (usually at a substantial discount). On average, these account for less than 5% of the total shares. In addition, not every company issues employee shares.</td>
</tr>
</tbody>
</table>

4.4.2. The Code of Corporate Governance in China (2002)

This subsection starts with providing a summary of key characteristics influencing the development of Chinese corporate governance. In particular, this is composed of the categories of business form, ownership structure, legal system, board structure, and the important aspect. Each of them is illustrated in Table 4.3.

Table 4.3.: Summary of key characteristics influencing Chinese corporate governance

<table>
<thead>
<tr>
<th>Feature</th>
<th>Key characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Business Form</td>
<td>State-owned Enterprises, joint stock companies</td>
</tr>
<tr>
<td>Predominant ownership structure</td>
<td>State</td>
</tr>
<tr>
<td>Legal system</td>
<td>Civil law</td>
</tr>
<tr>
<td>Board Structure</td>
<td>Two-tier board model</td>
</tr>
<tr>
<td>Important Aspect</td>
<td>Influence of Communist Party</td>
</tr>
</tbody>
</table>


Furthermore, corporate governance developments also involve a number of regulatory bodies in China, including the China Securities Regulatory Commission (CSRC), the Ministry of Finance (MOF), the State Economic and Trade Commission (SETC), and People’s Bank of China (PBOC) which is essentially the central bank of China.

In 2001, a series of corporate scandals came to light for violating provisions related to financial reporting and management in China. The followings briefly present several highest-profile cases:

- **Guangxia (Yinchuan) Industry Co. Ltd.**

  Guangxia, a listed pharmaceutical company, falsified profits for several years to present itself as a fast-growing entity with sophisticated, state-of-the-art technologies. The company fabricated sales contracts and export figures and exaggerated its financial statements, reportedly inflating net profit by RMB745 million (US$90 million). The CSRC initiated an extensive probe of the company in August 2001, and the MOF eventually stripped the accounting license of its longstanding auditor (TianQin audit company) (Mallin, 2007).
**Lantian Co. Ltd.**

Lantian was listed on the Shanghai stock exchange in 1996 and hailed as the first publicly listed Chinese ecological and agricultural company. Immediately after its IPOs, however, investors grew suspicious of the company’s soaring share price and incredibly strong profit growth because its business lines, lake fisheries and lotus processing, were unlikely to generate profits at that level. In specific, the company reported RMB1.84 billion (US$222 million) in sales income but only RMB8.5 million (US$1 million) in account receivable—an impossible gap for a legitimate company (Mallin, 2007). Despite the company declared that it had settled most of its transactions with cash, financial analysts estimated that it fabricated 2000 net profits up to RMB500 million (US$60 million) (Braendle et al., 2005). In October 2001, the CSRC launched an investigation of the company’s connected transactions, suspicious accounts receivables, and inflated earnings. In November 2001, banks stopped extending new loans to Lantian and the company’s major creditors, Citic Industrial Bank and China Minsheng Banking Corp., filed lawsuits against the company. In October 2004, the CEO of Lantian (Zhaoyu Huo) was sentenced to prison for two years. In July 2006, Lantian and its external auditor (Hualun audit company) were put in charge of RMB6.2 million ($0.7 million) (Mallin, 2007).

**Sanju Pharmaceutical Co. Ltd.**

The CSRC uncovered Sanjiu’s troubles in the mid-2001. The listed company, which was reportedly China’s largest pharmaceutical group, had misappropriated RMB2.5 billion (US$302 million) on behalf of a few major shareholders and related business partners without consent of other shareholders or the public. These diversions amounted to 96% of the company’s net assets, posing considerable threat to company’s operations. The CSRC reprimanded the senior principals, headed by former military serviceman Xinxian Zhao and fined the company RMB150 million (US$18.1 million). Major shareholders and related business partners had repaid RMB349 million (US$42.2 million) to Sanjiu by March 2002 (Shi and Weisert, 2002).

These corporate scandals have helped fuel the drive for corporate governance reforms in China. Specifically, in January 2002, CRSC issued the *Code of Corporate Governance for Listed Companies in China* (hereinafter the *Code*) which is broadly based on the OECD principles of corporate governance (2004). The main objectives of
the Code are to address “the protection of investors’ interests and rights, the essential behaviour rules and moral standards for directors, supervisors, and managers, and other senior management members of listed companies, and the accuracy of financial information provided to the investors” (Code, p.1.). The Code is seen as the yardstick by which a company is able to measure its corporate governance, and if there are deficiencies in the corporate governance of a company, then the securities supervision and regulatory authorities may instruct the company to correct its corporate governance to comply with the Code (Preamble of Code, 2002). The Code contains seven main chapters dealing with: shareholders and shareholders’ meetings; listed company and its controlling shareholders; directors and the board of directors supervisors and the supervisory board; performance assessments and incentive and disciplinary systems; stakeholders; and information disclosure and transparency.

i. Shareholders and Shareholders’ Meetings

The Code states “the corporate governance structure of a company shall ensure fair treatment toward all shareholders, especially minority shareholders. All shareholders are to enjoy equal rights and to bear the corresponding duties based on the shares they hold” (Section 1.2., p.1). Shareholders should have equal rights and, if their rights are infringed, then they should redress through legal action. For instance, Section 1.3., (p.2) of the Code expresses that “…in the event the resolutions of shareholders’ meetings or the resolutions of the board of directors are in breach of laws and administrative regulations or infringe on shareholders’ legal interests and rights, the shareholders shall have the right to initiate litigation to stop such breach or infringement…shareholders shall have the right to request the company to sue for such compensation in accordance with law.”

Companies should establish communications channels with shareholders and shareholders should be informed of significant matters that affect the company (Section 2.5.). Shareholders should be notified in good time of a shareholders’ meeting and agenda items should be given an appropriate amount of time in the meeting. Electronic communications may be used to help increase the number of shareholders participating. Shareholders may vote in person or may appoint a proxy to vote on their behalf (Section 2.7., 2.8., and 2.10.). The role of institutional investors is specifically mentioned in the appointment of directors, remuneration, and other major decisions (Section 2.11.). In
related party transactions, these transactions should, in principle, be at market value (Section 2.12, 2.13, and 2.14).

**ii. Listed Company and Its Controlling Shareholders**

This section of the Code deals with a protocol for how the controlling shareholders should behave when an enterprise is being restructured or reorganised prior to listing. Certain aspects of the enterprise, such as its non-operational institutions and welfare institutions, will not be transferred to the listed company, but may continue to provide services to the listed company in the capacity of a separate company based on commercial principles. Reform of labour, personnel, and distribution system may occur (Section 2.15., 2.16., 2.17., and 2.18.). However, the controlling shareholders should not act in a way detrimental to the listed company’s or shareholders’ legal rights and interests by adversely restructuring assets or otherwise marking advantage of their position (Section 2.20., and Section 2.21.).

The controlling shareholders initially nominate the candidates for directors and supervisors on the basis of their professional skills, knowledge, and experience. The shareholders’ meeting or the board of directors will approve appointments as appropriate (Section 2.20.). The listed company should be able to act independently of the controlling shareholders, including its personnel, and also the financial and accounting management systems of listed company should be independent from the controlling shareholders (Section 2.23., 2.24., and 2.25.). The board of directors and supervisory board should operate in an independent manner and indeed the Code states that “a listed company’s business shall be completely independent from that of its controlling shareholder” (Section 2.26., and 2.27. p.4).

**iii. Directors and Board of Directors**

In order to enable shareholders to make an informed choice as to which candidate to vote for in director elections, there should be detailed disclosure of information about the candidate. The emphasis is on appointments being made through a transparent process (Section 3.28, 3.29., 3.30., 3.31., and 3.32.).

Directors should attend appropriate training sessions to familiarise themselves with their directorial duties and responsibilities. They should be suitably qualified with
appropriate skills and knowledge (Section 3.36., and 3.37.). They should faithfully, honestly, and diligently perform their duties for the best interests of the company and all shareholders, and they should also devote adequate time and energy to their role as director and to attending board meetings (Section 3.33., 3.34., and 3.35.). The board of directors is accountable to shareholders and shall treat all shareholders equally and shall be concerned with the interests of stakeholders (Section 3.43.).

The board of directors should meet periodically and have a pre-set agenda, with timely and clear information about the agenda items being sent to all the directors. If two or more independent directors feel that the information is unclear or inadequate, then they may apply to postpone the meeting or the discussion of the relevant agenda item. And, minutes of the board meetings should be carefully maintained (Section 3.46., and 3.47.).

According to Section 3.49., a listed company shall introduce independent directors to its board of directors in accordance with relevant regulations. Independent directors shall be independent from the listed company that employs them and the company’s major shareholders. An independent director may not hold any other position apart from independent director in the listed company. The independent directors shall bear the duties of good faith and due diligence and care towards the listed company and all the shareholders. They shall protect the overall interests of the company, and shall be especially concerned with protecting the interests of minority shareholders from being infringed (Section 3.50.). In addition, the CSRC issued the *Guidelines for Introducing Independent Directors to the Board of Directors of Listed Companies* in the summer of 2001. The guidelines mandate all domestically listed companies to amend their articles as necessary to comply with the guidelines and to appoint, by June 30 2002, at least two members of the board of directors shall be independent directors, and by June 30th 2003, at least one third of board shall be independent directors.

The Code also recommends that various committees of the board be established, such as a corporate strategy committee, a remuneration and appraisal committee, an audit committee, and a nomination committee (Section 3.52.). Independent directors should be in majority on these committees and the audit committee, nomination committee, and remuneration/appraisal committee, at least one independent director
should be an accounting professional (Section 3.52., and 3.53.).

**iv. Supervisor and Supervisory Board**

The supervisory board should comprise individuals with professional knowledge or working experience in such areas as law and accounting. The supervisory board’s members need to be able to supervise effectively the directors and managers and to examine knowledgeably the company’s financial matters (Section 4.64.). The supervisory board is accountable to shareholders and its duties include supervising corporate finance, the directors’ and managers’ performance, and protecting the company’s and shareholders’ legal rights and interests. The supervisory board’s members should be provided with appropriate information to enable them to do their job effectively. And, the supervisory board’s meetings should be minuted (Section 4.59., 4.60., 4.61., and 4.66.).

**v. Performance Assessments and Incentive and Disciplinary Systems**

Directors, supervisors, and management’s performance should be assessed through a fair and transparent procedure, with directors and management being evaluated by the board of directors or by the remuneration/appraisal committee (Section 5.69., and 5.70.). When any individual’s performance is being reviewed, then the director being discussed should leave the meeting. Independent directors and supervisors should be evaluated by a combination of self-assessment and peer review. The performance and compensation of the directors and supervisors should be reported to the shareholders’ meeting (Section 5.70., and 5.71.).

The Code has an interesting provision in the context of the selection and appointment of management personnel, as it states “no institution or individual shall interfere with a listed company’s normal recruiting procedure for management personnel” (Section 5.73., p.9). As expressed by Mallin (2007), one problem with appointments in Chinese companies is that the State still wields a lot of influence and a mechanism is needed to isolate, as far as possible, the appointments process from the influence of political appointments. The Code seeks to make this an explicit point in the selection process.
Similarly, there is much demand from employees in Chinese companies, particularly at the higher levels where an awareness of the Western practices is more apparent, to link compensation with performance. The Code illustrates that the compensation for management personal should be linked to both the company’s performance and the individual’s work performance (Section 5.77., and 5.78.).

vi. Stakeholders

The section of the Code that deals with stakeholders states that “while maintaining the listed company’s development and maximizing the benefits of shareholders, the company shall be concerned with the welfare, environmental protection and public interests of the community in which it resides, and shall pay attention to the company’s social responsibilities” (Section 6.86., p.10). In addition, the Code also mentions that the company should respect the legal rights of the various stakeholder groups and provide them with information as appropriate (Section 6.81., and 6.84.). In particular, employees are encouraged to provide feedback on various issues that might affect them by direct communication with the board of directors, the supervisory board, and management personnel (Section 6.85.).

vii. Information and Disclosure and Transparency

The quality of financial reporting lay at the heart of the Code 2002. It recommends that a listed company shall establish sound financial and accounting management systems in accordance with laws and regulations and shall conduct independent business accounting. Controlling shareholders shall respect the financial independence of the company and shall not interfere the financial and accounting activities of the company (Section 7.88.). In regard to information disclosure, the 2002 Code mentions that it is a continuing responsibility of listed companies. A listed company shall truthfully, accurately, completely and timely disclose information as required by laws, regulations, and the company’s articles of association. Furthermore, the Code also suggests that in addition to disclosing mandatory information, a company shall also voluntarily and timely disclose all other information that may have a material effect on the decisions of shareholders and stakeholders, and shall ensure equal access to information for all shareholders (section 7.89.).
In addition, there should be specific disclosure to the company’s corporate governance, plus the company should make disclosure about its state of corporate governance and the reasons why it may differ from the Code (it is based on the “comply or explain” mechanism). It should also mention any plans to improve its corporate governance (Section 7.91.). The company should disclose information relating to the shareholding distribution in the company: for example, detail of shareholders who own a comparatively large percentage of shares (what level this might be is not specified in the Code), shareholders who can control the company by acting in concert (that is, acting together), and the shareholders who actually control the company (Section 7.92.).

Table 4.4. provides a summary of corporate governance structure in China by incorporating the influencing characteristics with the fundamentals of China’s 2002 China’s Code.

Table 4.4.: A Summary of the Corporate Governance Structure in China

<table>
<thead>
<tr>
<th>Corporate Governance Structure in China</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Characteristics influencing China’s Corporate Governance</strong></td>
</tr>
<tr>
<td><strong>Main business form</strong></td>
</tr>
<tr>
<td><strong>Stock Exchanges</strong></td>
</tr>
<tr>
<td><strong>Ownership structure</strong></td>
</tr>
<tr>
<td><strong>Legal system</strong></td>
</tr>
<tr>
<td><strong>Board structure</strong></td>
</tr>
<tr>
<td><strong>Important aspect</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Codes, Guidelines, and Rules of Corporate Governance in China</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name (Time) of the Codes</strong></td>
</tr>
<tr>
<td><strong>Issued By</strong></td>
</tr>
<tr>
<td><strong>Context</strong></td>
</tr>
<tr>
<td><strong>Reasons of Issuing (General)</strong></td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
</tr>
<tr>
<td><strong>The Main Concerns (Condensed)</strong></td>
</tr>
</tbody>
</table>
Table 4.4.: A Summary of the corporate governance structure in China (continued)

<table>
<thead>
<tr>
<th>Codes, Guidelines, and Rules of Corporate Governance in China</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Main Concerns (Condensed)</strong></td>
</tr>
<tr>
<td>• it is the elementary standard in measuring company's corporate governance;</td>
</tr>
<tr>
<td>• it highlights the accuracy and independence in financial information disclosure;</td>
</tr>
<tr>
<td>• the securities supervision and regulatory authorities can instruct the company to correct or even change its corporate governance to comply with the Code.</td>
</tr>
<tr>
<td><strong>Board Independence</strong></td>
</tr>
<tr>
<td>1/3 independent directors on the board</td>
</tr>
<tr>
<td><strong>Executive Pay Disclosure</strong></td>
</tr>
<tr>
<td>Not covered</td>
</tr>
<tr>
<td><strong>Audit Committee Composition</strong></td>
</tr>
<tr>
<td>Majority of independent directors on the audit committee</td>
</tr>
<tr>
<td><strong>The Role Institutional Shareholders</strong></td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td><strong>Minority Shareholders Protection</strong></td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

4.5. An Evaluation of China's Corporate Governance System

4.5.1. The Implementation and Enforcement of the China's 2002 Code

As argued by Berglof and Claessens (2004), Wymeersch (2006), Zattoni and Cuomo (2008), almost all existing corporate governance codes are of a non-statutory nature, their binding force cannot be based on the usual legal techniques, such as liabilities, injunctions, fines, imprisonment. Hence, enforcement is the key to ensure these Codes are implemented effectively. Corporate governance and enforcement mechanisms are intimately linked as they affect firms' ability to commit to their stakeholders, in particular to external investors (Berglof and Claessens, 2004). Enforcement is generally left to the effectiveness of internal corporate (e.g., the board of directors) and of external market forces (e.g., listing rules published by stock exchanges). Only in a few countries (e.g., Germany and Netherlands), the law attaches explicit legal consequences to the code or even to its provisions. For instance, the German Company Law contains an express reference to the governance code, whereby companies are legally obliged to adhere to the code, and can only derogate by stating their reasons (Wymeersch, 2005). Additionally, the code sometimes is referred in law and supervised by a government body, more specifically the security market supervisor in some countries. Depending on
the way the supervision is exercised, it may come close to traditional statutory law. The full statutory approach is the one followed in the US with the Sarbanes-Oxley Act (2002) (Wymeersch, 2006).

The recommendations contained in the Chinese Code (2002) do not have the force of law. Compliance with the Code is voluntary and as a result firms remain free to choose their own corporate governance structure. However, the CSRC adopts as part of its listing rules the requirement for all Chinese listed companies to include a statement of compliance with the Code in their annual reports. In the event that a firm does not fully comply, details of, and reasons for, the non-compliance must be disclosed, thereby making non-compliance a potentially costly action. On 28 March, 2007, the CSRC introduced the Notice on the Specific Activities of Strengthening Corporate Governance (hereafter referred to the Notice (2007)). The main objectives of the Notice (2007) are: (1) to improve the independence of the listed companies from their controlling shareholders; (2) to enhance the regulatory system of the listed companies in daily operations; (3) to solve the problem in the seeming application of the 2002 Code by some companies. Specifically, the Notice (2007) includes a self-check list for the companies to see if they comply with the 2002 Code, including the essential situation of the company and shareholders, the shareholders meetings, the board, the supervisory board, and the management team; the independency of the company; the transparency of the company; and the general evaluation of the company’s corporate governance framework. In addition, on 30 January, 2007, the CSRC introduced the Regulations on Information Disclosure of Listed Companies to make sure that all listed companies comply with the 2002 Code. For instance, provision 3(21) states that annual report shall contain the information on corporate governance (e.g., shareholders meetings, board structure, supervisory board meetings) and the application status of the Company Law; Securities Laws, Code of Corporate Governance for Listed Companies in China, Guidelines for Introducing Independent Directors to the Board of Directors of Listed Companies.

However, academic researchers often challenge the watchdog view of both the court and the CSRC in China. In brief, it is argued that the court as well as the CSRC in China are neither independent, nor are they sophisticated in dealing with complicated financial matters, and sometimes they are corrupt (Cai, 2007; Cohen, 1997; Lubman,
In particular, Young et al., (2007) state that, in a company, governance is actually in the hands of a few people who enjoy close relationship with the central administrative authorities in China. And if disputes arise in the company, these people are more likely to settle the disputes through informal mediation based on harmony, rather than enforcing the legal rights through litigation. In addition, Cai (2007) illustrates the inefficiency of the CSRC by arguing that it can not properly detect the alleged activities and/or fraudulent activities conducted by the listed companies and thus initiate the enforcement actions against such activities. He reports that the number of total enforcement actions initiated by the CSRC is only one-fifth of the 1,278 companies that were listed in Shanghai and Shenzhen by the end of 2005. Stated differently, at most one in twenty-five companies was subject to any kind of enforcement action. Furthermore, according to Pister and Xu (2005), the sanctions administered are often benign, with only 22% of all enforcement actions resulting in fines as opposed to warnings or informal reprimands.

For the law enforcement system, Cai (2007, p.86) argues that “...the reality in China is that effective law enforcement will not be attained in the near future”; “...China’s efforts to develop a vigorous stock market are doomed to fail as long as China does not fundamentally change its law enforcement mechanisms.” Monks and Minow (2008, p.380) states that “enforcement is weak and there are not enough qualified directors to serve on boards in order to facilitate the enforcement process.” Spencer Stuart’s 2007 Corporate Governance Lexicon cites an economic study by Qiao Liu and concludes, “shareholder protection is poor, insider trading rife, and listed companies tend not to take the maximization of shareholder value as their prime directive.” (Monks and Minow, 2008, p.379).

In summary, as the compliance with the 2002 China’s Code is generally on a voluntary disclosure basis, the watchdogs of the security markets published several rules and/or policies in order to enforce the implementation of the Code in China’s listed companies. However, in practice, the impacts of the court as well as the CSRC in China are arguably ineffective. They are neither independent, nor are they sophisticated in dealing with complicated financial matters, and sometimes they are corrupt. As the result, the legal enforcement system is relatively weak in China. It is thus argued that the implementation of the Code may be prevented regardless of the efforts that have
been made. In other words, it may not usually be the case as the Code formulated.

4.5.2. Several Concerns of China’s Corporate Governance System

Other than the ineffective legal enforcement system mentioned in the previous section, there are several concerns of the corporate governance system in China’s listed companies arranged from the influence of the controlling shareholders to the independence of the supervisory board. Each of the concerns will be discussed in the followings.

Concern 1: The Influence of the Controlling Shareholders

The most pronounced influence of the controlling shareholders is on shareholders’ meetings in China’s listed companies. A recent survey (CNINFO, 2005) reveals that, public investors including both individual and institutional investors are very reluctant to participate in the shareholders’ meetings for those that are fully manipulated by the controlling shareholders. Comparing with more than 40% of company’s shares usually is held by controlling shareholders, the survey estimates that, on average, public investors who take part in a shareholders’ meeting, represent only 4-5% ownership of the listed firms. Smaller shareholders with 3% ownership or less are even not allowed to raise any issue to discuss in shareholders’ meetings (CSRC, 2000). Furthermore, all the issues on which shareholders are asked to vote in a shareholders’ meeting are prepared by corporate executives and/or controlling shareholders themselves. By putting all together, it is argued that the minority shareholders who only hold a fraction of company’s equity in China may be unwillingly to get involved in shareholders’ meetings, as they find it is very difficult (if not impossible) to vote against the controlling shareholders’ self-dealing interests which are obtained at the expenses of others or their reckless decisions which are less effective on improving the performance of companies.

Secondly, due to the dominating position held by controlling shareholders, in most listed companies, the members of the board are dominated by controlling shareholders to certain extent. The majority of directors have direct or indirect relationship with the controlling shareholders as they are either the current or the former employees of the controlling shareholders. As showed in a survey (CNINFO, 2006), while 42.34% board
members of a listed company is holding a senior position in the controlling shareholders’ entities, another 40.12% of directors held a senior position in the controlling shareholders’ entities previously.

**Concern 2: Independent Board of Directors**

Another concern is about the independence and functionality of the non-executive directors in the listed companies. For the board independence, although the Code requires introduction and minimum number of non-executive directors on the board, a survey conducted by CNINFO (2006) reveals that 15% of listed firms fail to comply with and report a percentage of independent directors lower than 33.33% (or one third of board). This illustrates the enforcement for the Code is relatively weak. In addition, some real-life cases are quoted. For instance, a notorious example of *Yili Group* (stock code: 600887) demonstrates that an independent director of the company got fired, when challenging the shareholders of the company and investigating the company’s undisclosed transactions and suspicious conducts (China Securities News, 4th August 2004). *Kalong* (stock code: 000921) shows that even when independent directors have recognised financial statements are potentially fraudulent, they don’t oppose in board meetings (China Securities News, 13 April 2005).

Another concern with the board is related to its normal functionality. Taking the nomination process as an example, although the Code recommends a nomination committee on the board to be established, in reality, more than half of the companies do not comply with it (CNINFO, 2006). A candidate director has to be nominated by shareholders only. Due to the dominating position of the controlling shareholders in the listed companies, eventually, most candidates for non-executive directors are nominated directly by the controlling shareholders. Since the controlling shareholders have high incentives in nominating the non-executives who are more likely to represent their interests instead of those of minority shareholders, the nature of independence of non-executive directors may be jeopardised. Furthermore, the Code also mentions the role played by the institutional investors in nominating firms’ directors and setting their compensation strategies. However, due to the low ownership in the firms, they are not either interested or allowed to be involved.
Concern 3: Audit Committee

According to Cohen Commission (1978), Ribbon Report (1999), and the requirements of NYSE (2003), audit committee members ought to be independent if they are to provide an effective corporate governance control mechanism. For instance, all publicly listed companies on the NYSE must have an audit committee consisting of a minimum of three members and all must be independent directors. Both the Cadbury Report (1992) and Combine Code (1998, 2003, 2006) state that the board should establish an audit committee of at least three non-executive directors. Thus, the third concern is related to the functionality of audit committee in China’s listed companies. Although the China’s Code (2002) encourages establishment of an audit committee on the board, it only requires an audit committee to be composed of a majority of independent directors instead of all independent non-executives compared with the requirements in the developed markets. The Chinese Code’s requirement for only a majority of committee members to be independent non-executives seems inadequate to U.K. and U.S. eyes.

Despite the requirement differences in the composition of audit committee, Chambers (2007) argues that the differences between U.S. or U.K. and Chinese audit committee guidelines are mainly to do with the greater detail with which the committee’s duties are defined and regulated. For instance, other than enhancing the integrity and accountability of the financial statements, the audit committee served on the board of a U.K.’s or a U.S.’s company is also required to be involved in the risk management and non-accounting control as well as the scrutiny of the non-financial information provided by the firm. Since these issues are not specifically addressed in the China’s 2002 Code, the audit committee in a Chinese listed company may be less active. In a study of 103 B-share companies, Chen and Zhang (2010a) reveal that only 30% of the companies with audit committees on their boards by 2006. They argue that the relatively weak requirement coupled with inefficient enforcement mechanisms on audit committee provides a leeway for companies to bend the independence of audit committee members; it eventually limits the monitoring role played by the audit committee in China.

Concern 4: The Independence of the Supervisory Board

In contrast to the board structures in Germany (the supervisory board which is composed of entirely independent directors elect the management board), the
independence of the supervisory board of China is often challenged. This is due to (1) there is no clear hierarchical relation between the management board and the supervisory board; both executive and supervisory board are appointed by, and may be dismissed by, shareholder actions; (2) controlling shareholders have strong control over the activities of the supervisory board, primarily because they retain a large percentage of ownership and the supervisors mainly represent controlling shareholders’ interests rather than those of the minority shareholders.

Dahya et al., (2003) interview directors, supervisory board members and senior executives of 16 listed companies in China on the effectiveness of the supervisory board. Based on their results, they argue that the controlling shareholders have strong control over the activities of the supervisory board in China. The Communist Party and the government have a strong direct influence, mainly through personnel control. In such an environment, it is difficult for supervisory boards to expose serious problems that are discovered.

One participant in their interviews revealed that, “last year’s supervisory board report was quite frank but it was killed when the cadres of the factory met. This year’s report was accepted straight with no amendment at all. This report is Weixindi [against my will]...In fact, last year’s report was revised following the “suggestions” of the cadres. But even so, not all of the revised version was included in the annual report...The managers of the factory wanted me to state in the report that ‘there are no illegal acts in the company’. I dared not to write it that way. So I reported ‘no illegal acts were discovered’ instead.” The problem is even serious in a company that is headed by a highly ranked central government official. A manager reveals that the supervisory board report is revised from “no discovery of violation” to “no violation” at the request of the board of directors (Dahya et al., 2003, p.315). In addition, a Senior Economist of a company said, “to enhance the usefulness of the supervisory board, first, it is important to improve the independence of it. It should not be subordinate to the Party Committee and the Board of Director. Second, the supervisory board should be given more power. It should not have the voting right, but should have the power to vote” (Dehaya et al., 2003, p.317).
4.6. Summary

Based on the literature reviewed (e.g., Denis and McConnell, 2003; Gillan and Stark, 1998; Shleifer and Vishny, 1997; Zingales, 1998), in the condensed terminology, corporate governance is described as the set of mechanisms that induce the self-interested controllers of a company to make decisions that maximise the value of the company to its owners. By stating differently, corporate governance deals with the ways in which suppliers of finance assure themselves of getting a return on their investments.

Different models of board structure may contribute to the differences in corporate governance systems across country. In the Anglo-Saxon one-tier model, executive and non-executive directors operate together in one organisational layer. While some one-tier board structures can separate the CEO from the Chair, others may operate under a leadership structure that combined these two roles together. With regard to the Continental European two-tier model, an addition layer—the supervisory board is introduced in order to separate the executive function from its monitoring function. The supervisory board is elected by shareholders and employees and it in turn appoints the management board. In China, a listed company seems to apply the two-tier board structure model.

The Code of Corporate Governance for Listed Companies in China was published by the CSRC with quality of financial reporting laid at its heart aims to enhance the shareholder protection against the controlling shareholders’ expropriation through building a comprehensive corporate governance system. The China’s 2002 Code contains seven chapters. Through an in-depth evaluation of the corporate governance in China, it is argue that the relatively weak legal enforcement system resulted from the ineffectiveness of both the court and the CSRC may prevent the implementation of the Code. In addition, there are several concerns of China’s corporate governance arranged from the influence of the controlling shareholders to the independence of the supervisor board.
Chapter 5: Earnings Management

(EM)
5.1. Introduction

The recent wave of corporate governance failures has raised the concerns about the integrity of accounting information provided to investors and resulted in a drop in investor confidence. Top executives have been found to manage their earnings aggressively, through accounting sleight-of-hand and corporate policies designed to improve their companies’ apparent performance (e.g., Jain et al., 2003; Jain and Rezaee, 2003; Rezaee, 2004). This chapter starts with defining earnings management (or EM) based on the literature. And, by applying the theory of AT and TCE to EM respectively, it is argued that EM could be seen as a specific tool or means utilised by insiders of the companies to achieve their private benefits at the expense of other shareholders.

According to Healy and Wahlen (1999), three general incentives which are largely based on the Western experiences of engaging in EM are classified: (1) capital market motivations (e.g., management buyouts, leveraged buyouts, IPOs, SEOs, financial analysts’ expectations), (2) contracting motivations (e.g., lending covenants, executive compensation), and (3) regulatory motivations (e.g., import relief, tariff, quota). Each of these will be described in the following sections, and a table summary of the empirical studies on examining these incentives will be provided at the end of this chapter.

In China’s stock markets, EM practices have also been rampant (e.g., Aharony et al., 2000; Chen et al., 2001; Chen and Yuan, 2006; Yu et al., 2006). It is argued that Chinese investors and regulators are un-sophisticated: they are usually fixated on reported earnings, thus may not be able to see through EM practices. The specific incentives of engaging in EM practices have been documented in the literature are: (1) ROE requirements for issuing additional shares (capital market motivation), and (2) regulatory policies for de-listing firms (regulator motivation) (Ding et al., 2007; Liu and Liu, 2007). For the contracting motivations, the lending covenants are rarely used in the Chinese listed companies as the companies usually use properties or assets-based mortgages to the banks for borrowing and in most of the cases the properties of their parent companies instead of themselves are mortgaged to the banks (e.g., Cai et al., 2008; Firth et al., 2008; Zou and Xiao, 2006). And, to my best knowledge, there is no empirical evidence demonstrates whether executive compensation in China is regarded as an incentive of managers to engage in EM as proposed by TCE or should be
considered as an alignment strategy (AT) that encourages managers to make operating and investing decisions that maximise shareholder wealth, thus limiting their incentives of EM behaviours.

For the rest of the chapter, the measurements of EM are briefly reviewed. Based on McNichols (2000; 2002), there are three essential proxies: (1) aggregate accruals models, (2) specific accrual models, and (3) frequency distribution approach. Each of the measurements awards a subsection for discussion. A table summary of approaches with the relevant authors introducing them is also provided.

The basic structure of this chapter is given in the followings:

| 5.1. Introduction |
| 5.2. Earnings Management |
| 5.3. Incentives of EM |
| 5.4. Measurements of EM |
| 5.5. Summary |

Section 5.1. provides the introduction of the chapter; section 5.2. states the definition(s) of EM, and the application of AT and TCF to EM respectively; section 5.3. demonstrates the incentives of EM in general and China correspondingly; section 5.4. describes the three essential measurements of EM in the literature; and section 5.5. summarises the whole chapter.
5.2. Earnings Management

The terminology related to the modification of financial statements is not so clear. For example, there are terms such as manipulation, modification, adjustment, smoothing, and so forth, which are usually used quite synonymously in the literature. Stolowy and Breton (2000) use extensive term accounts manipulations for all modifications and discretionary entries made to the financial statements. In the literature, the most commonly used term for firms’ accounts adjustment is earnings management (hereafter refer to as EM). The primary focus on EM literature has been detecting whether and when EM takes place (Healy and Wahlen, 1999). More specifically, it is to understand why managers manipulate earnings, how they do so and the consequence of this behaviour (McNichols, 2000; 2002).

First of all, this section provides “various” definitions of EM based on the recent literature. Next, an analysis of the application of both AT and TCE to EM is demonstrated. It is argued that EM can be used as a specific tool or means by the insiders of the company to achieve their private benefits at the expense of other shareholders.

5.2.1. Definition of EM

There is no consensus on the definition of EM and there are several in some degree of different definitions in the literature. For instance, Dye (1988) and Scott (2005) state that EM is the choice by firm of accounting policies so as to achieve some specific managerial objectives. Teoh et al., (1998a) argue that EM is the process of taking deliberate steps within the constraints of GAAP to bring about desired level of reported earnings. The sources of EM within GAAP include the choice of accounting methods, the application of accounting methods, and the timing of asset acquisitions and dispositions. Healy and Wahlen (1999, p.368) propose that “earnings management occurs when managers use judgement in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers.” Beneish (2001) proposes that there are two perspectives on EM14: the opportunistic perspective holds that managers seek to mislead investors, and the information perspective (firstly enunciated by Holthausen
and Leftwich, 1983) argues that managerial discretion is a means for managers to reveal (or signal) to investors their private expectations about the firm’s future cash flows. And, Zhou and Chen (2004) define EM as a purposeful intervention in the external financial reporting process, with the intent of obtaining some private gains.

By putting all together, three shared either implicitly or explicitly aspects merit discussion:

First, there are many ways that managers can exercise judgement in financial reporting. For example, judgement is required to (1) estimate numerous future economic events such as expected lives and salvage value of long-term assets, obligations for pension benefits and other post-employment benefits, deferred taxes, and losses from bad debts and asset impairments; (2) choose among accepted accounting methods for reporting the same economic transactions, such as the straight-line or accelerated depreciation methods or the LIFO, FIFO, weighted-average inventory valuation methods; (3) make decision on working capital management (such as inventory levels, the timing of inventory shipments or purchases, and receivable policies), which affects cost allocations and net revenues; (4) decide how to structure corporate transactions. For example, business combinations can be structured to qualify for pooling or purchase accounting, lease contracts can be structured so that lease obligations are on- or off-balance sheet, and equity investments can be structured to avoid or require consolidation; and (5) choose to make or defer expenditures, such as research and development, advertising or maintenance (Healy and Wahlen, 1999).

A second to note is that the objective of EM as being to “mislead” shareholders (or some class of shareholders) about the underlying economic performance of the firm to achieve some self-dealing benefits (Beneish, 2001). This can arise if managers believe that (at least some) shareholders do not undo EM. It can also occur if managers have access to information that is not available to outside shareholders so that EM is unlikely to be transparent to outsiders (Healy and Wahlen, 1999). It is argued that EM is related to the information asymmetry between managers and firm’s other interest groups. Prior literature documents a relationship between information asymmetry and EM by arguing that the existence of information asymmetry between management and shareholder is a necessary condition for EM (Chaney and Lewis, 1995; Dye, 1988; Lara
et al. 2005; Richardson, 2000; Thomas, 2001; Trueman and Titman, 1988). Beneish (2001) demonstrates EM as managers taking advantages of an asymmetry of information with shareholders. Dutta and Frank (2002) state that there is information asymmetry between managers and other interest groups and that asymmetry can not be totally eliminated by changing the contractual agreement. As illustrated by Healy and Wahlen (1999), due to the ineffectiveness of the auditing, management’s use of judgement creates opportunities for EM, in which managers choose reporting methods and estimates that do not adequately reflect firms’ underlying economics. While the study of the correlation between EM and information asymmetry is an interesting research topic, but, it is out of the scope of the current thesis.

And thirdly, some of the judgments can make financial reports more informative for users. This can arise if certain accounting choices or estimates are perceived to be credible signals of a firm’s financial performance. For example, as expressed by Healy and Wahlen (1999), if auditing is effective, managers’ estimates of net receivable will be viewed as a credible forecast of cash collections. Managers can use reporting judgement to make financial reports more informative by overcoming limitations to current accounting standards. And, until recently some successful R&D firms created R&D limited partnerships, which permitted them to effectively capitalise R&D outlays that otherwise would have been expensed (Beneish, 2001). Healy and Wahlen (1999) argue that management’s use of judgement in financial reporting has both costs and benefits. The costs are the potential misallocation of resources that arises from EM. Benefits include potential improvement in management’s credible communication of private information to external shareholders, improving in resource allocation decisions. However, they also specify that “decisions to use accounting judgement to make financial reports more informative for users do not fall within our definition of earnings management” (Healy and Wahlen, 1999, p.369).

5.2.2. Applying AT and TCE to EM

In a review of AT and its application to accounting, Lambert (2001, p.3-4) states that “agency theory has been one of the most important theoretical paradigms in accounting during the last 20 years...while [it] has generated insights into financial accounting and
audit issues, by far its largest contributions have been to managerial accounting”. This makes AT’s application to EM to be very important for this thesis.

To start with, as argued by Fama and Jensen (1983b) agency problems arise because contracts are not costlessly written and enforced. And, this problem in decision process is more pronounced when decision managers who initiate and implement important decisions are not the major residual claimants and they do not bear a major share of the wealth effects of their decisions. Without effective control procedures, such decision managers are more likely to take actions that are deviated from the interests of residual claimants. This is the hypothesis of separation of ownership and control—separation of residual risk bearing from decision management leads to decision system that separate decision management from decision control (Fama and Jensen, 1983b, p.304). By applying the hypothesis of separation of ownership and control to EM, it can be said that EM occurs when managers (the agent) initiate and implement decisions in firm’s financial reporting policies which are within the constraints of GAAP, and they are not the major residual claimants thus do not bear a major share of the wealth effects of the decisions, the principals (e.g., shareholders, debt holders, and other stakeholders) do bear the wealth effects. According to the Jensen Meckling’s RFMM model on human behaviours, rational individuals always choose the option that makes them better off as they set it. For instance, an individual takes action A over action B because he expects A to result in better outcomes. In other words, they are profit maximisers (Jensen and Meckling, 1994). And, in some situations it will pay the agent to expand resources (bonding costs) to guarantee that he will not take certain actions which would harm the principal or to ensure that the principal will be compensated if he does take such actions (Jensen and Meckling, 1976). For the monitoring costs, Jensen (2004) argues that because both the external and internal monitoring costs are imposed on the manager, it is in his interest to ensure that the monitoring is performed in the lowest cost way (Jensen, 2004). Thus, without effective control procedures, the decisions managers are likely to engage in accounting manipulations to maximise their own benefits by influencing contractual outcomes that depend on accounting numbers and to minimise the bonding and monitoring costs imposed on them by misleading shareholders about the underlying performance of the company. In a similar vein, Lambert (2001) uses the revelation principle which applies agents receive private information (this is mainly due to the notion of separation of ownership and control)—initiation and implementation of
decisions are all allocated to the managers), have the ability to transmit the information, and the principal is able to credibly commit to how the information is used to explain EM. He states that “...when the revelation principle applies, any equilibrium that involves nontruthful reporting (e.g. one where earnings management is taking place) can always be dominated by one [the managers] where truth telling is induced” (Lambert, 2001, p.71).

On the other hand, Marcher and Richman (2006, p.23) in a survey argue that “...there are fewer direct applications of TCE reasoning to empirical problems in accounting [and corporate governance]. This relative dearth of TCE research is somewhat surprising given the apparent relevance of accounting phenomena to questions of economic organization and performance”. Thus, the current thesis contributes to the literature by directly applying TCE to EM.

To begin with, the Fundamental Transformation of TCE applies to that subset of transactions for which large number of qualified suppliers at the outset are transformed into what are, in effect, small number of actual suppliers during contract execution and at the contract renewal interval (Williamson, 1979; 1996; 2002b). The key factor here is whether the transaction in question is supported by investment in different types of transaction-specific assets (Williamson, 1996). This implies that as the assets invested by parties become more and more specialised, both parties are “locked into” the specific assets; they are bilaterally dependent and bear the relevant costs if transactions are prematurely terminated. TCE also predicts that the manager is the member with the comparative advantage in deciding what the firm and its members should do, and this manager need not be an owner. Accordingly, TCE takes the so-called managerial discretion hypothesis. This hypothesis “ascribes de facto control to those who are knowledgeable, strategically situated, and disposed to be actives” (Williamson, 1984, p.1221). By applying TCE to EM, it can be said that EM occurs when managers (one party) initiate and implement decisions in firm’s financial reporting policies which are within the constraints of GAAP, and given that that all complex contracts are unavoidably incomplete by reason of bounded rationality, they will bear the relevant costs if the shareholders (the other party) prematurely terminate the transaction as managers and shareholders have high level of human asset specificity and monetary-based asset specificity involvements respectively. For instance, the shareholders will not
invest in the firm anymore, if it can not reach the expected level of performance measured by accounting numbers. The managers have to bear the relevant costs from the lack of investment (e.g., credibility lose, liquidity problems, lower compensation, pressure from the regulators), and in the extreme case, they may be forced to retire from the firm. In order to minimise such costs resulted from premature transaction termination, managers may manage earnings in order to mislead shareholders by artificially dressing up their firms’ apparent performance. In addition, TCE argues that the economic agents who make false or empty, that is, self-disbelieved threats or promises, cut corners for undisclosed personal advantage, cover up tracks, and the like (Williamson, 1983). It is not necessary to consider that all agents are equally opportunistic, however, it is sufficient to assume that less opportunistic agents are difficult and costly to ascertain ex ante and that “even among the less opportunistic, most have their price” (Williamson, 1979, p.234). And, according to the theory of feasible foresight, parties have the capacity to look ahead, uncover hazards which may against their private benefits, thereupon incorporate hazard-mitigating mechanisms (Williamson, 2005b). Thus, other than minimising the premature transaction termination risk called by shareholders, managers also engage in EM to negotiate the terms of transaction for their own benefits, for instance, they may manipulate earnings to influence the contractual outcomes (e.g. compensation package) that depend on reported accounting numbers. A structure summary of applying both AT and TCE to EM is provided in Table 5.1.

Table 5.1.: Summary of applying AT and TCE to EM

<table>
<thead>
<tr>
<th>AT</th>
<th>EM</th>
<th>TCE</th>
<th>EM</th>
</tr>
</thead>
<tbody>
<tr>
<td>all decisions are initiated and implemented by managers</td>
<td>management judgments in accounting policies</td>
<td>all decisions are initiated and implemented by managers</td>
<td>management judgments in accounting policies</td>
</tr>
<tr>
<td>no wealth effects; agency costs (bonding &amp; monitoring costs); profit maximisation</td>
<td>manage earnings to mislead the shareholders and to gain private benefits</td>
<td>transaction costs (bilateral dependence); opportunism; feasible foresight</td>
<td>manage earnings to mislead the shareholders and to gain private benefits</td>
</tr>
</tbody>
</table>
5.3. Incentives of EM

5.3.1. An Overview

According to Healy and Wahlen (1999), there are three major incentives of conducting EM: (1) capital market motivations, (2) contracting motivations, and (3) regulatory motivations. Each of them will be briefly reviewed in the following sub-sections. At the end of this chapter, Table 5.3. provides a summary of the empirical studies of EM’s incentives.

5.3.1.1. Capital Market Motivations

The widespread use of accounting information by investors and financial analysts to help value stocks can create an incentive for managers to manipulate earnings. These include the studies of EM in periods surrounding capital market transactions and when there is a gap between firm performance and analysts’ or investors’ expectations (Beneish, 2001; Healy and Wahlen, 1999; Lambert, 2001). The major theoretical framework of the capital market motivations which is applied by most published studies is AT (e.g., Chen et al., 2008; Chou et al., 2006; Lee and Masulis, 2009; Perry and Williams, 1994; Wright and Guan, 2004; Wu, 1997). As stated by Chen et al., (2008), AT provides a conceptual framework for investigating the influence of capital market incentives on EM according to the accounting decisions. More generally, it is argued that because of the separation of decision management from decision control, management has the ability (management is involved in making and implementing the decisions) as well as the incentive (the managers do not bear the wealth effects of their decisions and they are profit maximisers) to maximise their own benefits or minimise agency costs. At here, the management benefits are to issue more shares at higher price (or to meet certain requirements) and to avoid missing the analysts’ and investors’ expectations (the bonding costs may increase, if they miss the expectations) by managing reported earnings. In the perspective of TCE, the capital market incentives can also be explained. Based on the previous discussion, in a specific-asset transaction between managers and shareholders (high level of human asset specificity and monetary-based asset specificity), managers will bear the relevant costs if shareholders prematurely terminate such a transaction. Thus, they are likely to engage in EM to minimise the risk of premature termination of the transaction when they cannot meet the analysts’ or investors’ expectations. Based on the arguments of opportunism and feasible foresight,
managers may also engage in EM to raise capital at more favourable terms (e.g. higher issuing price).

Several studies examine EM prior to management buyouts (MBOs). It is argued that going-private restructurings provide unique opportunities to manipulate earnings since managers face conflict of interests when they are engaged in buying the firm's stock in order to take it private. As the representatives of stockholders, managers have a fiduciary duty to them. This duty conflicts with a strong incentive to buy the firm's stock at the lowest possible price. Their personal stake in an MBO may motivate management to depress pre-buyout accounting earnings to portray a less favourable picture of the firm, either through decisions on the timing of discretionary cash flow or the selection of accounting methods or estimates. Perry and Williams (1994) investigate EM preceding MBOs using a sample of 175 MBOs during the period over 1981 and 1988 in the US. By using the discretionary accruals calculated from Jones (1991) Model as the dependent variable and earning changes as the independent variable, they find significantly negative discretionary accruals which are used to lower reported earnings in the year immediately preceding the public announcement of management's intention to bid for control of the company. Wu (1997) examines EM behaviours of 87 US MBO cases during the period of 1980 to 1987. By following the similar research method used by Perry and Williams (1994), the overall evidence she provided favours the hypothesis that managers manipulate earnings downwards prior to the MBO proposal. And, an examination of pre-MBO stock prices indicates a downward movement. This downward movement is systematically associated with pre-MBO earnings changes. Moreover, pre-announcement declines in earnings are specific to MBOs.

More recently, Wright et al., (2006) examine the incidence of EM in countries where the level of investor protection provided by the legal environment is high. In particular, they compare the discretionary accruals calculated from the Modified Jones Model of 92 UK MBO firms with those of 63 MBO firms for the period of 1997-2002. Overall, their results indicate that, managers of MBO firms in both the UK and US significantly manage earnings downwards through income-decreasing discretionary accruals in the year immediately prior to the buyout. And, managers of the US MBO firms manage earnings downward to a greater extent than their counterparts in the UK. The authors argue that while the UK and US are similar in numerous respects, various
cultural and organisational differences exist, such as the UK firms differ from US firms in use of equity compensation; the audit function between the UK and the US is also different. These country specific factors influence managers’ willingness to engage in EM practices.

Implicitly, instead of focusing on accrual-based EM, Wright and Guan (2004) investigate the accounting method choices of 74 US firms over a period of three years leading up to a MBO in 1998. By using a match approach and multivariate logit analysis, they provide evidence suggesting that management’s self-serving behaviour begins far in advance of the actual MBOs. Specifically, management of the MBO firms tends to use income increasing accounting policies over some period of time prior to the MBOs. The conclude their study by stating that “[s]elf-serving managers who act to take a firm private make accounting choices that result in maximisation of their own benefits while reducing future cash flows of the firm” (Wright and Guan, 2004, p. 58).

By using a sample of 247 reversed leveraged buyouts (LBOs) that are offered between 1981 and 1999 in the US, Chou et al. (2006) find positive and significant correlation between discretionary current accruals calculated using the Modified Jones Model and offerings of reverse LBOs indicating that managers of equity-issuing firms opportunistically manipulate earnings upwards, regardless of the form of equity offering. Furthermore, they find that the abnormal accruals are negatively related to post-offering stock returns within the first year following the offering even after controlling for firm size, book-to-market ratio, offering size, and participation of buyout specialists or involvement of management. These results suggest that investors discover the EM practices for reverse LBO firms shortly after the offerings, and/or an earnings reversal leads them to change their perception of the true earnings prospects of the reverse LBO firms.

In addition, recent studies have also examined and indicated that managers manipulate earnings in periods of equity offers. These include firms that report positive (income-increasing) unexpected accruals prior to seasoned equity offerings (SEOs) (Lee and Msaulis, 2009; Rangan, 1998; Teoh et al., 1998b; Yoon and Miller, 2002), initial public offerings (IPOs) (Li et al., 2006; Nagata and Hachiya, 2006; Teoh et al., 1998a), and stock-financed acquisitions (Botsari and Meeks, 2008).
Specifically, Teoh et al. (1998b) hypothesize that issuers have unusually high income-increasing accounting adjustments pre-issue (in order to reach the thresholds of stock issuing) and unusually poor earnings and stock return performance post-issue. By using a sample of 1,265 SEOs during 1976-1989 in the US and discretionary accruals (calculated using the Modified Jones Model) as the proxy for EM, they provide robust evidence to support their hypothesis that discretionary accruals grow before the offering, peak in the offering year, and decline thereafter. This accruals pattern causes net income to grow before, peak in, and decline after the offering year. The post-issue net income declines are especially pronounced for issuers that aggressively manage discretionary accruals before the issue.

In the similar vein, Rangan (1998) investigates whether investors' inability to unravel EM around the time of the offerings can explain the subsequent poor stock price performance. Based on the discretionary accruals (proxy for EM, obtained from the Modified Jones Model), earnings changes, and market adjusted stock returns of 230 US SEOs for the years of 1987-1990, the author finds that SEOs firms significantly manage their earnings upwards before the offerings suggesting managers manipulate reported earnings to meet the thresholds of stock offerings. And, he also documents that discretionary accruals are negatively correlated with both earnings changes and market-adjusted stock returns in the year following the offerings. A one-standard-deviation increase in discretionary accruals is associated with an earnings decline of about two to three cents per dollar of assets. And, it is also associated with a decline in market-adjusted stock returns of about 10%. In conclusion, he states that “...the stock market does not correctly value the implications of discretionary accruals for subsequent earnings. Rather, the market appears to extrapolate earnings growth associated with discretionary accruals and hence overvalues issuing firms”; “...I conclude that issuing firms can manipulate their stock price by managing earnings” (Rangan, 1998, p.121).

Yoon and Miller (2002) investigate 249 Korean SI:Os firms during the period of 1995-1997 to investigate if firms manage earnings in the year before a planned issue of SEOs. Using three research methods (accrual difference tests, correlation tests between net income and CFO, and sign-change ratio tests), they find that the Korean firms contemplating SEOs do manage earnings upwards through income-increasing discretionary accruals particularly when their relative performance has been poor.
Analysis of operating performance around SEOs shows that SEOs firms tend to increase reported earnings in the year immediately preceding and the year of SEOs.

Lee and Masulis (2009) investigate the accounting information quality (measured by discretionary accruals calculated using the Modified Jones Model) of 963 US SEOs during the period of 1990-2002. They provide evidence suggesting that firms aggressively manipulate earnings through income-increasing discretionary accruals upwards in the year prior to the SEOs. The poor accounting information quality is associated with higher flotation costs in terms of (1) larger underwriting fees; (2) larger negative SEO announcement effects; and (3) a higher probability of SEO withdrawals.

As stated by Teoh et al., (1998a), the high degree of information asymmetry between issuers of IPOs and investors at the time of offerings provides firms opportunity to mislead investors through EM practices in order to meet the thresholds of offerings or to raise funds at favourable terms, such as higher offering price. Thus, it is argued that IPOs process is particularly susceptible to EM. Empirically, Teoh et al., (1998a) examine the relation between the long-run post-IPOs return underperformance and IPOs firms’ EM. Specifically, they examine the correlation between current and long-term discretionary accruals (using the Modified Jones Model) and annual income performance of 1,649 US IPOs firms during 1980-1992. Their results suggest that discretionary accruals are high around the IPOs comparing with those of non-issuers. And, issuers with higher discretionary accruals have poor stock return performance in the subsequent three years. They conclude by stating that “…investors are not able to fully understand managerial earning choices made the IPOs firms. Because investors behave as if they are fixated on these high [manipulated] earnings. [and] they are disappointed later” (Teoh et al., 1998a, p.1966).

More recently, Nagata and Hachiya (2006) question whether managers of IPOs firms manipulate earnings upwards to meet the issuing requirements and the reasons of doing so. Based on a sample of 830 Japanese IPOs for the year of 1989-2000, they use performance-matched abnormal accruals (using the Modified Jones Model) as the proxy of EM and find managers significantly manipulate earnings upwards prior to the offerings. They also report that IPO issuers have the incentives to manage earnings to reduce the amount of wealth transfer and control of the firm.
Li et al., (2006) investigate 3,989 US IPOs firms over the period of 1980-1999 to determine if the managers engage in EM and aggressive EM is related to the delisting risk. By using current discretionary accruals (DCAs) calculated using the Modified Jones Model, they find that DCAs in IPOs year are significantly and positively related to the probability of involuntary delisting after IPOs. Furthermore, they find that IPOs firms associated with conservative EM are more likely to be merged or acquired and they earn positive abnormal returns.

EM by acquirers ahead of share bids in a stock-financed acquisition may affect whether a bid succeeds, and hence which management team controls the target’s assets, as well as the distribution of gains between target and acquirer shareholders. In the share corporate takeovers, the consideration received by target shareholders is the acquiring firm’s stock. The total number of shares issued by the acquirer to gain control is computed based on the acquiring firm’s stock price on or near the takeover agreement date. Because this exchange ratio is inversely related to the acquiring firm’s stock price, the acquiring firm may have an incentive to increase accounting earnings prior to the takeover in the hope of raising the market price of its stock, and therefore reducing the cost of buying the target (Hartzell et al., 2004; Rhodes-Kropf and Viswanathan, 2004; Shleifer and Vishny, 2003). In order to test this argument, Botsari and Meeks (2008) investigate a sample of 42 UK companies involved 48 cases of share-financed acquisitions over 1997-2001, and use distribution approach of discretionary accruals calculated using the Modified Jones Model, their results suggest that acquiring companies engage in income-increasing EM in the year immediately preceding the offer announcement, and this manipulation is mostly concentrated on the working capital component of accruals.

Other studies of EM have shown that earnings are managed to meet the expectations of financial analysts or investors. One obvious reason is that if the companies can not meet the expectations of financial analysts or investors, the public will lose confidence in the company’s performance and the stock price will thus be plunged. As proposed by Burgstahler and Eames (2006), firms engage in manipulating earnings to avoid negative earnings surprises. Empirically, Albarbanell and Lehavy (2003) use 22,173 financial analysts’ stock recommendations (e.g., Buy, Hold, or Sell) for the period over 1985-1998 in the US and quarterly unexpected accruals to analyse
how a firm’s stock price sensitivity to earnings news, as measured by outstanding stock recommendations, affects the direction and magnitude of discretionary accruals measured by the Modified Jones Model. In particular, they find a tendency for firms rated by the financial analysts a Sell to encourage more frequently in extreme, income-decreasing EM practices, indicating that they have relatively stronger incentives both to take earnings bath and increase accounting reserves than other firms. In contrast, firms rated by the financial analysts a Buy are more likely to engage in EM practices that makes reported earnings equal to or slightly higher than analysts’ forecast.

Burgstahler and Eames (2006) study the correlation between the discretionary accruals (for EM measurement, calculated from the Modified Jones Model) and 25,951 analysts’ forecasts over 1986 to 2000 in the US stock markets. More generally, they provide evidence suggesting an unusually low frequency of small negative annual earnings surprises and an unusually high frequency of zero and small positive earnings surprises at several forecast horizons.

Chen el al., (2008) study accrual-based and real-based EM behaviours measured through the Modified Jones Model and cash flow from operations respectively of 6,685 US firms during 1987-2006. The objective of their study is to empirically assess how the market values the act of meeting or beating analysts’ forecasts in the presence of EM. Their findings suggest that firms engage in both accrual-based and real-based EM to meet or beat analysts’ expectations in order to get their equity to be valued as premium by the market. However, comparing with the control firms that do not engage in EM, market discounts the magnitude of this premium by approximately one-third at earnings announcement day when EM practices are acknowledged.

5.3.1.2. Contracting Motivations
Accounting data are used to help monitor and regulate the contracts between the firm and its stakeholders. For instance, while management compensation contracts are used to align the incentives of management with those of the external stakeholders, lending contracts are written to limit manages’ actions that benefit the firm’s stockholders at the expenses of its creditors (Healy and Wahlen, 1999; Watts and Zimmerman, 1986). Bergstresser and Philippon (2006) suggest that these contracts create incentives for EM because it is likely to be costly for compensation committees and creditors to “undo”
EM. A large literature has emerged to test whether the incentives created by lending and compensation contracts can explain EM. The following section reviews the empirical evidence on the association between contracting incentives and voluntary changes in accounting methods, estimates, or accruals.

**a. Lending Covenants**
Debt-holders normally use lending covenants to protect themselves from opportunistically discretionary behaviours. By definition, a lending covenant requires borrowers to maintain their physical assets to certain standards, meet minimum disclosure requirements, engage only in permissible businesses, or maintain a certain level of insurance (Brealey et al., 2007). In terms of AT, which is applied by most studies in this field (e.g., Demiel et al., 2007; DeAbgelo et al., 1994; Kasanen et al., 1996; Moeira and Pope, 2007; Prevost et al., 2008; Sweeny, 1994), the agency relationship is between the management (the agent) and the creditors (the principal). And, by taking the hypothesis of separation of ownership and control, the assumption that individuals are profit maximisers, and the notion of avoiding agency costs, it is argued that the lending contracts may not effectively constrain management from engaging in opportunistic discretion at the expense of the creditors. In particular, when firms are in the period with negative returns, the decisions managers are likely to engage in EM to hide from their creditors a signal (loss) that could negatively affect the costs of debt. In terms of TCE, managers and creditors are bilaterally dependent; both of them are bounded to the relationship as the high level of specific assets involved in the transaction. Thus, one party will bear the relevant costs, if the other one prematurely terminates the transaction. Given the notion that all contacts are unavoidably incomplete by the reason of bounded rationality, in order to avoid the transaction costs resulted from premature termination, managers thus are likely to engage in EM to artificially dress-up the apparent performance of firms, especially when they can not fulfil the requirements of the covenants. In addition, managers may also manipulate earnings in order to get a better deal from the creditors (e.g. lower interest rate).

Empirically, Defond and Jiambalvo (1994) and Sweeny (1994) examine the firms that actually violate a lending covenant. However, the empirical evidence from these two studies is mixed. On one hand, Defond and Jiambalvo (1994) find that the 139 sample firms (US) accelerate earnings by using discretionary accruals measured by the
Modified Jones Model one year prior to the covenant violation for the study period of 1988-1992. They interpret this as evidence of EM by firms that are close to their lending covenants. On the other hand, based on the discretionary accruals of 150 US firms during 1980-1990, Sweeny (1994) also finds covenant violators utilise income-increasing accounting changes, but these typically take place after the violation. This finding indicates that the 150 sample firms (US) do not make accounting changes specially to avoid violating the lending covenant.

In addition, Prevost et al., (2008) find evidence suggesting that the major incentive for the firms (14,855 US firm-year observations over 1993-2005) to engage in aggressive accounting (measured by discretionary accruals using the Modified Jones Model) is to avoid debt covenant violations. And, they point out two strategies that are used by firms to manage the reported earnings: (1) the “save for the future” strategy is to spread profits obtained in the current period over future periods; and (2) the “borrow from the future” strategy is to reflect in the current period that profits are expected to be gained in the future.

Instead of analysing the accrual-based EM practices, Moeira and Pope (2007) examine the earnings changes over time. In particular, they investigate whether firms with negative returns face higher incentive to make earnings upwards and their ultimate intention is to hide from credit market a signal that could be translated into a negative impact on the costs of debt. By analysing the relation between changes in net income and debt of 1,138 UK firms for the period of 1976-1994, they find that firms with negative returns show higher EM pervasiveness than their counterparts, reporting a greater number of small profits and fewer small losses. They also provide evidence suggesting that the negative return firms with larger needs of debt show higher pervasiveness in undertaking EM to avoid violation of lending covenants.

As stated by Kalay (1982), Bradley and Roberts (2004), the dividend constraints/restrictions are among the most common covenants in debt contracts. Since the level of reported earnings is an important determinant of dividends in such covenants (Daniel et al., 2008), managers then have the incentive to manipulate earnings upwards to avoid dividend cuts when reported earnings would otherwise be below the expected dividend levels17 (Daniel et al., 2008; Watts and Zimmerman, 1986).
Empirically, DeAngelo et al. (1994) examine the total accruals (as a proxy for EM) of 76 financially troubled US firms with a record of persistent losses and dividend reductions over 1990-1994. They find that managers’ accounting choices primarily reflect their firms’ financial difficulties, rather than attempts to inflate income. Firms with and without binding covenants exhibit minor accrual differences in the ten years before the dividend reduction. Healy and Palepu (1990) study the changes of total accruals of 126 US firms that experience tightness in their dividend constraints during 1980-1990 and find no evidence that these firms make accrual changes to circumvent the dividend restriction. However, with such small sample size, the results of both studies may be limited to reflect the full picture (e.g. the pervasiveness and magnitude of accounting manipulations).

More recently, Daniel et al. (2007) investigate 1,500 S&P firms during 1992-2005 in the US, and find that firms are more likely to manage earnings upwards through discretionary accruals measured by the Modified Jones Mode when their earnings would otherwise fall short of expected dividend levels. This EM behaviour appears to significantly impact the likelihood of a dividend cut. In particular, firms whose discretionary accruals cause reported earnings to exceed expected dividend levels are significantly less likely to cut dividends than are firms whose reported earnings fall short of expected dividend levels.

By using 37 Finnish firms over 1970-1989, Kasanen et al. (1996) document that firms manage earnings upwards by using discretionary accruals calculated from the Modified Jones Model in response to pressure from large institutional shareholders to pay dividends. In conclusion, the authors state that “...our empirical evidence gives support for the hypothesis that dividends are an important determinant of earnings management in Finland during 1970-89. And, earnings management is driven by an implicit contract between the firm and its shareholders” (Kasanen et al., 1996, p.305). Although the authors argue that the sample covers around 90% of the market capitalisation of industrial firms in the Helsinki Stock Exchange (Finland), such a small sample size may still be a concern.
More generally, directors’ remuneration is composed of six elements (Jensen and Murphy, 1990; 2004; Mallin, 2007; Murphy, 1999): base salary, bonus, stock options, restricted share plans (stock grants), pension, and benefits. The following section will provide an analysis on the effectiveness of compensation strategy which has been seen as a mechanism to align management’s interests with those of shareholders.

Theoretically, by structuring appropriate incentives, AT aims to minimize agency costs to the principal of the agency relationship; it is to design a contract ex ante which can efficiently align the different interests between the principal and the agent. As argued by Baker et al. (2003), most academic studies (e.g., Baker et al., 2003; Efendi et al., 2007; Guidry et al., 1999; Holthausen et al., 1995) have typically focused on testing executive compensation strategy within an agency theory framework, primarily examining alignment aspects. Arguably, by tying executive compensation strategy to performance (measured by different criteria, e.g., profitability, stock price, growth), it encourages managers to make operating and investing decisions that maximise shareholder wealth. Stating differently, because of linking the executive compensation with changes in shareholder wealth, it increases shareholder wealth by reducing agency problems (David et al., 2006). In particular, AT argues that the well-designed compensation contract as one way of the ex ante alignments will help to ensure that the objectives of directors and shareholders are aligned, and so share options and other long-term incentives are the key mechanisms (Conyon 1997; 2006).

However, the effectiveness of aligning the interests of managers with those of investors by linking the compensation strategy to company’s performance is often challenged. Starting from the theoretical view point, TCE focuses on the ex post governance to minimize transaction costs in a discriminating (mainly, transaction cost economizing) way by allocating different governance structures correspondingly to the different attributes of transactions. In transaction between managers and shareholders, as managers engage in high level of human asset specificity and shareholders engage in dedicated asset specificity, these two parties are said to be bilaterally dependent. Tying executive compensation strategy to firm’s performance through long-term incentives (such as stock options) increases the level of bilateral dependence due to executives’ involvement in both the specific human asset and the specific monetary asset, thus the
transactions costs involved (Williamson, 1991; 1996). Since shareholders usually use financial information to evaluate the executives’ performance, executives will be motivated to engage in EM practice: (1) to mislead the shareholder of company performance (a negative performance may make shareholders to terminate the transaction with managers, and they may lose more than before due to increased transaction costs); (2) to negotiate a better compensation package with shareholders. By putting all together, TCE argues that remuneration strategy as an *ex ante* alignment may not be an effective mechanism to prevent opportunistic discretion given the written contracts are never complete and managers are given to opportunism.

Similar argument is also proposed by Bebchuk and Fried (2004) that there are significant flaws in pay arrangements, which “have hurt shareholders both by increasing pay levels and, even more important, by leading to practices that dilute and distort managers’ incentives” (p.155). Clarke (2007, p.72) states “a far more insidious indicator of the extent to management entrenchment in the US corporations is the rapid escalation of CEO and executive remuneration, regardless of performance, that suggests in this respect management of is out of control of either boards or shareholders.” And, Monks and Minow (2008) argue that if shareholders, as the consumers of executive compensation, cannot act when it is out of control, the system simply isn’t working. It is just one symptom of corporate governance system that fails to ensure management accountability. Further, they argue that “…there is an inherent conflict of interests between shareholders and management with regard to compensation…it is important to note that the conflict is not over the amount of compensation, but over the variability of the compensation. Shareholders want compensation to vary with performance as much as possible, while managers understandably want as much certainty as possible…” (Monks and Minow, 2008, p.309).

Empirically, a number of studies have examined the executive compensation in relation to managers’ incentives of engaging in EM activities (Mallin, 2007; Wearing, 2005). In general, the evidence reported by these studies is consistent with the notion of managers using accounting judgement to increase performance-based compensation. In other words, without effective monitoring and control mechanisms, simply linking executive compensation to the company’s performance cannot prevent opportunistic
discretion, in fact, it motivates managers to engage in accounting manipulations for better rewards.

For instance, Guidry et al., (1999) test the bonus-maximisation hypothesis that managers make discretionary accrual decisions to maximise their short-term bonuses. By investigating the relationship between discretionary accruals calculated from the Modified Jones Model and bonus plan for executives of 117 US firms over the period of 1994-1995, they find that divisional managers for a large multi-national firm are likely to defer income when the earnings target in their bonus plan will not be met and when they are entitled to the maximum bonuses permitted under the plan. In the similar vein, Holthausen et al. (1995) examine the extent to which earnings are manipulated to maximise the value of payments under short-term bonus plans. By following the similar research method used by Guidry et al. (1999), they investigate 443 firm-year observations over 1982-1990 in the US and provide evidence suggesting that the CFOs manipulate earnings downwards when they are at the upper bound of their bonus contracts in order to increase the present value of payments from those bonus plans. However, they find no evidence that managers manipulate earnings downwards when they are below the lower bound of their contract. With relatively small sample size, both studies may suffer the power in generalising their findings.

More recently, researchers draw their attention especially to the impacts of stock options with larger sample size. Using 7,301 US firm-year observations over 1992-1999, Gao and Shrieves (2002) show that EM intensity measured by the absolute value of discretionary accruals (obtained from the Modified Jones Model) scaled by asset size is related to the managerial compensation contract design. In particular, the amounts of stock options and bonuses, and the incentive intensity of stock options, are all positively related to EM intensity.

Baker et al., (2003) study whether the structure of executive compensation, specifically, stock options relative to other forms of pay, is associated with opportunistic use of discretionary accruals in reported earnings. By using 168 US firms during 1992-1998, they investigate the relationships between discretionary accruals (calculated from the Modified Jones Model) and different forms of compensation (e.g., salary, bonus, and stock options) and provide evidence suggesting
that relatively high option compensation is associated with more income-increasing discretionary accrual choices in periods leading up to option award dates in order to raise the stock price, thus the exercise price. Furthermore, they find that this association is stronger when managers are able to publicly announce earnings prior to the option award date. In conclusion, they state that “...[the] results are consistent with the general implication that option compensation creates opportunistic incentives for managers to manipulate reported earnings for their private benefits...” (Baker et al., 2003, p.557).

Bergstresser and Philippon (2006) argue that tying the managers’ incentives together with those of shareholders through linking compensation strategy with company’s performance (e.g. companies’ share prices) may have the perverse effect of encouraging managers to exploit their discretion in reporting earnings, with an eye to manipulating the stock prices of their companies. By using 4,671 firm-year observations in the US over 1993-1996, the authors find that the use of discretionary accruals (obtained through the Modified Jones Model) to manipulate reported earnings is more pronounced in firms where the CEO’s potential total compensation is closely tied to the value of stock and option holdings. In addition, during the years of high accruals, the CEOs exercise unusually large numbers of options as the CEOs and other insiders sell large quantities of shares. By studying discretionary accruals calculated from the Modified Jones Model of 240 Japanese firms during 1991-2000, Shuto (2007) finds evidence suggesting that the use of discretionary accruals in Japanese firms increases with performance-related executive compensation, especially the stock options.

Instead of investigating the direct link between EM practices and executive compensation, Denis et al., (2006) use a sample of 358 US firms for the period of 1993-2002, and show a significant positive association between the likelihood of securities fraud allegations and the intensity of executive stock options using Black and Scholes (1973) model. They conclude their study by arguing that stock options increase the incentive of engaging in fraudulent activity. In addition, they find that the positive relation between the likelihood of fraud allegations and option intensity is stronger in firms with higher outside blockholder and higher institutional ownership.

And, using 190 US companies contained 95 financial reports restating firms with the matched control firms for the years of 1997-2002, Fendi et al., (2007) find that the
likelihood of a misstated financial statement increases greatly when the CEO has very sizable holdings of in-the-money stock options. Additionally, misstatements are also more pronounced for firms that are constrained by an inter-coverage debt covenant, that raise new debt or equity capital, or that have a CEO who serves as the board chair.

In summary, these studies suggest that compensation and lending contracts may have the perverse effect of encouraging managers to exploit their discretion in reporting earnings.

5.3.1.3. Regulatory Motivations

The literature of EM has explored the effects of several forms of accounting-related regulations, such as industry-specific, anti-trust, and anti-dumping regulations. The theoretical background is related to the political cost hypothesis which states that political sector has the power to transfer wealth between various parties. From the perspective of EM practices, the more a firm is subject to potential wealth transfers in the political process, the more its management is likely to adopt accounting policies in order to reduce such transfers (Watts and Zimmerman, 1978; 1979; 1986)\(^2\). From the perspective of AT, which is applied by most research (e.g., Garrod et al., 2007; Jones, 1991; Key, 1997; Magan et al., 1999), firm can be seen as the agent, and regulator/the whole society is the principal; there exists conflict of interests as these two parties have different objectives in the political process. Given that the contacts are incomplete (these will be the particular regulations, such as anti-trust or anti-dumping policies) and managers are opportunistic, such agency problem may motivate the firm to manipulate reported earnings in order to avoid wealth transfers in the political process at the expense of the principal. In terms of TCE, the political process can be seen as a specific transaction between firm as one party and the regulator/the whole society as the other one, and the political cost is the cost of undertaking such transaction. Given that all contracts are unavoidably incomplete (the particular regulations), the opportunistic managers who have the ability of feasible foresight may engage in EM to avoid the wealth transfers at the expense of the other party.

A number of studies have investigated the specific regulations to recognise managers’ EM incentives. The followings provide a brief summary of the empirical studies on the regulatory incentives. For instance, Jones (1991) tests whether firms can
benefit from import relief (e.g., tariff increases, quota reductions) by decreasing reported earnings through EM during import relief investigations by the United States International Trade Commission (ITC). The import relief determination made by the ITC is based on several factors are specified in the federal trade acts, including the profitability of the industry. By analysing the discretionary accruals calculated from the Jones Model of 49 US firms during 1980-1985, she finds that firms in industries seeking import relief tend to defer income in the year of application. She concludes by stating that “explicit use of accounting members in import relief regulation provides incentives for managers to manage earnings downwards in order to increase the likelihood of obtaining import relief and/or increase the amount of relief granted” (Jones, 1991, p.193).

Key (1997) examines the relationship between total accruals (calculated as the differences between depreciation expenses and amortization expenses plus the net differences between net assts and net liabilities) and several firm characteristics (e.g., gross property, plant, equipment, gross intangible assets) for 24 firms in the US cable television industry at the time of Congressional hearings (1984-1985) on whether to deregulate the industry. Her evidence is consistent with firms in the industry deferring earnings during the period of Congressional scrutiny. With such a small sample size, the evidence from the study on the frequency of EM for regulatory purposes may be difficult to interpret. As stated by Key (1997, p.334), “[a] limitation of examining one industry with a small number of firms is that omitted variables are more likely to have an unspecified influence compared to large sample studies with diverse firms.”

Magan et al., (1999) study the EM measured by the Modified Jones Model during anti-dumping investigations in Canada. The purpose of their study is to assess if Canadian firms lodging antidumping complaints against foreign competitors opportunistically reduce their reported earnings to obtain favourable ruling from the Canadian External Trade Tribunal. In a sample of 223 Canadian firms during 1976-1992, their results indicate that Canadian firms reduce their reported earnings by a significant amount (6.3% of lagged assets) during the year in which they are under investigation by the tribunal. Moreover, the authors find that investors can correct the price-earnings relation to take into account the systematic underestimation of earnings reported by firms launching antidumping complaints.
Gill-de-Albornoz and Illueca (2005) analyse the effect of price regulation on accounting policy of 114 firm-year observations of 13 Spanish electricity companies over the period of 1991-2000. Their results are consistent with managers artificially reduce reported earnings using discretionary accruals measured by the Modified Jones Model when the government establishes tariff increase. In this way, companies attempt to diminish their political visibility and counteract social outcry arising from the government’s decision.

Furthermore, Garrod et al., (2007) examine the extent to which economic incentives subject to political cost impact on accounting choice. By using 25,740 firm-year observations of the Slovenian small private firms for year 2002 to test the relationships between discretionary accruals calculated using the Modified Jones Model and net income, earnings before tax, ordinary income before tax from ordinary activities, and adjusted operating profits respectively, they find that profit firms manage earnings downward to reduce, but not entirely eliminate, current period corporate tax. Elimination of tax is constrained by political cost resulting from the increased possibility of a tax audit. Interestingly, they argue that this same political cost also provides an incentive to firms that are genuinely in a position where they would pay no tax in the current period to adopt earnings-increasing accounting policies.

In summary, the empirical studies are consistent with the theoretical argument that in the presence of a political process (the specific regulations) with a potential wealth transfer between firm (one party in terms of TCE or the agent in perspective of AT) and regulators/the whole society (the other party in terms of TCE or the principal in terms of AT), the former may manipulate reported earnings with the objective of misleading the latter in order to reduce the possibility of wealth transfer.

5.3.2. Incentives of EM in China

EM has also been rampant in China’s listed companies. Chinese investors and regulators are unsophisticated: they are usually fixated on reported earnings, thus may not be able to see through EM (Chen and Yuan, 2006; Chen et al., 2001; Ding et al., 2007; Liu and Lu, 2007; Yu et al., 2006). Based on the literature, two types of incentives of EM in China have been documented, including the capital market
incentive (ROE requirements for issuing additional shares) and the regulatory incentive (regulatory policy for de-listing firms). In particular, the CSRC requires listed companies to meet certain return on equity (ROE) criteria before they can apply for permission to issue additional shares to shareholders. And, the most important criterion for delisting a listed company is a reported net loss for three conservative years. Liu and Lu (2007, p.882) state that “such practices [ROE requirements and delisting policy] unintentionally provide the listed firms with strong incentives to manage earnings.”

For the contracting motivations, the lending covenants are rarely used in the Chinese listed companies as the companies normally use properties or assets-based mortgages to the banks for borrowing and in most of the cases the properties of their parent companies instead of themselves are mortgaged to the banks (e.g., Cai et al., 2008; Firth et al., 2008; Zou and Xiao, 2006). As proposed by Allen et al., (2005), Dobson and Kashyap (2006) that China still manages to maintain dominant State ownership in the banking sector in order to channel bank deposits to the ailing State-owned Enterprises (SoEs). These State-owned banks which account for more than 70% of bank lending have the obligations to lend to SoEs. While the efficiency of the China’s banking system is not within the scope of the current thesis, however, it can be argued that lending to the listed companies especially those transferred from the SoEs seems to be treated as a political process in China instead of a market originated procedure in which lending covenants are important. To my best knowledge, there is no empirical evidence demonstrates whether executive compensation in China is an incentive of managers to engage in EM as proposed by TCE or should be considered as an alignment strategy (AT) that encourages managers to make operating and investing decisions that maximise shareholder wealth, thus limiting EM behaviours. The effect of executive compensation on EM practices is thus unclear. A detailed analysis of executive compensation in perspective of China will be provided in the next chapter.

This section is composed of two parts: (1) capital market incentive of EM in China—ROE requirements, and (2) regulatory incentive of EM in China—delisting policy. A summary of the empirical studies of these incentives can be found in Table 5.4.
5.3.2.1. **Capital Market Incentive of EM in China**

---ROE Requirements

Most studies apply AT to investigate capital market incentive of EM in China (e.g., Chen and Yuan, 2006; Haw et al., 2005; Huang et al., 2006; Liu and Lu, 2007; Yu et al., 2006). In terms of agency relationship, firms are the agent as majority of listed companies in China regard issuing shares as the best channel for raising funds (Huang et al., 2006; Liu and Lu, 2007). On the other hand, the general investors on the market coupled with the relevant Chinese authorities who set financial thresholds (e.g., net profits, ROE requirements) on rights issuing are the principals. Due to the widespread use of accounting information by regulators and investors to help value stocks, firms manipulate reported earnings in order to mislead both authorities and general investors about their performance in attempt to issue shares and influence short-term stock price. From the perspective of TCE, it can also be applied to the capital market incentive of EM in China. In transaction between firms and their shareholders, these two parties are bilaterally dependent as firms need to raise funds from the markets through issuing shares to maintain a proper liquidity level, and shareholders, on the other hand, require the specific human asset provided by the firms (or managers of the firms) to make sure that the companies run smoothly (in perspective of Chinese regulators) and to assure of getting a return on their investments (in perspective of general investors). The widespread use of accounting information by regulators and investors to evaluate firms, this bilateral dependence, however, creates an incentive for firms to manipulate their reported earnings in order to minimise the risk of premature termination of transaction when they cannot meet the investors’ expectations and regulatory thresholds for issuing shares. Based on the arguments of opportunism and feasible foresight, firms may also engage in EM to raise capital at more favourable terms (e.g. higher issuing price).

Recall from the previous discussion, China’s stock exchanges (SHE and SZSE) were opened in the early 1990s as an experiment in mixing a market economy with central planning. To raise additional capital, listed firms can issue shares through Seasoned Equity Offerings (SEO) to investors. In the early 1990s, because of the insatiable demand for stocks from public investors, SEOs were quickly and fully subscribed by shareholders (Chen and Yuan, 2006). To curb this excessive activity, the CSRC issued a series of guidelines to restrict additional rights can be issued after
November 1993. As summarized in Table 5.2., each guideline requires a minimum level of profit or ROE, and limits the number of shares that can be issued.

Table 5.2.: The CSRC’s five guidelines regulating rights issue activities: 1993-1999

<table>
<thead>
<tr>
<th>Date of Guideline</th>
<th>Profitability Requirement</th>
<th>Limitation on No. of New Shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 17, 1993</td>
<td>Two years' profits</td>
<td>30% of existing shares</td>
</tr>
<tr>
<td>Sept. 20, 1994</td>
<td>Three years' profits and three-year average ROE ≥ 10%</td>
<td>No change</td>
</tr>
<tr>
<td>Jan. 24, 1996</td>
<td>ROE ≥ 10% in each of previous three years(^a)</td>
<td>30% of existing shares, excluding shares issued as stock dividends</td>
</tr>
<tr>
<td>Mar. 17, 1999</td>
<td>Three-year average ROE ≥ 10%, and ROE ≥ 6% in each of previous three years(^b)</td>
<td>No change</td>
</tr>
<tr>
<td>Mar. 15, 2001</td>
<td>Three-year average ROE ≥ 6%, and expected ROE ≥ 6% for the year of rights issues</td>
<td>30% limit can be waive if the actual control shareholders buy all the new shares</td>
</tr>
</tbody>
</table>

\(^a\) For companies in the energy, raw materials, and infrastructure sectors, ROE is reduced to 9% in each of the previous three years.

\(^b\) For companies in the energy, raw materials, infrastructure, agriculture, and high-tech sectors, the average ROE is reduced to 9%.

Source: Chen and Yuan, 2006, p.648; and Yu et al., 2006, p.3458.

To start with, the 1993 guideline required listed firms to report two years’ profits as the threshold to issue additional shares. The guideline was tightened to a three-year average ROE of 10 percent in 1994. However, the 1994 guideline was proved to be ineffective to limit the amount of SEOs, as reported by Chen and Yuan (2006, p.648) that “the amount of capital raised through SEOs exceeded that from IPOs in 1995; the rights issues were $0.8 billion compared with $0.3 billion of IPOs.” As a response, the guideline in 1996 required an ROE at least 10 percent in each of the previous three years. This guideline significantly reduced the number of firms that can apply to the CSRC for SEOs. For instance, the total amount of capital raised through SEOs in China remains $0.8 billion compared with $2.7 billion from IPOs in 1996 (Chen and Yuan, 2006). In early 1999, in response to public criticisms of earnings-manipulation phenomenon (this is known as the “10% phenomenon”, for an detailed analysis refer to Chen and Yuan, 2006; Chen and Wang, 2007; Yu et al., 2006), the CSRC lowered the standard requiring that firms needed to have an average ROE above 10% in the past three years but not lower than 6% in any of these years. In March 2001, the CSRC further lowered the standard, stating that firms must have an average ROE: above 6% in the past three years. However, this is not an easy task for most Chinese listed companies considering the fact that the average ROE of listed companies is about 6.5%, and the
average ROE for most industries in China is below 6% by the end of 2005 (Chen and Shih, 2004). Thus, given the fact that the CSRC relies on ROEs to review a listed company’s application for issuing more shares, listed companies have strong incentive to manage earnings above the necessary threshold. As argued by Yu et al. (2006, p.3456), “China’s listed firms are likely to have strong incentives to conduct EM, especially to meet regulatory requirements to raise equity capital in the stock market.” And, Chen and Wang (2007, p.224) state that “…the reduction of the ROE threshold [CSRC’s requirements in 2001] did not seem to reduce the magnitude of earnings manipulation”; “…the earnings manipulation target shifted from 10% to 6% as the regulation on rights issues changed.”

Empirically, a number of studies examine the relationship between EM and ROE requirements during the SEOs process in China’s listed companies. For example, Hau et al., (2005) examine whether Chinese listed firms manage earnings to meet regulatory benchmarks on ROE and whether regulators and investors consider the quality of earnings in respective to their regulatory and investment decisions. By analysing the aggregate income effect of below-the-line items (net of taxes) scaled by the book value of equity, discretionary accruals calculated from the Modified Jones Model, and reported ROE adjusted for the effect of below-the-line items (net of taxes) of 329 firm-year observations from the A-share market that report ROE between 10%-11% over 1996-1998, they show that firms whose ROEs are in the range of 10% to 11% (“borderline firms”) have higher discretionary items such as abnormal accruals and non-operating income than other firms. Their evidence suggests that managers execute transactions involving below-the-line items and use accounting accruals to achieve regulatory benchmarks to qualify for the rights offering. They further partition the sample into three subgroups: firms that successfully received approval for the rights offering from the regulators, those that were unsuccessful, and those did not apply. Their results show that while both successful and unsuccessful firms (including non-applicants) manage earnings upwards, the income-increasing magnitude for successful firms is significantly greater than that for unsuccessful firms.

Chen and Yuan (2006) use a sample of 440 applicants for additional rights issues from 1996 to 1998 to examine the correlation between EM (measured by discretionary accruals using the Modified Jones Model) and capital resource allocation in China.
They find that many firms in China are still able to gain rights issue approval through accrual-based EM practices, and such opportunistically discretionary behaviour associates with miss-allocation of capital resources. They also show that these firms subsequently underperform other approval firms that do not use the same practices.

Huang et al. (2006) study the existence and magnitude of both accrual-based (discretionary accruals calculated from the Modified Jones Model) and real EM (both below-the-line and above-the-line items). By using 2,046 firm-year observations selected from A-share market in manufacturing industry during 1996 to 1998, their main findings illustrate that real and accruals-based EM activities are significantly higher for firms in danger of missing the performance thresholds imposed by the authorities to issue rights. They call these firms the suspect firms. Among these suspect firms, they find that "...suspect firms which have been non-suspect in the previous year show a significant increase in accrual-based EM activities" (Huang et al., 2006, p.25-26).

Using 2,504 firm-year observations from 1999 to 2005, Liu and Lu (2007) examine the relation between EM and corporate governance in China by introducing a tunneling perspective. By using total accruals as the measurement for tunneling, they provide evidence suggesting that Chinese listed companies have strong incentives to manage earnings in order to meet ROE thresholds. And, they also identify the importance of corporate governance in mitigating EM that "...Chinese listed companies' earnings management is significantly related to the main aspects of their corporate governance [e.g., independent board of director, audit committee, ownership structure]. Good corporate governance mitigates agency problems, especially agency conflicts between the largest shareholders and the minority shareholders, which often takes the form of tunneling in the Chinese context" (Liu and Lu, 2007, p.894). However, the explanatory power of total accruals as a measure for accounting management is questionable, since it is biased not only by variations in investments in fixed asset but only by changes in working capital. Furthermore, the relationship between accruals and tunneling may not be fixed; it will depend on whether investors are seeking long-term or short-term benefit.
Yu et al. (2006) investigate whether Chinese firms manipulate earnings to meet regulator requirements in rights issuing. Indirectly, instead of focusing on the accrual-based EM practices, they analyse the trend in EM measured by income from non-operating activities for a sample of 5,921 firm-year observations over 1994-2002, they document that EM at the thresholds of 6% and 10% ROE is very pervasive and the non-core income is the major means used in such EM.

In addition, several studies document the existence of upwards EM prior to the initial public offerings (IPOs) of Chinese listed companies. For instance, Aharony et al. (2000) examines EM in the process of financial packing preceding IPOs in which Chinese State-owned Enterprises issue shares to foreign investors. For 83 Chinese firms that issue B-Share or H-Shares over 1992-1995, they analyze the trends in return on assets (ROA) and selected earnings components (e.g., total assets, net sales, net income) in two years preceding and three years following the IPO. More generally, they find that the median firm ROA peaks in the IPO indicating an upwards EM and declines after. However, with such a small sample size, the pervasiveness of EM is difficult to interpret given that there are over 1,400 listed companies in China’s market to date. As the authors admit that “…among this study’s limitations, the most significant is small sample size” (Aharony et al., 2000, p.125). In addition, the measurement of EM is another concern. Earnings patterns analyzed through ROA may be affected by macroeconomic factors, such as the fluctuation of inflation rates, exchange rates (for the firms that have oversea subsidiaries), and so forth.

By using a large sample size of 884 companies in both A-share and B-share markets over 1995-1999, Chen and Shih (2004) study the patterns of several selected financial indicators (e.g., operating revenue growth rate, net profit growth rate, earnings per share, ROA) of companies in three years preceding the IPO. Their results demonstrate that companies tend to inflate the figures in financial statements which are required to provide to implement the IPOs procedures. And, Wang (2005) documents a sharp decline in operating performance of IPO firms over 5 years after issuing. One of the reasons for this trend is, as argued by the author, the pre-issue manipulating of reported earnings. In order to conduct his research, Wang (2005) use several performance measures (e.g., ROA, operating income to assets, sales to assets, returns on
sales) to study the post-issue performance of 747 firms that applied for IPOs over 1994-1999.

All in all, it can be said that Chinese companies manipulate reported earnings to mislead authorities and investors about true performance of the firms in order to issue shares (either ROEs or IPOs) at favourable terms. The means used to manipulate earnings are various ranging from the non-cash accrual items at operating level to the non-operating transactions with related parties.

5.3.2.2. Regulatory Incentive of EM in China 

--Delisting Policy

To protect minority shareholders and encourage better corporate governance, the CSRC introduced a special de-listing mechanism in 1998 (The Company Law of the People’s Republic of China, revised in 2005). Under the guidelines, China’s two stock exchanges—the SHSE and the SZSE start to de-list Chinese listed firms. The stock exchanges will first label firms in financial trouble (consecutive losses for three years) as special treatment (ST) firms. It means that the stocks of such firms can only be traded with 5% price change limit each trading day compared to 10% for normal stocks. In addition, the midterm reports of such firms must be audited. If a ST firm continues to suffer loss for one more year, it will be designated to a particular transfer (PT) firm. PT stocks can only be traded on Friday, with a maximum 5% upside limit to last Friday’s close, but no restriction on the downside. PT firms will be de-listed if they cannot become profitable within one year. On 22 February 2001, as per the Company Law, the CRSC issued the Policy of Suspension and/or De-listing Loss-making Companies from the Stock Market (CSRC, 2002). Comparing to the police issued in 1998, there are several changes: (1) firms will be labelled as ST and suspended for consecutive losses for three years on both exchanges; (2) up to the middle of the coming year, if the firms continue to suffer loss, they will strictly be de-listed from the stock exchanges; (3) PT system will be ceased.

Taking this delisting policy as a political process between firms and the relevant regulatory authorities, according to AT, firms can be regarded as the agent, on the other hand, the relevant authorities are the principal. There is conflict of interests between these parties as they have different objectives in such a political process. In particular,
while the firms simply don’t want to be delisted, the regulators would like to know the truth in firms’ performance in order to decide if they should be delisted. Due to the widespread use of accounting information as the only criterion to evaluate firms’ performance by the market regulators, they are motivated to manipulate reported earnings to mislead the true performance in order to avoid wealth transfers (to be delisted) in such political process. Consequently, regulators have to bear the relevant costs of not being able to accurately and efficiently discover and de-list a poorly performed firm which is dressed-up through EM practices. By applying TCE to this incentive of EM in China, it is argued that firms and regulators are bounded to each other as one party prematurely terminates the transaction, the other one will bear the relevant political costs. At here, the so-called political costs are the costs of delisting. Thus, in order to minimise the political costs, the opportunistic managers who have the ability of feasible foresight are likely to engage in EM practices to mislead the market regulators about their firms’ true performance to avoid being de-listed. Chen et al., (2001), Chen and Wang (2004), Defond et al., (2000), and Lee and Cao, (2002) argue that the Chinese security regulations contain explicit profitability targets that govern the eligibility for determining delisting status, leading to strong incentives for EM.

Empirically, several studies investigate the relationship between EM practices and the delisting policy. For instance, Chen et al., (2004) study 537 A-share firms over the period of 1999-2004 to examine whether firms manipulate earnings to avoid delisting. With regard to the revised delisting rules issued in 2001, they analyse the discretionary accruals measured by the Modified Jones Model as the proxy for EM during different time periods (pre- and post- delisting policy revised period; 1999-2000 period vs. 2002-2004 period in specific) and provide evidence suggesting an increasing trend in income-increasing discretionary accruals in the post-policy period. They further divide the sample into two sub-groups: one presents the firms with no-loss, and the other stands for the loss-making firms. They show that while both groups have income-increasing accruals, the loss-making firms have higher discretionary accruals (at 1% significant level) than those of the other group.

Chen and Wang (2004) adopt four models in their study, including: (1) the random walk expectation model of accrual profit amount; (2) the accrual profit expectation model in consideration of growth factors; (3) the accrual profit expectation
model considering scale and industrial factors; and (4) the Modified Jones Model. Using a sample of 2,202 observations of A-share companies over 1997-2000, their results show that the loss-making companies intentionally conduct remarkable EM to increase profits in order to avoid being delisted. Based on all A-Share Chinese listed companies over the period of 1992-1999, Lee and Cao (2002) use seven different models to investigate the asymmetric relationship between earnings and returns (e.g., accounting recognition coefficient; earnings autocorrelation asymmetry; earnings-returns mapping asymmetry; $R^2$ asymmetry) They provide evidence showing that (1) asymmetry in earnings-returns relation is ubiquitous, but the nature of asymmetry varies from case to case, (2) the asymmetric in earnings-returns relation seems associated with the regulations in China (e.g. managers may not release the true financial information to avoid be delisted).

By putting all those together, the empirical evidence supports the theoretical view by pointing out that delisting policy leads managers to engage in EM in Chinese listed companies.

5.4. Measurements of EM

According to Healy and Wahlen (1999) and McNichols (2000), a fundamental element of any test for EM is a measure of management’s discretion over earnings. More generally, three approaches with various modifications and characteristics have been used by most researchers to evaluate the existence of EM. These approaches include: the (1) aggregate accruals models, (2) specific accrual models, and (3) frequency distribution approach. The followings will briefly analyse each of these approaches.

a. Aggregate Accruals Models

There is a large literature that attempts to indentify discretionary accruals based on the relation between total accruals and hypothesized explanatory factors. The aggregate accrual models use magnitude of accruals as a proxy for the extent to which insiders exercise discretion in reporting earnings. Panel A of Table 5.5. describes the most typical aggregate accruals estimation approaches and indicates the authors introducing these approaches.
This literature begins with Healy (1985) and DeAngelo (1986), who use total accruals and change in total accruals, respectively, as measures of management’s discretion over earnings. More recently, Leuz et al., (2003) and Shen and Chih (2007) introduce four different models in measuring EM, (1) the firm-level standard deviation of operating earnings divided by the firm-level standard deviation of cash flow from operations; (2) the correlation between changes in accounting accruals and operating cash flows; (3) the magnitude of accruals; and (4) the aggregate EM score, is computed by averaging the rankings for the previous three individual EM measures.

Jones (1991) introduces a regression approach to control for nondiscretionary factors influencing accruals, specifying a linear relation between total accruals and change in sales and property, plant and equipment. Dechow et al., (1995), Dechow and Dichev (2002) provide a modified version of the original Jones (1991) Model. The modification is designed to eliminate the conjectured tendency of the Jones (1991) Model to measure discretionary accruals with error when discretion is exercised over revenues. The adjustment relative to the original Jones Model is that the change in revenues is adjusted for the change in receivables in the event period. The modified version implicitly assumes that all changes in credit sales in the event period result from EM. As expressed by Dechow et al., (1995), “...it is based on the reasoning that it is easier to manage earnings by exercising discretion over the recognition of revenue on credit sales than it is to manage earnings by exercising discretion over the recognition of revenue on cash sales.” McNichols (2000; 2002) argues that over 1993-2000 the greatest number of studies used an aggregate accruals approach based on the Jones or Modified Jones Model. She concludes that the large number of studies published that use aggregate accruals suggest that it is widely accepted as a proper proxy for EM.

However, some academics question the validity and reliability of this discretionary accruals proxy (e.g., Bernard and Skinner, 1996; Dechow et al., 1995; McNichols and Wilson, 1988; McNichols, 2000; 2002; Peasnell et al., 2000a; Thomas and Zhang, 2000; Wilson, 1996; Xie, 2001). For instance, Dechow et al., (1995) evaluate alternative accrual-based models for detecting EM. They use four distinct samples of firm-year observations (e.g., (1) a randomly selected sample of 1000 firm-year observations over 1950-1991; (2) samples of 1000 firm-year observations that are randomly selected from pools of firm-year experiencing extreme financial performance
over 1950-1991; (3) samples of 1000 randomly selected firm-year observations in which a fixed and known amount of accrual manipulation has been artificially introduced over 1950-1991; and a sample of 32 firms that are subject SEC enforcement actions (the SEC has published details of its major enforcement actions since April 1982) for allegedly overstating annual earnings over 1982-1991) to test the Healy Model, DeAngelo Model, Jones Model, and Modified Jones Model. More generally, they find that all of the models appear well specified when applied to a random sample of firm-year; and the modified version of the model developed by Jones (1991) exhibits the most power in detecting EM. However, when the models are applied to samples of firm-year experiencing extreme financial performance, all models lead to misspecified results. In addition, McNichols (2000) estimate the Jones (1991) and Modified Jones models of accruals from 1988 to 1998 to test for a relation between discretionary accrual estimates and growth. Using cross-sectional estimation at the two-digit industry level (US), she provides evidence showing that EM measures based on these two models are not sufficiently powerful or reliable to assess EM behaviour in many contexts likely to be of interest to accounting researchers, standard letters and analysts. Specifically, “I conjecture that firms with greater expected earnings growth are likely to have greater accruals than firms with less expected earnings growth. Furthermore, this effect is not controlled by the current year change in sales and therefore estimated discretionary accruals using the Jones and Modified Jones Models are significantly associated with analysts’ projections of long-term earnings growth. This finding holds after controlling for return on assets” (McNichols, 2000, p.335-336). Building upon the cross-sectional Modified Jones Model, Larcker and Richardson (2004) develop another accrual model to control misclassification issues (e.g. extreme performance and growth). In particular, two additional independent variables that are shown to be correlated with measures of unexpected accruals are added to the Modified Jones Model. First, it is the book-to-market ratio (BM). It is included as a proxy to control the extreme growth in the firms’ operations. Large accruals for growing firms are expected (see also McNichols, 2000, 2002). Second, the current operating cash flows (CFO) as a measure of current operating performance is included to control the extreme level of performance for some firms.
b. Specific Accrual Models

A second approach in the literature is to model a specific accrual, as in Beaver and McNichols (1998), McNichols and Wilson (1998), Moyer (1990), Nelson (2000), Penalva (1998), Petroni (1992), Petroni et al. (2000). These studies often focus on industry settings in which a single accrual is sizeable and requires substantial judgement (McNichols, 2000; 2002). Based on these characteristics, as well as anecdotal evidence, the researchers state that opportunistic discretion is likely to be reflected in a specific accrual or set of accruals (McNichols, 2002). As with aggregate accruals studies, a key aspect of the research design task is modelling the behaviour of each specific accrual to identify its discretionary and nondiscretionary components. Panel B of Table 5.5 provides several examples of measures of the specific discretionary accruals and indicates the authors introducing these approaches. In contrast to the above studies, Beneish (1997) develops a model based on several specific accruals, focusing on firms from a number of industries. This model is based on a number of financial statement ratios to identify EM, several of which relate to specific accruals such as receivables, inventory and account payable. As mentioned by McNichols (2000, p.335), “[this approach] utilises a richer information set to identify variation in the levels of these specific accruals...there seems to be great potential to apply this approach further, with more extensive modelling of the behaviour specific accruals.”

McNichols (2000; 2002) identifies three advantages and disadvantages to this specific accruals approach relative to the aggregate accruals approach respectively. Briefly, the major advantages are: (1) the researcher can develop intuition for the key factors that influence the behaviour of the accrual, exploiting his or her knowledge of generally accepted accounting principles, (2) a specific accrual approach can be applied in industries whose business practices cause the accrual in question to be a material and a likely object of judgement and discretion, and (3) one can estimate the relation between the single accrual and explanatory factors directly. On the other hand, there are three potential disadvantages: (1) it is crucial that the specific accrual reliably reflect the exercise of discretion. If it is not clear which accrual management might use to manipulate earnings, then the power of a specific accrual test for EM is reduced, (2) specific accruals approaches generally require more institutional knowledge and data than aggregate accruals approaches. This raises the cost of applying such approaches, and (3) the number of firms for which a specific accrual is managed may be small.
relative to the number of firms with aggregate accruals. This may limit the
generalizability and the sensitivity of the findings of specific accruals studies.

c. Frequency Distribution Approach
A third approach is to examine the statistical properties of earnings to identify
behaviour that influences earnings, as developed by Burgstahler and Dichev (1997) and
Degeorge et al., (1999). These studies focus on the behaviour of earnings around a
specified benchmark, such as zero or a prior quarter's earnings, to test whether the
incidence of amounts above and below the benchmark are distributed smoothly, or
reflect discontinuities due to the exercise of discretion. They both suggest that if firms
have greater incentives to achieve earnings above a benchmark, then the distribution of
earnings after management will have fewer observations than expected for earnings
amount just below the threshold, and more observations than expected for earnings just
above the threshold. Panel C of Table 5.5. describes this approach in testing EM and
indicates the authors introducing these approaches.

A noteworthy feature of the distribution approach is that the power of the
approach comes from the specificity of the predictions regarding which group of firms
will manage earnings, rather than from a measure of discretion over earnings.
Specifically, this approach measures discretion over earnings as the behaviour of
earnings after management, which no doubt includes discretionary and nondiscretionary
components. However, as argued by McNichols (2000), it seems implausible that the
behaviour of the nondiscretionary component of earnings could always explain the
differences (these could be large in some cases) in the narrow intervals around the
hypothesized earnings targets. Stated differently, measurement error in their proxy for
discretionary behaviour seems unlikely to be correlated with the partitioning variable in
this approach. Moreover, this approach is silent on the incentives for management to
achieve specific benchmarks. As stated by McNichols (2000), “how these incentives
vary across firms, and what targets might be appropriate in different contexts are
important question for future research. A better understanding of why managers
manipulate earnings will allow researchers to assess the power of EM tests, and
ultimately strengthen our understanding of the implications of EM for investors and
other contracting parties.”
5.5. Summary

This chapter starts with defining earnings management (EM) as the alternation of firms’ reported economic performance by insiders to either mislead some stakeholders or to influence the contractual outcomes. It is used to reduce outsider interference and protect insiders’ private control benefits. Both AT and TCE are applied to explain the phenomenon of EM. In brief, both theories propose that managers make judgements in accounting policies. In order to minimise the agency costs (the monitoring and bonding costs) and the transaction costs (the costs resulted from premature termination of the bilaterally dependent transaction) correspondingly, managers are likely to manipulate reported earnings in order to mislead investors about firms’ true performance. Based on AT, managers do not bear the wealth effects of their decisions and are profit maximisers. In terms of TCE, managers are given to opportunism and have the feasible foresight. Thus, they are likely to dress-up the firms’ apparent performance in order to gain private benefits. While AT is mostly applied to study EM in the literature, the application of TCE is relatively underdeveloped. This thesis contributes to the literature by directly applying TCE to accounting manipulations.

Based on the Western experiences, three incentives of conducting EM have been indentified in the literature, such as capital market motivations (e.g., management buyouts, IPOs, SEOs), contracting incentives (e.g., lending covenants, executive compensation), and regulatory incentives (e.g., import relief, tariff). While EM has also been rampant in China, Chinese listed companies manipulate their earnings dramatically in order to meet the ROE requirements for additional shares issuing and/or to avoid being delisted. For the performance-related executive compensation, to my best knowledge, there is no published study to empirically examine the relationship between it and EM in China. A detailed analysis of this phenomenon will be provided in the next chapter.

And finally, based on McNichols (2000; 2002), three measurements of accrual-based EM have been reviewed briefly, including: (1) aggregate accruals models, (2) specific accrual models, and (3) frequency distribution approach.
Table 5.3.: A summary of the empirical studies about incentives of EM

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perry &amp; Williams</td>
<td>U.S.</td>
<td>A sample of 175 MBOs during 1981-88</td>
<td>• Dependent variable: EM (discretionary accruals)</td>
<td>The results indicate that unexpected accruals are negative (income-decreasing) prior to a management buyout.</td>
</tr>
<tr>
<td>Wu Y.W. (1997)</td>
<td>U.S.</td>
<td>A sample of 87 MBO cases during 1980-1987</td>
<td>• Dependent variable: EM (discretionary accruals)</td>
<td>The overall evidence favour the hypothesis that managers manipulated earnings downwards prior to the MBO proposal. The potential benefit from earnings manipulation is estimated to be almost $500 million on average for the sample firms.</td>
</tr>
<tr>
<td>Wright et al.,</td>
<td>U.K. &amp; U.S.</td>
<td>A sample of 92 U.K. and 63 U.S. MBO firms for the period of 1997-2002</td>
<td>• Dependent variable: discretionary accruals;</td>
<td>Their results indicate that managers in both the U.K. and U.S. manage earnings downwards prior to an MBO, with U.S. managers being significantly more aggressive than U.K. managers.</td>
</tr>
<tr>
<td>Wright &amp; Guan</td>
<td>U.S.</td>
<td>A sample of 74 MBO firms for year 1998</td>
<td>• Dependent variable: accounting method choice of firm / (e.g., FIFO, straight-line depreciation, and flow-through method for the investment tax credit)</td>
<td>Management of the MBO firms tend to use income increasing accounting policies over some period of time prior to the MBO. Then, in the year immediately prior to the buyout, managers may act to lower reported earnings through the use of negative discretionary accruals.</td>
</tr>
<tr>
<td>Chou et al.,</td>
<td>U.S.</td>
<td>A sample of 247 reversed LBOs during 1981-1999</td>
<td>• Dependent variable: current discretionary accruals (using Modified Jones Model)</td>
<td>They find positive and significant discretionary current accruals coincident with offerings of reverse LBOs. They also find a negative and significant relation between abnormal accruals and post-issues abnormal returns within the first year after the offering.</td>
</tr>
</tbody>
</table>

128
Table 5.3: A summary of the empirical studies about incentives of EM (continued)

**Capital Market Motivations**—MBOs, LBOs, SEOs, IPOs, share-financed acquisitions, analysts’ forecasts

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
| Teoh et al., (1998b) | U.S. | A sample of 1,265 SEOs firms during 1976-1989 | • Dependent variable: discretionary accruals (using Modified Jones Model)  
  • Independent variable: Long-horizon mean abnormal returns | They find that discretionary accruals grow before the offering, peak in the offering year, and decline thereafter. This accruals pattern causes net income to grow before, peak in, and decline after the offering year. The post-issue net income is especially pronounced for issuers that aggressively manage discretionary accruals before the issue. |
  • Independent variables: earnings changes and market-adjusted stock returns | The author finds that SEOs firms significantly manage their earnings upwards before the offering suggesting managers engage in EM to meet the thresholds of stock offerings. And, he also documents that discretionary accruals are negatively correlated with both earnings changes and market-adjusted stock returns in the year following the offerings. |
| Yoon & Miller (2002) | Korea | A sample of 249 SEOs for year 1995-1997 | Three testing models: accrual difference tests, correlation tests between net income and CFO, and sign-change ratio tests | They find that the Korean firms contemplating SEOs in the prior year do manage earnings particularly when their relative performances have been poor. The results are robust irrespective of control samples. |
| Lee & Masulis (2009) | U.S. | A sample of 963 SEOs for year 1990-2002 | • Dependent variable: Underwriter gross spread—underwriter’s purchase price for a share of the SEO as a percent of the offer price  
  • Independent variable: discretionary accruals (Dechow and Dechew earnings accruals model (2002)) | According to their findings, firms aggressively manipulate earnings upwards in the year prior to the SEOs. And, they also find that poor accounting information quality (represented by the discretionary accruals) is associated with higher flotation costs in terms of (1) larger underwriting fees, (2) larger negative SEO announcement effects, and (3) a higher probability of SEO withdrawals. |
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
• Independent variable: annual income performance                                        | They find that issuers who adjust discretionary current accruals to report higher net income prior to the offering have lower post-issue long-run abnormal stock returns and net income. Interestingly, they also show that the relation between discretionary current accruals and future returns is stronger and more persistent for seasoned equity issuers than for non-issuers. |
• Independent variables: wealth loss (the number of new share offerings as the proxy) and control of the firm (directors' and stable shareholders' shareholdings as the proxies) | They argue that IPO issuers have the incentives to manage earnings to reduce the amount of wealth transfer and keep control of the firm. Their findings are consistent with the first expectation by saying that firms issuing a large number of new shares manage earnings aggressively to reduce wealth transfer. However, contrary to their expectation, there is no significant association between the level of insider ownership and abnormal accruals. |
• Independent variable: Current Discretionary Accruals (using Modified Jones Model)                      | They find that discretionary current accruals (DCA) in the IPO year, as a proxy for EM, are significantly and positively related to the probability of involuntary delisting after IPO. Thus, IPO firms associated with aggressive EM are more likely to delist for performance failure, and tend to delist sooner. Furthermore, they find that IPO firms associated with conservative EM are more likely to be merged or acquired and they earn positive abnormal returns. |
| Botsari & Meeks (2008) | U.K.    | A sample of 42 companies for year 1997-2001 (involved 48 cases of share-financed acquisitions) | The distribution approach of discretionary accruals (using standard Jones and Modified Jones Model) | The results suggest that acquiring companies engage in income-increasing accrual manipulation in the year immediately preceding the offer announcement, and that this manipulation is mostly concentrated on the working capital component of accruals. |
### Table 5.3.: A summary of the empirical studies about incentives of EM (continued)

#### Capital Market Motivations—MBOs, LBOs, SEOs, IPOs, share-financed acquisitions, analysts’ forecasts

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albarbanell &amp; Lahavy (2003)</td>
<td>U.S.</td>
<td>A sample of 22,173 financial analysts’ recommendations for 1985-1998</td>
<td>• Dependent variable: quarterly unexpected accruals (using Modified Jones Model)</td>
<td>They find a tendency for firms rated a Sell (Buy) to engage more (less) frequently in extreme, income-decreasing EM, indicating that they have relatively stronger (weaker) incentives to create accounting reserves especially in the form of earnings baths than other firms. In contrast, firms rated a Buy (Sell) are more (less) likely to engage in EM that leaves reported earnings equal to or slightly higher than analysts’ forecasts.</td>
</tr>
<tr>
<td>Burgstahler &amp; Eames (2006)</td>
<td>U.S.</td>
<td>A sample of 25,951 analysts’ forecasts for year 1986-2000</td>
<td>• Dependent variable: Discretionary Accruals (using Modified Jones Model)</td>
<td>They provide empirical evidence of both (1) upward management of reported earnings, and (2) downward ‘management’ of analysts’ forecasts to achieve zero and small positive earnings surprise.</td>
</tr>
<tr>
<td>Chen et al., (2008)</td>
<td>U.S.</td>
<td>A sample of 6,685 firms for year 1987-2006</td>
<td>• Dependent variable: Discretionary Accruals (using Modified Jones Model) and CFO (cash flow from operations as the measurement for real EM)</td>
<td>Their findings suggest that firms engage in both accruals and real-based EM to meet or beat analysts’ expectations in order to get their equity to be valued as premium by the market. However, comparing with the control firms that do not engage in EM, market discounts the magnitude of this premium by approximately one-third at earnings announcement day when EM practices are acknowledged.</td>
</tr>
</tbody>
</table>

#### Contracting Motivations—lending covenants, dividends constraints, and executive compensation plan

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defond &amp; Jiambalvo (1994)</td>
<td>U.S.</td>
<td>A sample of 139 firms for year 1988-1992</td>
<td>• Dependent variable: Discretionary Accruals (using Modified Jones Model)</td>
<td>They find that the sample firms accelerate earnings one year prior to the covenant violation.</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Country</td>
<td>Sample Size</td>
<td>Methodology</td>
<td>Results</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------</td>
<td>---------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Sweeny (1994)</td>
<td>U.S.</td>
<td>A sample of 150 firms for year 1980-1990</td>
<td>• Dependent variable: Discretionary Accruals (using Modified Jones Model)</td>
<td>She shows that covenant violators make income-increasing accounting changes, but these typically take place after the violation. This finding indicates that the sample firms did not make accounting changes specifically to avoid violating the lending covenant.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variable: debt covenant period</td>
<td></td>
</tr>
<tr>
<td>Prevost et al., (2008)</td>
<td>U.S.</td>
<td>A sample of 14,855 firm-year observations for 1993-2005</td>
<td>• Dependent variable: Discretionary Accruals (using Modified Jones Model)</td>
<td>They find evidence suggesting that one of the main objectives/incentives of EM is to avoid debt covenant violations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variable: bonds</td>
<td></td>
</tr>
<tr>
<td>Moeira &amp; Pope (2007)</td>
<td>U.K.</td>
<td>A sample of 1,138 firms for year of 1976-1994</td>
<td>• Dependent variable: dummy variable (1 if net income is in the interval 0-0.0025; 0 if the firms have deflated net income in the interval -0.0025-0)</td>
<td>They argue that firms with negative returns in the period face a higher incentive to undertake EM, and their ultimate intention is to hide from credit markets a signal (loss) that could negatively affect their cost of debt.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variable: debt</td>
<td></td>
</tr>
<tr>
<td>DeAbgelo et al., (1994)</td>
<td>U.S.</td>
<td>A sample of 76 financially troubled firms for year 1990-1994</td>
<td>• Dependent variable: total accruals</td>
<td>They find no significant difference in total accruals for firms with and without binding debt constraints.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variable: with or without binding debt constraints</td>
<td></td>
</tr>
<tr>
<td>Healy &amp; Palepu (1990)</td>
<td>U.S.</td>
<td>A sample of 126 firms for year 1980-1990</td>
<td>A comparative approach between accrual changes and dividend restriction.</td>
<td>They find no evidence that these firms make accrual changes to circumvent the dividend restriction.</td>
</tr>
<tr>
<td>Daniel et al., (2007)</td>
<td>U.S.</td>
<td>A sample of S&amp;P 1,500 firms for year 1992-2005</td>
<td>• Dependent variable: Discretionary Accruals (using Modified Jones Model)</td>
<td>They find that firms whose discretionary accruals cause reported earnings to exceed expected dividend levels are significantly less likely to cut dividends than are firms whose reported earnings fall short of expected dividend levels.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variable: dummy variable: payer (1 = dividends paid, 0=otherwise)</td>
<td></td>
</tr>
</tbody>
</table>
Table 5.3.: A summary of the empirical studies about incentives of EM (continued)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
• Independent variable: current dividend payment | They document that firms manage earnings upwards in response from large institutional shareholders to pay dividend. |
• Independent variable: bonus plan for executives | They find that divisional manages for a large multinational firm are likely to defer income when the earnings target in their bonus plan will not be met and when they are entitled to the maximum bonuses permitted under the plan. |
• Independent variable: bonus plan for executives | They show that firms with caps on bonus awards are more likely to report accruals that defer income when that cap is reached than firms that have comparable performance but which have no bonus cap. |
• Independent variables: salary, bonus, option, restricted stock, long-term incentive plan, incentive intensity of restricted stock and stock options award(s), etc. | Their results show that EM intensity is related to managerial compensation contract design. In particular, the amounts of stock options and bonuses, and the incentive intensity of stock options, are positively related to EM intensity. |
• Independent variable: stock option compensation by salary, bonus, and stock option exercises | They find that relatively that relatively high option compensation is associated with income-decreasing discretionary accrual choices in periods leading up to option award dates. And, this association is stronger when managers are able to publicly announce earnings prior to the option award date. |
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bergstresser &amp; Philippon (2006)</td>
<td>U.S.</td>
<td>A sample of 4,671 firm-year observations for 1996</td>
<td>• Dependent variable: Discretionary Accruals (using Modified Jones Model)</td>
<td>They provide evidence that the use of discretionary accruals to manipulate reported earnings is more pronounced at firms where the CEO's potential total compensation is more closely tied to the value of stock and option holdings. In addition, during years of high accruals, CEOs exercise unusually large numbers of options and CEOs and other insiders sell large quantities of shares.</td>
</tr>
<tr>
<td>Denis et al., (2006)</td>
<td>U.S.</td>
<td>358 firms facing fraud allegations and 358 firms matched on size and industry for which there are no fraud allegations for the years of 1993-2002</td>
<td>• Dependent variable: a dummy variable of 1 if the firm is the target of a fraud allegation and 0 otherwise; • Independent variables: option intensity—is the change in the value of the executive's option portfolio from a $1000 change in the value of the firm's equity; ROA, Altman Z-score; Log(1+bonus); log(1+salary); Log(1+LTIP), etc</td>
<td>Their results show a significant positive association between the likelihood of securities fraud allegations and a measure of executive stock option incentives. They conclude by arguing that stock options increase the incentive to engage in fraudulent activity. In addition, they find that the positive relation between the likelihood of fraud allegations and option intensity is stronger in firms with higher outside blockholder and higher institutional ownership.</td>
</tr>
<tr>
<td>Efendi et al., (2007)</td>
<td>U.S.</td>
<td>190 companies for the years of 1997-2002: 95 restating firms and their control firms</td>
<td>• Dependent variable: dichotomous variable of 1 for restating firms 0 otherwise; • Independent variables: salary, bonus and options to salary, restricted stock holdings to salary, in the money options to salary, Res. Stock grant to salary, debt to asset and equity, CEO in board etc.</td>
<td>Their results suggest that the likelihood of a misstated financial statement increases greatly when the CEO has very sizable holdings of in-the-money stock options. Additionally, misstatements are also more likely for firms that are constrained by an inter-coverage debt covenant, that raise new debt or equity capital, or that have a CEO who serves as board chair.</td>
</tr>
</tbody>
</table>
Table 5.3.: A summary of the empirical studies about incentives of EM (continued)

**Contracting Motivations**—lending covenants, dividends constraints, and executive compensation plan

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
• Independent variable: CEO compensation package, including salary, stock options, bonus, etc. | It is suggested that the use of discretionary accruals in Japanese firms increases executive compensation, especially the stock options. |

**Regulatory Motivations**—industry specific, anti-trust, anti-dumping regulations

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
| Key (1997) | U.S. | A sample of 24 firms for year 1984-1996 | • Dependent variable: Total Accruals  
• Independent variables: gross property, plant, equipment, gross intangible assets, and a dummy variable to distinguish the period of Congressional scrutiny and non-scrutiny. | Her evidence suggests that Discretionary accruals for cable TV firms are more negative in Congressional scrutiny time periods than in non-scrutiny time periods. |
• Independent variable: dummy variable to distinguish the period during and one year prior to the anti-dumping investigations | Their results indicate that Canadian firms reduce their reported earnings by a significant amount (6.3% of lagged assets) during the year in which they are under investigation by the tribunal. |
Table 5.3.: A summary of the empirical studies about incentives of EM (continued)

<table>
<thead>
<tr>
<th>Regulatory Motivations — industry specific, anti-trust, anti-dimpling regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author(s)</td>
</tr>
<tr>
<td>Gill-de-Albornoz &amp; Illueca (2005)</td>
</tr>
<tr>
<td>Garrod et al., (2007)</td>
</tr>
</tbody>
</table>

Table 5.4.: A summary of the empirical studies about incentives of EM in China.

<table>
<thead>
<tr>
<th>Capital Market Incentives of EM in China — SEOs, and IPOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author(s)</td>
</tr>
<tr>
<td>Haw et al., (2005)</td>
</tr>
</tbody>
</table>
Table 5.4.: A summary of the empirical studies about incentives of EM in China (continued).

### Capital Market Incentives of EM in China—SEOs, and IPOs

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
  • Dummy variable: 1=firm i’s operating ROE<10 percent in year t, and 0 otherwise.                                                                 | Their results suggest that many firms in China are still able to gain rights issues approval through excess EM. They also show that these firms subsequently underperform other approval firms that do not use the same practice. |
| Huang et al., (2006) | China   | A sample of 2,046 firm-year A-share observations over 1996-98                | Examine EM measured by (discretionary accruals; real EM activities concerning below-the-line items and the above-the-line) of the suspect firms measured by (firms are in the range 9%≤ROE<11%, 0 otherwise) | Their main findings are that real and accounting EM activities are significantly higher for firms in danger of missing a regulation imposed performance threshold, so called the suspect firms.                        |
  • Dependent variables: total accruals, industry-median-adjusted accruals, and discretionary accruals.  
  • Independent variables: mechanisms of corporate governance, i.e., ownership, independent director, leadership. | More generally, their results show that Chinese listed companies have strong incentives to manage earnings in order to meet ROE thresholds. Their results strongly argue that agency conflicts between controlling shareholders and minority investors account for a significant portion of EM in China’s listed companies. In addition, they also find that EM in China is mainly introduced by tunnelling. |
### Capital Market Incentives of EM in China—SEOs, and IPOs

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abarony et al., (2000)</td>
<td>China</td>
<td>A sample contains the entire population of 83 Chinese SEOs that issued to foreign investors B-Shares in Chinese domestic stock exchanges or H-Shares in the Hong Kong stock exchange for year 1992-1995</td>
<td>They use earnings performance, measured as return on assets (ROA), surrounding the IPO year to document evidence of EM.</td>
<td>By analysing the behaviour of ROA in the two years preceding and three years following the IPO. They found that the median firm ROA peaks in the IPO year and declines thereafter.</td>
</tr>
<tr>
<td>Chen &amp; Shih (2006)</td>
<td>China</td>
<td>A sample of 884 companies both in the A-share and B-share markets over 1995-1999</td>
<td>Patterns analysis of several financial indicators, e.g., operating revenue growth rate, net profit growth rate, earnings per share, ROA, etc.</td>
<td>They provide evidence suggesting that companies tend to submit inflated figures in the financial statements they are required to provide to implement the IPOs procedures.</td>
</tr>
<tr>
<td>Wang (2005)</td>
<td>China</td>
<td>A sample of 747 firms that conducted IPOs on both the SHSE and SZSE over 1994-1999</td>
<td>Performance analysis of ROA, operating income to assets, sales to assets, returns on sales, etc. for each sample firm</td>
<td>He documents a sharp decline post-issue operating performance of IPO firms. One of the reasons for this trend is, as argued by the author, the pre-issue manipulating of reported earnings.</td>
</tr>
</tbody>
</table>

### Regulatory Incentives of EM in China—delisting policy

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chen et al., (2004)</td>
<td>China</td>
<td>A sample of 537 firms for year 1999-2004</td>
<td>A comparison approach by comparing the activities of discretionary accruals measured by the Modified Jones Model as the proxy of EM between pre-delisting policy period (1999-2000) and post-delisting policy (2002-2004)</td>
<td>They provide evidence suggesting an increasing trend in income-increasing discretionary accruals in the post-policy period. They further divide the sample into two sub-groups: one presents the firms with no-loss, and the other one stands for the loss-making firms. They show that while both groups have income-increasing accruals, the loss-making firms have higher discretionary accruals (at 1% significant level).</td>
</tr>
</tbody>
</table>
Table 5.4.: A summary of the empirical studies about incentives of EM in China (continued).

<table>
<thead>
<tr>
<th>Regulatory Incentives of EM in China—delisting policy</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Author(s)</strong></td>
<td><strong>Country</strong></td>
<td><strong>Sample Size</strong></td>
</tr>
<tr>
<td>Chen &amp; Wang (2004)</td>
<td>China</td>
<td>A sample of 2,202 observations (all A-share companies) over a four-year period from 1997-2000</td>
</tr>
<tr>
<td>Lee &amp; Cao (2002)</td>
<td>China</td>
<td>A sample of all A-Share companies for the period from 1992-1999</td>
</tr>
</tbody>
</table>
Table 5.5. Discretionary accrual proxies

<table>
<thead>
<tr>
<th>Panel A: Aggregate accruals models</th>
<th>Authors</th>
<th>Discretionary Accrual proxy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healy (1985)</td>
<td>Total accruals</td>
<td></td>
</tr>
<tr>
<td>DeAngelo (1986)</td>
<td>Change in total accruals</td>
<td></td>
</tr>
<tr>
<td>Leuz et al., (2003); Shen &amp; Chih (2007)</td>
<td>(1) the firm-level standard deviation of operating earnings divided by the firm-level standard deviation of cash flow from operations; (2) the correlation between changes in accounting accruals and operating cash flows; (3) the magnitude of accruals; and (4) the aggregate EM score.</td>
<td></td>
</tr>
<tr>
<td>Jones (1991)</td>
<td>Residual from regression of total accruals on change in sales and property, plant and equipment.</td>
<td></td>
</tr>
<tr>
<td>Modified Jones Model from Dechow et al., (1995)</td>
<td>Residual from regression of total accruals on change in sales and on property, plant and equipment, where revenue is adjusted for change in receivables in the event period.</td>
<td></td>
</tr>
<tr>
<td>Kang &amp; Sivaramakrishnan (1995)</td>
<td>Residual from regression of noncash current assets less liabilities on lagged levels of these balances, adjusted for increases in revenues, expenses and plant and equipment.</td>
<td></td>
</tr>
<tr>
<td>Dechow et al., (2003); Larcker &amp; Richardson (2004)</td>
<td>Residual from regression of total accruals on change in sales and on property, plant and equipment. And, two additional independent variables (BM and CFO) are introduced.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panel B: Specific accruals models</th>
<th>Authors</th>
<th>Discretionary Accrual proxy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroni (1992)</td>
<td>Claim loss reserve estimation error, measured as the firm year development of loss reserves of property casualty insurers.</td>
<td></td>
</tr>
<tr>
<td>Beaver &amp; Engel (1996)</td>
<td>Residual allowance for loan losses, estimated as the residual from a regression of the allowance for loan losses on net charge-offs, loan outstanding, nonperforming assets and one year ahead change in nonperforming assets.</td>
<td></td>
</tr>
<tr>
<td>Beneish (1997)</td>
<td>Days in receivables index, gross margin index, asset quality index, depreciation index, selling general and administrative expense index, total accruals to total assets index.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panel C: Frequency distribution approach</th>
<th>Authors</th>
<th>Test for EM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burgstahler &amp; Dichev (1997)</td>
<td>Test whether the frequency of annual earnings realisations in the region above (below) zero earnings and last year’s earnings is greater (less) than expected.</td>
<td></td>
</tr>
<tr>
<td>Degeorge et al., (1999)</td>
<td>Test whether the frequency of quarterly earnings realisations in the region above (below) zero earnings, last quarter’s earnings and analysts’ forecasts is greater (less) than expected.</td>
<td></td>
</tr>
<tr>
<td>Myers et al., (2006)</td>
<td>Test whether the number of consecutive earnings increases is greater than expected absent EM.</td>
<td></td>
</tr>
</tbody>
</table>

Chapter 6: Earnings Management and Corporate Governance
6.1. Introduction

Based on the theoretical review of both TCE and AT, the analysis of corporate governance with special attention to the system in China, and the illustration of the definition, incentives, and measurements of EM, the purpose of this chapter is to critically review the main empirical studies that investigate the impacts of corporate governance mechanisms on EM practices with regard to the Western experiences and China’s setting correspondingly. Given that the primary objective of this thesis is to examine the impacts of the China’s Code (2002), key governance mechanisms enforced by the Code are reviewed. These include the executive compensation, board independence, audit committee, statutory auditor, institutional shareholders, and controlling shareholders.

In addition to reviewing the empirical studies of corporate governance, a series of summary tables which can be found at the end of this chapter have been created. The purpose of these tables is to complement the discussion in the chapter and also to sum up the main characteristics and conclusions of these studies.

The structure of this chapter is tabulated as followings:

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1.</td>
<td>Introduces the chapter; section 6.2. reviews executive compensation; 6.3.</td>
</tr>
<tr>
<td></td>
<td>studies board independence and EM from global and Chinese evidence respectively;</td>
</tr>
<tr>
<td>6.2.</td>
<td>section 6.4. studies the empirical research on both the internal and external audit;</td>
</tr>
<tr>
<td>6.3.</td>
<td>section 6.5. analyses the studies on institutional shareholders; section 6.6.</td>
</tr>
<tr>
<td>6.4.</td>
<td>focuses on the controlling shareholders; and finally section 6.7. provides the summary.</td>
</tr>
<tr>
<td>6.5.</td>
<td></td>
</tr>
<tr>
<td>6.6.</td>
<td></td>
</tr>
<tr>
<td>6.7.</td>
<td></td>
</tr>
</tbody>
</table>

Section 6.1. introduces the chapter; section 6.2. reviews executive compensation; 6.3. studies board independence and EM from global and Chinese evidence respectively; section 6.4. studies the empirical research on both the internal and external audit; section 6.5. analyses the studies on institutional shareholders; section 6.6. focuses on the controlling shareholders; and finally section 6.7. provides the summary.
6.2. Executive Compensation

6.2.1. Global Evidence of Executive Compensation

Recall from the previous chapter, the theoretical view on the effectiveness of executive compensation proposed by AT is contradictory to the argument originated from TCE. In brief, by tying executive compensation to performance (measured by different criteria, e.g., profitability, stock price, growth), it encourages managers to make operating and investing decisions that can maximise shareholders’ wealth. State differently, by linking compensation of executives with changes in shareholders’ wealth, it can reduce the conflict of interests or agency problem (David et al., 2006). And, the classical AT argues that a well-designed compensation contract as an ex-ante alignment is to ensure the objectives of executives and shareholders are aligned, and so share options and other long-term incentives are the key mechanisms (Conyon, 1997; 2006). In contrast, TCE proposes that in transaction between executives and shareholders, as executives engage in high level of human asset specificity and shareholders engage in dedicated asset specificity, these two parties are said to be bilaterally dependent. Tying executive compensation strategy to firm’s performance through long-term incentives (such as stock options) increases the level of bilateral dependence due to executives’ involvement in both the specific human asset and the specific monetary asset, thus the transactions costs involved (Williamson, 1991; 1996). As shareholders usually use financial information to evaluate the executives’ performance, executives may largely be motivated to engage in EM practices: (1) to mislead the shareholder of company performance (a negative performance may make shareholders to prematurely terminate the transaction with managers, and they may lose more than before due to increased transaction costs); (2) to negotiate a better compensation package with shareholders. By putting all together, TCE argues that remuneration strategy as an ex ante alignment may not be an effective mechanism to prevent opportunistic discretion given the written contracts are never complete and managers are given to be opportunism.

Empirical studies provide consistent results with the argument proposed by TCE that executive compensation, especially the equity-based components motivates executives to engage in EM practices. While a detailed analysis of the empirical studies has been provided in the previous chapter, the followings give a brief review of them.
Based on the data of 117 and 64 US firms, Guidry et al., (1999) and Holthause et al., (1995) study the impact of bonus plan on executives' EM practices. In general, Guidry et al., (1999) provide evidence suggesting that managers for a large multinational firm are likely to defer income when the earnings target in their bonus plan will not be met and when they are entitled to the maximum bonuses permitted under the plan. While Holthause et al., (1995) find no evidence that managers manipulate earnings downwards when they are below the lower bound of their contract, but they report that executives manipulate earnings downwards when they are at the upper bound of their bonus contracts in order to increase the present value of payments from those bonus plans. However, with relatively small sample size, both studies may suffer the power in generalising their findings.

More recently, researchers draw their attention especially to the impacts of stock options with larger sample size. Based on 7,301 US firm-year observations over 1992-1999, Gao and Shrieves (2002) find that both the amounts and intensity of stock options are significantly related to EM intensity. For 168 US firms, Baker et al., (2003) study whether stock options relative to other forms of pay is associated with opportunistically use of discretionary accruals in reported earnings. The findings release that high option compensation is associated with more income-increasing discretionary accrual choices in periods leading up to option award dates in order to raise the stock price, thus the exercise price. By investigating the correlation between discretionary accruals and stock options of 4,671 firm-year observations in the US over 1993-1996, Bergstresser and Philippon (2006) provide evidence suggesting that the use of discretionary accruals to manipulate reported earnings is more pronounced in firms where the executives' potential total compensation is closely tied to the value of stock and option holdings. In addition, during years of high accruals, executives exercise unusually large numbers of options and other insiders sell large quantities of shares. And, Shuto (2007) studies 240 Japanese firms and documents that the use of discretionary accruals in Japanese firms increases with performance-related executive compensation, especially the stock options.

Instead of investigating the direct link between EM practices and executive compensation, Denis et al., (2006) study the likelihood of securities fraud allegations based on 358 US firms over 1993-2002. Their results are consistent with those that
directly study EM practices since they report a significant positive correlation between the likelihood of securities fraud allegations and the intensity of stock options. In addition, by focusing on 190 US companies contained 95 financial reports restating firms for the years of 1997-2002, Efendi et al., (2007) find that the likelihood of a misstated financial statement increases greatly when the CEO has very sizable holdings of in-the-money stock options.

6.2.2. China’s Evidence of Executive Compensation
To my best knowledge, there is no published study to empirically investigate the impact of executive compensation on EM practices in China’s listed companies. It thus still remains unclear whether performance-related executive compensation in China is used as an incentive of managers to engage in EM practices as proposed by TCE or should be considered as an alignment mechanism (AT) that encourages managers to make operating and investing decisions that maximise shareholder wealth, thus limiting the level of EM.

In line with the AT, this study follows its major arguments on performance-related executive compensation in China. In particular, it is conjectured that by tying executive compensation to firms’ performance in China, opportunistically discretionary behaviours of the managers in China’s firms may be limited as their interests are aligned with those of the shareholders, thus limiting the level of EM behaviours. There are two possible reasons, including the China’s executive compensation reforms started in the 1980s but awaited more systematic and operational developments until the 2000s, and the unique compensation structure in China.

Firstly, the reforms of executive compensation in China have been largely influenced by the market-oriented reforms since 1978. In China’s centrally planned economy prior to the reforms, all the enterprises were State owned and their profits were all repatriated to the State. There were neither incentive schemes, nor profit sharing schemes for managers. Sun and Tong (2003) argue that managers seemed to be isolated or semi-isolated as there was no connection at all between them and the enterprises they served prior to the reforms; under such a circumstance, no matter how much you did, how well you did, and how quickly you did for your jobs, you would be paid same. In the 1980s, the Chinese economy reforms took place with one of the major
objectives to introduce profit retention or profit sharing schemes. In other words, managers started to be rewarded by their performance in the firms (Groves et al., 1994; 1995). However, the process of establishing a fully-functional executive compensation system is slow in China (Clarke, 2007; Cooper, 2008), and more systematic and operational developments waited until the 2000s. Argued by Mallin (2007), in the past 10-plus year, there appears a increasing tendency as well as a demand from employees in Chinese companies, particularly at the higher levels where an awareness of the Western practices is more apparent, to link compensation with performance. Chen et al., (2010) provide evidence suggesting that the developments of the Chinese executive compensation system have been largely influenced by the recent global governance convergence and the introduction of foreign investments. And, the China’s Code (2002) states that “to attract qualified personnel and to maintain the stability of management, a listed company shall establish rewarding systems that link the compensation for management personnel to the company’s performance and to the individual’s work performance” (Chapter 5, Section 3, p.77).

By checking the firms’ annual reports, it confirms with the argument that, until recently, more Chinese companies have directly linked the management compensation to their firms’ performance which is usually measured by the annual net profit. For instance, Wanke Enterprise Ltd. (Code: 000002) states in its 2003 annual report that the compensation of the management team is based on the increased rate of annual net profits. In its 2004 annual report, Nanbo Ltd. (Code: 000012) announces that the compensation plan of the top executives should be proposed by the compensation committee and reviewed and evaluated by the board of directors. The measurement standard is based on the yearly net profits. Only few haven’t but are trying to establish a performance-based compensation for their management team. Dingli Technical Development Ltd. (Code: 600614) in its 2004 annual report states that they haven’t established the assessment system that links the performance with compensation for their top management team, but they are trying to build one in the near future with efforts.

By putting all together, it is conjectured that due to the move from an executive compensation system that was entirely separated from the performance in the 1980s to a more systematic and operational performance-based system developed until the 2000s,
the interests of executives may be aligned with those of the firms/shareholders. The
executives may be more likely to focus on improving the performance of the firms as
they will be paid more for any efficient works. Theoretically, it encourages executives
to make operating and investing decisions that can maximise the value of shareholders,
thus limiting their incentives of behaving opportunistically at expense of shareholders.

Secondly, in perspective of the Western counties, the equity-based executive
compensation is widely used and it could account for more than 50% or even a higher
proportion of the total compensation awarded to the executives (Jensen and Murphy,
2004). However, the effectiveness of such a compensation strategy is often challenged
and largely blamed as the root cause of EM practices. As reviewed previously, the
empirical studies in the recent corporate governance literature provide consistent results
suggesting that EM practices (mostly measured by discretionary accruals) and/or other
opportunistic behaviours (e.g., accounting fraud, restating financial statements,
providing misleading financial information) are concurrent with the use of equity-based
compensation. It is argued that stock-option components provide incentives that
motivate executives to exploit their discretion in reported earnings and other
opportunistic behaviours (e.g., Baker et al., 2003; Cohen et al., 2008; Gao and Shrieves,
2002; Shuto, 2007). The assumption underneath is that by artificially improve
companies’ apparent performance through EM practices, especially prior to the options
exercise date, it ensures executives getting better rewards.

In contrast to the Western countries, managerial and director shareholding are
very small and executive stock option schemes are rare due to the dominant hierarchy
structure of the authority in China’s companies (Chen et al., 2006; Chen et al., 2010;
Firth et al., 2006). Statistically, executives’ shareholding was only about 0.0042% in
2000, but further decreased to 0.0032% by the end of 2006 (compile from firms’ annual
reports). In addition, by the end of 2006, over 60% the stocks of Chinese listed
companies are still non-tradable, which means they could not be traded in the secondary
market, accordingly, it is hard to price them. Stock price is not a sufficient indicator of
firm value (Chen et al., 2010). Therefore, stock options or stock ownership could hardly
be considered as an incentive of engaging in EM practices for executives in Chinese
listed firms as they are not commonly used.
In summary, given that the lack of stock options utilised in China which have been largely blamed as the root cause of EM practices based on the Western experiences, tying executive compensation to performance may become a mechanism to align the interests of managers with those of the shareholders, thus encourage them to act on behalf of shareholders and limit their opportunistically discretionary behaviour—EM.

6.3. Board Independence

6.3.1. Global Evidence of Board Independence

Based on the literature, both TCE and AT have mentioned the role of the board to monitor or safeguard opportunistic behaviours. In terms of TCE, a board is created and awarded to equity that is elected by the pro-rata votes of those who hold tradable shares; has the power to replace management; decides on management compensation; has access to internal performance measures on a timely basis; can authorise audits in depth for special follow-up purposes; is apprised of important investment and operating proposals before they are implemented, and in other respects bears a decision-review and monitoring relation to the firm’s management. The board thus evolves as a way by which to reduce the costs of capital for projects that involve limited redeployability. The “board of directors should be considered as a governance structure whose principle purpose is to safeguard those who face a diffuse but significant risk of expropriation because the assets in question are numerous and ill-defined, and cannot be protected in a well-focused, transaction-specific way” (Williamson, 1984a, p.1197).

In perspective of AT, the monitoring control force in open corporation is delegated by residual claimants to the board. Residual claimants generally retain approval rights (by vote) on such matters as board membership, auditor choice, mergers and new stock issues. Other management and control functions are delegated by the residual claimants to the board (Jensen, 2004; 2005). The board then delegates most decision management functions and many decision control functions to its sub-committees, but it retains ultimate control over internal agents, including the rights to ratify and monitor major policy initiatives and to hire, fire, and set the compensation of top level decisions managers (Jensen, 2004).

For the board composition, both theories argue that the board should be composed of both insider and outsiders. On one hand, it is natural to believe that internal managers
are the most influential members since they have valuable specific information, for example the information about the daily operations, the capital structure of a specific investment, the corporate law, and so forth. Such information can act as an important support to the top managers in dealing with special decision problems (Jensen, 2004; 2005; Williamson, 1984a). On the other hand, since managers enjoy more informational advantages because of their full-time status and inside knowledge, the participating board may easily become an instrument of the management (Williamson, 1984a). Similarly, as expressed by Jensen (2004, p.886), “the board is not an effective device for decision control unless it limits the decision discretion of individual top managers...this signals the absence of separation of decision management and decision control, and, in our theory, the organisation suffers in the competition for survival.” In other to handle this problem, both theories argue that corporate boards should include independent non-executives directors, that is, members who are not internal managers, and they should hold a majority of seats. The outside board members act as a monitoring mechanism and as arbiters in disagreements among internal managers and carry out tasks that involve serious agency problems between internal managers and residual claimants, for instance, setting executive compensation or searching for replacements for top managers (Fama and Jensen, 1983b; Jensen, 2004; 2005; Williamson, 1984a).

More recently, Monks and Minow (2008) argue that it is recognised that the board as the most important control mechanism available because it forms the apex of a firm’s governance structure. In a similar vein, Clarke (2007, p.33) states that “the board of directors is the fulcrum of corporate governance: the critical nexus in which the fortunes of the company are decided”. And, Stiles and Taylor (2002, p.4) propose that “the board is the link between shareholders of firm and managers entrusted with undertaking the [operations] of the organisation.” For the independent non-executive directors, Wearing (2005) suggest that because the independent non-executive directors usually have no personal financial interest, no potential conflict of interests arising from day-to-day involvement in running the business, they thus can exercise an impartial judgement over the fairness of executives’ self-dealings. It can be said that the board dominated by independent non-executives permit an adequate oversight function of top management (Dedman, 2002; Hopt and Leyens, 2004; Johnson et al., 1996; Karpoff et al., 1996; Klein, 2002).
The majority of empirical literature, which is mainly based on the Western security markets, has confirmed a positive correlation between the independence and monitoring effectiveness of the board. While there are studies that directly examine the correlation between board independence and EM practices largely measured by discretionary accruals, other studies provide implicit evidence on the correlation between board independence and other opportunistically discretionary behaviours, such as accounting fraud, violations of accounting policies, and providing the misleading financial information. The followings start with analysing the direct evidence, and then review the implicit results.

Using 630 UK firms, Peasnell et al., (2000) examine whether the associate between board composition and EM activity differs between the pre- and post-Cadbury periods. EM is measured by the use of income-increasing abnormal accruals calculated using the Modified Jones Model when unmanaged earnings undershoot target earnings. Results provide evidence of accrual-based EM to meet earnings targets in both periods. However, “...[our] results for the post-Cadbury period indicate less income-increasing accrual management to avoid earnings loss or earnings declines when the proportion of non-executive directors is high” (Peasnell et al., 2000, p.415). In conclusion, they argue that the appropriately structured boards are discharging their financial reporting duties more effectively post-Cadbury.

Furthermore, Peasnell et al., (2005) investigate whether the incidence of EM by UK firms (the sample size is 1,271 firms) depends on board monitoring over the period of 1993-1996. Consistent with their previous study on the impact of the Cadbury report, they show that the likelihood of managers making income-increasing abnormal accruals to avoid reporting losses and earnings reductions is negatively related to the proportion of outsiders on the board. They also find that the change of abnormal accruals being large enough to turn a loss into a profit or to ensure profit does not decline is significantly lower for firms with a high proportion of outside board members. Thus, they conclude by stating that boards contribute towards integrity of financial statements.

Based on a sample of 692 S&P firms for period of 1992-1993, Klein (2002) examines whether board characteristics are related to EM by firm. To operationalise this study, abnormal accruals calculated from the Modified Jones Model are used as the
proxy of EM, and the matched-portfolio method to adjust the absolute value of
abnormal accruals is also introduced. The results show a significantly negative
correlation between the board independence and abnormal accruals. Reductions in
board or audit committee independence are accompanied by large increases in abnormal
accruals. Hence, the author concludes that boards structured to be more independent
from the CEO are more effective in monitoring the corporate financial accounting
process.

Xie et al., (2003) investigate the relation between EM and structure, background,
and composition of a firms’ board of directors. They are particularly interested in the
role played by outside directors and their background in corporations, finance, or law.
By using discretionary accruals calculated from the Modified Jones Model and 282 US
firm-year observations during the period of 1992-1996, they report that EM is less
likely to occur or occurs less often in companies whose boards include both more
independent outside directors and directors with corporate experiences. They also find
an associate between lower level of EM and meeting frequency of the boards. Thus,
they conclude that board activity influences members’ ability to serve as effective
monitors, and “…the recommendations of this panel appear, in our sample, to make
boards more effective monitors of corporate financial reporting” (Xie et al., 2003,
p.314).

Kao and Chen (2004) examine the correlation between board characteristics and
EM. They argue that management of a firm may engage in EM for their own benefits.
However, under proper governance system, the board of directors might be able to
monitor the firm and prevent management from engaging in EM. By analysing the
relation between the absolute value of discretionary accruals calculated from the
Modified Jones Model and several characteristics of the board (e.g., size, independence)
of 1,097 Taiwanese firms in 2002, they provide evidence suggesting that when the
board size is large, extent of EM is high. Further, they divide their sample into
electronic and non-electronic firms and find that while there is no significant
correlation in the electronic firms, discretionary accruals are significantly and
negatively related to the number of independent directors on the board in the non-
electronic firms. Thus, they confirm that the more outside directors on the board, the
more efficient monitoring can be provided and thus the less extent of EM.
Furthermore, Ebrahim (2007) examines the relation between EM behaviour and activity of both the board and audit committee. By using the Modified Jones Model to calculate discretionary accruals, and a sample of 2,360 US firm-year observations in the period of 1999 and 2000, the results indicate that the absolute value of abnormal accruals is negatively related to the proportion of independent directors on the board and the audit committee. It is thus argued that introducing independent non-executive directors on the board and its sub-committees can effectively mitigate EM practices through constrain opportunistic behaviours. In addition, results also show consistent and significantly negative correlation between EM and both institutional ownership in the firm and quality of its outside audit.

The followings highlight the studies that investigate the effectiveness of board independence on mitigating other opportunistically discretionary behaviours, such as accounting fraud, violations of accounting policies, and providing the misleading financial information. For instance, Beasley (1996) examines the relation between the board composition and occurrence of financial statement fraud. The main objective is to test the prediction of number of outsiders on the board is lower for firms experiencing financial statement fraud than no-fraud firms. In order to carry out this study, a paired sample methodology is utilised by which “firms in the same industry of comparable size and capital structure and with a significantly different proportion of outside directors on the board are paired” (Beasley, 1996, p.450-452). Based on the results from logit regression analysis of 75 fraud and 75 no-fraud US firms over 1979-1990, the results indicate that no-fraud firms have the board with significantly higher proportion of outside members than fraud firms. Additionally, as outside director ownership in the firm and outside director tenure on the board increase, and as the number of outside directorships in other firms held by outsiders decreases, the likelihood of financial statement fraud decreases. Thus, he concludes that “board composition is more important for reducing the likelihood of financial statement fraud...the supplement analysis shows that not only does board composition significantly affect the likelihood of financial statement fraud, but board size and certain outside director characteristics also affect [this likelihood]…” (Beasley, 1996, p.463).

In the similar vein, Dechow et al., (1996) investigate firms subject to accounting enforcement actions by the SEC for alleged violations of the US-GAAP. The aim of the
study is to investigate whether the likelihood of earnings manipulation is systematically related to the weaknesses in oversight of management. Based on a sample of 92 firms subject to enforcement actions by the SEC between 1982 and 1992 (and 92 control firms), they find that an important motivation for earnings manipulation is the desire to attract external financing at low cost. For corporate governance, they report evidence suggesting that firms manipulate earnings are: (i) more likely to have the board dominated by the management, (ii) more likely to have a CEO who simultaneously serves as the Chairman of the board, (iii) more likely to have a CEO who is also the firm’s founder, (iv) less likely to have an audit committee, and (v) less likely to have an outside blockholder. In conclusion, they state that “poor oversight of management through weak governance structure is an important catalyst for earnings manipulations...[and] the desire to raise external financing at low cost represents an economically significant motivation for earnings manipulation that has received relatively little attention in previous academic research” (Dechow et al., 1996, p.30-31). However, with such small sample size, the pervasiveness and magnitude of the effectiveness of independent non-executive directors may not be well established in both studies.

By focusing on 989 observations from the US banking industry of 2000-2001, Zhou and Chen (2004) investigate the correlation between board characteristics and EM through loan loss provisions by commercial banks. They introduce and use both loan loss provision and discretionary loan loss provision models to operationalise their study. Their results provide evidence suggesting that banks with more active boards are associated with less EM. When they further classify firms into high and low EM groups, they find that the number of board meetings is negatively related to EM for low EM banks. For the high EM group, independence and size of the board play an important role in constraining EM practices.

On the other hand, there are those who point out outside directors may become effective monitors only if they have proper incentives (Park and Shin, 2004). Monks and Minow (2008) argue that directors become effective, not just because they have no economic ties to the company beyond their jobs as directors, but because they are significant shareholders. They note that disinterested outsiders can mean uninterested ones. In other words, outside directors are likely to be uninterested directors in
jurisdictions, where they have only token ownership interest, if any, in the firms they serve. It is argued that simply increasing board representation of outside directors does not, ipso facto, lead to an increasing reduction in EM.

Empirically, Park and Shin (2004) study the effect of board composition on practices of EM in Canada. For the research method, they use abnormal accruals calculated from the Modified Jones Model as the proxy of EM. They use two earnings targets: zero earnings and last fiscal year’s earnings. Firms are hypothesized to practice EM to meet these two targets. Using a sample of 202 Canadian firms over 1991-1997, they find that earnings are managed upwards to avoid reporting losses and earnings declines. While outside directors, as a whole, do not reduce abnormal accruals, directors from financial intermediaries reduce EM, and board representation of active institutional shareholders reduces it further. By investigating the impacts of the issuance of the Toronto Stock Exchange’s Corporate Governance Guidelines (1994), they do not find monitoring of abnormal accruals by outside directors, as whole, or by directors from financial institutions is more effective after the 1994 guidelines. They conclude their study by stating that adding outside directors to the board may not achieve improvement in governance practices by itself, especially in jurisdictions where ownership is highly concentrated and outside directors’ labour market is not well developed.

Implicitly, Ahmed et al., (2006) examine whether the information-usefulness of annual earnings varies with the faction of outside directors serving on the board and board size. Their model is an assessment of whether the association between earnings per share (EPS) and share returns (RET) varies as a function of the proportion of outside directors and board size, in which the association between EPS and RET is the proxy for the information usefulness of annual earnings. Using a panel data of 604 New Zealand (NZ) firms over 1991-1997, their results show that a smaller (larger) board size is positively (negatively) associated with earnings informativeness. This suggests that a smaller board size is more effective than a larger board in monitoring the quality of earnings. However, the fraction of outside directors does not appear to be significantly related to earnings informativeness. Furthermore, the authors examine the effect of the NZ Companies and Financial Reporting Acts 1993, overall, their results suggest that “...[the Acts] did not strengthen the relation between board size and outside board
representation and usefulness of earnings but at the same time did not seem to have weakened the relation significantly either” (Ahmed et al., 2006, p.428).

In summary, while both TCE and AT emphasize the monitoring role of the board in mitigating opportunistic discretion, but the empirical results are mixed. While some scholars (e.g., Beasley, 1996; Dechow et al., 1996; Peasnell et al., 2000; 2005) report significantly negative relation between outside directors (measured either by the absolute number or proportion) and EM practices coupled with other discretionary behaviours, others don’t find any significant correlation (e.g., Ahmed et al., 2006; Park and Shin, 2004).

6.3.2. China’s Evidence of Board Independence
Recall from the previous chapters, Chinese listed companies did not introduce the independent non-executive directors into their boards until the CSRC required them to do so in 2001. And, as mentioned earlier, the proportion, nomination, and independence of non-executive directors are all questionable due to the dominating position held by controlling shareholders in Chinese listed companies. As argued by Chen and Cheng (2007), Clarke (2006), the effectiveness of independent directors on monitoring in Chinese listed companies may be jeopardised. According to Clarke (2006, p.216-217), “it is difficult to imagine that the independent director opinion will have a great effect on the way listed companies are run [in China]...there is a potential downside to implementation of the independent director opinion if it turns out to have any real effect...[it is because] the usual substitutes for shareholder monitoring as a means of disciplining managers—shareholder litigation, the managerial labour market, the input and produce market, and the market for corporate control—do not, with the exception of the input and produce market, function at all well in China.”

Empirically, the number of studies that examine the correlation between EM and independent board of directors in China is limited. This may be due to the difficulties in getting a proper measurement of EM and reliable database. Instead of directly linking board independence with EM practices, Chen and Cheng (2007) investigate the opportunistic behaviour in applying different accounting standards between the Chinese GAAP and IFRS. By using a sample of 104 B-share firms and a model of net profit
differences to examine the effectiveness of corporate governance in accounting harmonisation over 1999-2003, they do not find any significant relation among independent directors, audit committee, and institutional shareholdings with the harmonisation of accounting practices in China. Chen and Zhang (2010a) modify the original model used by Chen and Cheng (2007) by using the net profit differences of 1-7 items which range from allowance for doubtful debts to revenue recognition as the dependent variable and proxy of EM. Based on a sample of 103 B-share companies over 1999-2006, while they find a significantly negative correlation between audit committee and earnings gap (or EM), they do not report any significant correlation between the proportion of independent directors on the board and earnings gap. In conclusion, they argue that the independent directors on the board remain inactive in mitigating firm’s opportunistic behaviour in China. In addition, by conducting a survey over 150 empirical studies, Clarke (2006, p.204) find that “researchers have not found consistent empirical support in China for the effectiveness of independent directors in enhancing corporate performance”, for example, Gao and Ma (2002), He and Wang (2002), L.uo et al., (2004)23, Tian and Lau (2001), Xiao (2004). In conclusion, he argues that proponents of the institution of independent directors misconceive the nature of corporate governance problem in China and have not taken into account specific features of Chinese institutional environment—particularly the legal environment—that affect the viability of any proposed solution.

In contrast, Chen et al., (2006) examine whether boardroom characteristics have an effect on corporate financial fraud in China. Based on a sample of 338 firms (with 169 fraud firms and 169 paired and non-fraud firms) over 1999-2003, they test the relation between fraud and governance structures (e.g., proportion of outside directors on the board, board size, number of board meetings). The results from multivariate analysis show that board characteristics are important in explaining fraud; the proportion of outside directors, the number of board meetings, and the tenure of the Chairman are associated with the incidence of fraud. In particular, they find (1) a significantly negative correlation between the proportion of outside directors on the board and incidence of fraud suggesting outsiders monitor management and help deter fraud; (2) a significantly positive relation between the number of board meetings and incidence of fraud suggesting directors realise some acts or decisions are borderline legal and so there is more debate about them resulting in more meetings; (3) a
significantly negative relation between the Chairman tenure and incidence of fraud suggesting that the Chairmen with shorter tenure appear less able to deter fraud. However, the study has a caveat concerning the sample selection. Specifically, although the study tests all published CSRC enforcement actions from 1999 to 2003, the cases of minor infractions (for the minor infractions, the CSRC will give an internal warning or reprimand to offending party and this will not be disclosed to the public) are excluded. This leads to an impression that only the most “extreme” cases have been considered, but the pervasiveness and magnitude of the effectiveness of independent directors may be difficult to obtain. In addition, fraud firms are much easier to identify and measure than those that engage in EM practices.

6.4. Internal and External Audit
Theoretically, both TCE and AT highlight the important roles of internal and external audit in monitoring and mitigating opportunistic discretion in the firms. TCE argues that some managements play “end games” (undisclosed strategic decisions to cut and run before corrective measures can be taken) and individual managers commonly disclose information selectively or distort data. In order to minimise the transaction costs derived from such concealment and distortion, additional checks are thus required to be created. In particular, Williamson (1984a) points out that “…an audit committee composed of outside directors and the certification of financial reports by an accredited auditing firm can limit management’s tendency of channelling benefits to themselves through disclosing misleading information” (Williamson, 1984a, p.1211).

In a similar vein, AT argues that an audit committee should be an outstanding function in monitoring activities. In order to be efficient, it has to be entirely composed of outside directors. And, in principle, external auditors could act as a checking point to make sure the financial information provided to the public is comprehensive, punctual, and accurate (Jensen, 2000). The following subsections focus on the effectiveness of internal and external audit on mitigating EM practices.
6.4.1. Audit Committee

6.4.1.1. Global Evidence of Audit Committee

The board appoints the sub-committees which should report regularly to the board. Although the board may delegate various activities to these sub-committees, it is the board as a whole that remains responsible for the areas covered by the sub-committees (Mallin, 2007; Monks and Minor, 2008). The possible sub-committees include the audit, remuneration, nomination, strategy, and risk committee, among these, the audit committee is arguably the most important one in providing diligent oversight to ensure that management is not compromising shareholder interests and maintaining accountability of the firms’ reported earnings (e.g., Archambeault and DeZoort, 2001; Defond and Jiambalvo, 1991; Kunitake, 1983). In particular, it is the role of the audit committee to review the scope and outcome of the audit, and to ensure the objectivity of auditors is maintained. This would usually involve a review of the audit fee and fees paid for any non-audit works, and independence of auditors. The audit committee provides a useful bridge between both internal and external auditors and the board, helping to ensure that the board is fully aware of all relevant issues related to audit. Clarke (2007) lists six responsibilities of the audit committee, including: (1) to monitor the integrity of the financial statements of the company, (2) to review the company’s internal financial controls, (3) to monitor and review the effectiveness of the company’s internal audit function, (4) to make recommendations to the board in relation to the appointment of external auditor and to approve remuneration and terms of engagement of external auditor, (5) to review and monitor external auditor’s independence and objectivity and effectiveness of the audit process, (6) to develop and implement policy on the engagement of external auditor to supply non-audit services.

Furthermore, the Cohen Commission (AICPA, 1978) and Blue Ribbon Report (BRC, 1999) stress that audit committee members ought to be independent if they are to provide effective corporate governance control mechanisms. And, NYSE (2003) requires that publicly listed companies on the NYSE must have an audit committee consisting of a minimum of three members and all must be independent directors.

Empirically, the role played by the audit committee in monitoring firms has been examined by directly linking it with EM practices in the literature. Davidson et al., (2005) investigate the role of firm’s internal governance structure in constraining EM
practices in Australia. It is hypothesised that EM behaviour is systematically related to the strength of internal corporate governance mechanisms—the audit committee and internal audit function. Based on a cross-sectional data of 434 listed Australian firms, for the financial year ending in 2000, their results suggest that while the establishment of an audit committee is not significantly, the number of non-executive directors on the committee is found to be negatively and significantly associated with EM measured by the absolute level of discretionary accruals calculated from the Modified Jones Model.

Crutchley et al., (2007) study the governance characteristics, earnings quality, growth rates, dividend policy, and compensation structure of 97 US firms over 1991-2002 under investigation by the SEC for accounting fraud. In order to measure EM, they use two different models, including: (1) absolute value of discretionary current accruals calculated from the Modified Jones Model, and (2) Q-score of Penman and Zhang (2002), which examines the year-to-year change in estimated reserves and their current level relative to the industry median. A Q-score of 0 indicates good quality, whereas both high and low Q-score indicate that current earnings are of poor quality. By comparing with another 97 industry-matched and non-scandal US firms, their results show that the corporate environment which is most likely to lead an accounting scandal manifests significant growth and accounting practices that are already pushing the envelope of earnings smoothing. Firms operating in such an environment tip over the edge into fraud if there are fewer outsiders on the audit committee and outside directors appear overcommitted.

Bedard et al., (2004) investigate the relation between the audit committee’s expertise (financial, governance, and firm-specific expertise), independence and activities and aggressive EM on a sample of 3,947 firm-year observations (US) over the period of 1996-2002. It is argued that audit committee leading by an independent director with financial and governance expertise can effectively monitor opportunistic discretion. Using a cross-sectional version of the Jones Model to measure the abnormal accruals (proxy of EM), they find that aggressive EM is negatively associated with the financial and governance expertise, independence, and presence of a clear mandate defining the responsibilities of the audit committee. The association is similar for both income-increasing and income-decreasing EM suggesting audit committee members are concerned with both types of EM.
Agrawal and Chadha (2005) examine whether certain corporate governance mechanisms are related to the probability of a company manipulating its earnings. They compare the level of discretionary accruals calculated from the Modified Jones Model of 159 US public companies with an industry-size matched sample of control firms (the total sample size is 318) for the years of 2001 and 2002. Overall, their results provide evidence suggesting that the probability of engaging in EM practices is lower in companies whose audit committees have an independent director with financial expertise. The relation is statistically significant, large in magnitude, and robust to alternative specifications. Thus, they state that independent directors with financial expertise served on the audit committee are valuable in providing oversight of a firm’s financial reporting practices.

Indirectly, the effectiveness of audit committee on mitigating other opportunistic discretion in accounting field arranged from overstatement errors to lowering the quality of financial statements has also been studied.

Defond and Jiambalvo (1991) argue that audit committee is an important element of a firm’s control environment and it can reduce the likelihood of overstatement errors. Empirically, they examine the incidence of accounting errors revealed by prior period adjustments for 41 US firms in comparison with a control group of another 41 US firms from 1976 to 1987. This comparison is used to highlight circumstances that are likely to motivate managers to use errors as an earnings manipulation tool. They find that while earnings overstatements are more likely when firms have diffuse ownership, lower growth in earnings, and fewer income-increasing GAAP alternatives available, they are less likely among firms that have audit committee which are entirely composed of independent non-executive directors.

McMullen and Raghunandan (1996) conduct a survey on 51 US companies with one or both of two types of financial reporting problems: (1) SEC enforcement actions and (2) material restatements of quarterly earnings. As of 1 February 1989, the national market system of the NASDAQ required audit committee for all registered companies. To enhance the power of their analysis, they thus concentrate on four year-period before 1989. By comparing with the paired no-financial problems firms, the authors find that firms which have (1) an audit committee composed entirely of non-executive directors,
(2) Certified Public Accounts (CPAs) on their audit committee, and (3) frequent audit committee meetings, are less likely to be subject to the SEC enforcement actions or restating their quarterly reports. In other words, it would be likely to find less financial fraud in those firms.

Abbot et al., (2004) address the impact of certain audit committee characteristics identified by the Blue Ribbon Report (1999) on the likelihood of financial restatements. They examine 88 US restatements of annual results (without allegations of fraud) in the period of 1991-1999, together with a matched pairs control group of firms of similar size, exchange listing, industry and auditor type. They document that the independence and activity level (proxy for audit committee diligence) of the audit committee exhibit a significant and negative association with the occurrence of the restatements. They also find a significant negative association between an audit committee that has at least one member with financial expertise and restatements. As they argued (Abbot et al., 2004, p.69), “…our results underscore the importance of BRC’s [Blue Ribbon Report, 1999] recommendations as a means of strengthening the monitoring and oversight role that the audit committee plays in the financial reporting process.”

Pucheta-Martinez and Fuentes (2007) analyse the relation between the likelihood that a company receives a qualified audit report (as a measure of the quality of financial information) and existence and characteristics of the audit committee. By comparing 148 Spanish firms that voluntarily created and 232 Spanish firms did not create an audit committee in the period following the publication the 1998 Spanish Code of Corporate Governance (Olivencia Code), their results indicate that the mere presence of an audit committee does not reduce the occurrence of error and non-compliance qualifications, as audit committees are not effective per se. However, the proportion of independent non-executives on the audit committee has significant influence on the receipt of qualifications of this kind. In other words, an independent audit committee reduces the likelihood of receiving an error or non-compliance qualification.

All in all, the empirical evidence is consistent with the theoretical statement that an audit committee which is composed of independent non-executive directors should be able to mitigate the opportunistic behaviours, thus EM practices.
6.4.1.2. China’s Evidence of Audit Committee

As already been mentioned in the previous chapters, the 2002 Chinese Code (CSRC, 2002) encourages the establishment of an audit committee on the board to facilitate the convergence of Chinese accounting practices and improve the quality of financial reporting. However, both compliance and enforcement of this requirement as indicated earlier are relatively weak in China. Further, the independence of the committee is also doubtful, given that the committee is only required to be composed of a majority instead of all independent directors. Therefore, as argued by Chen and Zhang (2010a) the effectiveness of the audit committee in China on mitigating reported earnings manipulations is not clear.

Within a limited number of empirical studies on this issue, Ho and Wang (2001) test the relation between a set of corporate governance factors (e.g., proportion of independent directors, existence of an audit committee) and the extent of voluntary disclosure provided by listed firms in Hong Kong in the late 1997 and early 1998. Based on the argument of AT that audit committee can effectively mitigate the activities of EM, they hypothesise that improved monitoring on the board, especially audit committee leads to more voluntary disclosures. Using a weighted disclosure index for measuring voluntary disclosure, their results indicate that the existence of an audit committee is significantly and positively related to the extent of voluntary disclosure. The authors use a questionnaire survey of 610 CFOs and 535 financial analysts for all listed firms in Hong Kong, however, with the response rate of 17% and 18% respectively, only 1 Chinese H-share firm has responded. Thus, their results may represent the population of listed firms in Hong Kong to certain degree, but not for the companies listed in the mainland China.

Chen and Zhang (2010a) report a significantly negative correlation between the existence of audit committee and earnings gap which is used as the proxy for EM for 103 B-share companies over 1999 to 2006. With such a small sample size, their results on the pervasiveness and magnitude of the effectiveness of audit committee may not well represent the total population of listed companies in China. And, the earnings gap introduced may not be necessarily the same with EM.
6.4.2. Statutory Audit

6.4.2.1. Global Evidence of Statutory Audit

The quality of external auditing can have a significant influence on the quality of recorded earnings, and therefore, constitutes a constraint on EM practices. The international reputable auditors, such as the Big 4 auditor\(^\text{24}\), are usually used as the proxy for quality auditing. As expressed by Krishnan (2003), not only do the large audit firms have more resources and experts to detect EM, but they also have greater incentive to protect their reputation because of their large client base. Street and Gary (2002) provide supporting evidence of this argument that being audited by a large firm is positively and significantly associated with IFRS compliance, both in the case of disclosure requirements (standards compliance) and in the case of measurement and presentation requirements (practices compliance).

By directly investigating the correlation between the Big 4 auditor and EM, a large number of studies provide evidence showing the effectiveness of employing the Big 4 auditor on mitigating companies’ EM behaviour. For instance, Becker et al., (1998) investigate the relation between audit quality and EM. Consistent with the prior research, they treat audit quality as a dichotomous variable and assume that the Big 4 auditor is of higher quality than non-Big 4 auditor. EM is captured by discretionary accruals that are estimated using a cross-sectional version of Jones Model. They hypothesise that clients of non-Big 4 report more discretionary accruals to increase income than those annual reports audited by the Big 4. By using a US sample of 10,379 Big 4 and 2,179 non-Big 4 firm year observations for the period of 1989-1992, they find that clients of non-Big 4 report discretionary accruals that are, on average, 1.5%-2.1% higher than the discretionary accruals reported by clients of the Big 4 auditor.

Francis et al., (1999) examine if the likelihood of hiring a Big 4 auditor is increasing in the firm’s endogenous propensity to generate accruals. They hypothesise that high-accrual firms have greater scope of aggressive and/or opportunistic EM and therefore have an incentive to hire a brand name Big 4 auditor to provide assurance that reported earnings are credible. In a sample of 74,390 firm-year observations (based on all NASDAQ firms) over the period of 1975-1994, their results indicate that even though the Big 4 audited firms have higher level of total accruals, they still have lower amounts of estimated discretionary accruals. Thus, the authors conclude by stating that
“...these findings are consistent with the Big 4 auditor constraining aggressive and potentially opportunistic reporting by firms with high level of accruals” (Francis et al., 1999, p.17).

Gore et al., (2001) examine the provision of non-audit services provided by auditors to their audit clients can impair independence more severely for smaller auditors than for larger auditors. Using a sample of 4,779 UK firms over 1992-1998, they find that clients’ EM activities to avoid losses and earnings declines is positively associated with the ratio of non-audit fees to total fees for non-Big 4 auditors but not for the Big 4 auditor. Further, the difference in the effectiveness of the Big 4 and non-Big 4 auditors in constraining EM widen as the non-audit fee ratio increases. These results suggest that, “when the provision of non-audit services is relatively high, smaller auditors are less able to resist aggressive accounting by their clients” (Gore et al., 2001, p.28).

Using a sample of 4,422 (or 24,114 firm-year observations) clients of the Big 4 auditor over 1989-1998 in the US, Krishnan (2003) examines the association between auditor industry expertise, measured in terms of both audit market share in an industry and an industry’s share in the auditor’s portfolio of client industries, and a client’s level of absolute discretionary accruals calculated using the Modified Jones Model. The results indicate that clients of nonspecialist auditors report absolute discretionary accruals that are, on average, 1.2% higher than the discretionary accruals reported by clients of specialist auditors. His findings are consistent with the notion that “....specialist auditors mitigate accruals-based EM more than nonspecialist auditors and, therefore, influence the quality of earnings” (Krishnan, 2003, p.1).

Zhou and Elder (2004) investigate the relation between audit quality as measured by audit firm size and industry specialisation, and EM measured by discretionary current accruals, for companies making seasoned equity offerings (SEOs). By using 2,453 observations of SEOs in the US between 1991 and 1999, they find evidence suggesting that the companies employing the Big 4 auditor are associated with few EM practices in the years before, during, and subsequent to the SEOs. In other words, they argue that higher audit quality as evidenced by auditor size (the Big 4) is associated with less EM.
Van Tendeloo and Vanstraelen (2005) address whether German companies that have adopted IFRS engage significantly less in EM compared to German companies reporting under German GAAP, while controlling for other differences in EM incentives. By using a sample of 636 firm-year observations during the period of 1999-2001, and the absolute value of the discretionary accruals, they show that the IFRS-adapters do not present different EM behaviour compared to companies reporting under German GAAP. Moreover, it appears that companies that have adopted IFRS engage more in earnings smoothing. However, they report that “...[this] increase in earnings smoothing with a adoption of IFRS is significantly reduce when the company has a Big 4 auditor” (Van Tendeloo and Vanstraelen, 2005, p.176). Van Tendeloo and Vanstraelen (2008) investigate the relation between external auditing quality and EM in private firms across different European countries. Using data on private firms of six European countries, their study provides evidence that, after controlling for self-selection, audit quality differentiation between the Big 4 and non-Big 4 audit firms also exists in the private client segment market. In addition, their results suggest that audit quality and investor protection are substitute in constraining EM in private firms, in the sense that the Big 4 audit quality effect attenuates when investor protection is stronger.

6.4.2.2. China's Evidence of Statuary Audit

The use of an external auditor is mandatory for all listed companies in China. For the companies listed on the B-share market, it is usually audited by two Certified Public Accountant (CPA) firms. Specifically, their domestic GAAP statements are usually audited by a local Chinese CPA firm while their IFRS statements are audited by an international CPA firm. A reconciliation of the company’s net income and shareholders’ equity from Chinese GAAP and IFRS should be included in the company’s annual report. Recent years have seen a significant increase of auditor concentration in China, with strong support from the CSRC. Many local Chinese CPA firms have merged with the Big 4, hoping to improve the quality of their auditing. The total number of Chinese local CPA firms declined from 106 in 1999 to 71 in 2002 and less than 50 in 2006 (CSRC, 2007). Furthermore, the Big 4 concentration ratio increased from 18% in 1999 to 37% in 2002 and 51% in 2006 (CSRC, 2007).

While the above trend may be an indication of the quality auditing performed by the Big 4, however, as indicated by Wearing (2005) that the quality control of audit is...
very much dependent on the local branch and is heavily influenced by the local circumstance as many Big 4 local branches mainly engage local employees with few expatriates being the top senior management from regional headquarters. Several studies (e.g., Ball et al., 2000; La Porta et al., 2000b; Leuz et al., 2003), in the similar vein, also suggest that the quality of financial disclosure is in large part determined by the underlying economic and institutional background influencing managers’ and auditors’ incentives. Thus, taking these local influencing factors into consideration, the quality of auditing provided by the Big 4 auditor may not be the same in China comparing with that provided in the Western countries. The literature provides supporting evidence for the above argument. First of all, as argued by Chen (2005) and Chen and Cheng (2007), that the underlying economic and institutional factors (e.g., monitoring system, ethic education or training, legal infrastructure and enforcement) have not been well developed to ensure the reliability of financial reporting in China that investors would expect. Secondly, the lack of qualified auditing professionals in China is another reason that contributes significantly to the inefficient performance of external auditor on monitoring opportunistic discretion (Chen et al., 2002; Chen and Zhang, 2010a). Therefore, due to the lack of both supporting institutional environment and qualified auditing professionals in China, it is argued that the quality of audit performed by the same auditor, even if the Big 4, may be different from it appears in a well-developed institutional system. Put it in another way, the Big 4 may not provide the same high quality of auditing in China comparing with the Western countries.

6.5. Institutional Shareholders
6.5.1. Global Evidence of Institutional Shareholders
Theoretically, AT argues that monitoring activities to become specialised to those institutions and individuals who possess comparative advantages in these activities. For institutional investors, the importance of being active to minimise agency costs is the core in AT’s argument. Jensen (2000, p.64-67) states that “...I mean an [active] investor who actually monitors management, sits on boards, is sometimes involved in dismissing management, is often intimately involved in the strategic direction of the company, and on occasion even manages...and as a response to problems caused by the lack of effective monitoring of corporate managers, [continuing] developments in financial institutions is crucial.” In perspective of TCE, Williamson (1984a) argues that as the exposure to risk increases, these debt holders become more concerned with the details
of the firm's operating decisions and strategic plans; "with high debt-equity ratios the creditors become more like shareholders and greater consultation between the management and its major creditors results" (Williamson, 1984a, p.1197). For institutional shareholders, Williamson (2007) states that corporate monitoring by institutional investors can constrain opportunistic behaviours. Large institutional investors have the opportunity, resources, and ability to monitor, discipline, and influence managers. Thus, corporate monitoring by institutional investors can force managers to focus more on corporate performance and less on opportunistic or self-serving behaviour. And, it is also pointed out that in order to secure the value of ultimate beneficiaries (or stakeholders) through consistent monitoring of the company performance, the institutional investors are required to be active. This is to be backed up by direct engagement in the firms where appropriate. If companies persistently fail to respond to concerns raised by stakeholders (e.g. the reliability of firm's accounting policies made by the management), institutional investors will vote against the board at general meetings.

Throughout the twentieth century, the pattern of ownership has changed and, in the US and UK in particular, individual share ownership has declined and institutional share ownership has increased. As stated by Gillan and Starks (2003), over seventy years later, institutional investors own large proportions of equity in many companies across the world, and the key role played by institutional investors in corporate governance can not be underestimated. In the similar vein, Mallin (2007) proposes that with the internationalisation of cross-border portfolios, and financial crises that have occurred in many parts of the world, it is perhaps not surprising that institutional investors increasingly look more carefully at the corporate governance of companies.

Empirical research, on one hand, shows that monitoring and controlling activities provided by institutional investors effectively constrain firms from manipulating reported earnings opportunistically (Black, 1990; Bushee, 1998; Monks and Minow, 2007; Roe, 1994; Romano, 2001). For instance, Chung et al., (2002) examine whether large institutional shareholding in a firm deter EM practices in the firms when they have incentives to increase or decrease reported profits. Using discretionary accounting accruals as the measure of EM and a sample of 12,478 US firm-year observations over the period of 1988-1996, they find that the presence of large institutional shareholding
inhibits firms from increasing or decreasing reported profits towards the desired level or range of profits. Their evidence is consistent with the notion of institutional investors monitoring and constraining self-serving behaviours.

Moreover, Chung et al. (2005) hypothesise that low-growth companies with high free cash flow (SFCF) will use income-increasing discretionary accruals (DAC) to offset the low or negative earnings that inevitably accompany investments with negative net present values (NPVs). Their results, using 22,576 firm-year observations over the period of 1984-96 and income-increasing discretionary accruals calculated from the Modified Jones Model, confirm their hypothesis. In addition, they also show that institutional investors with substantial shareholding moderate the SFCF-DAC relation, which suggests that external monitoring by institutional investors is effective in deterring EM practices.

Sheng (2003) investigates the association between institutional ownership and Australian firms' aggressive EM strategies. He predicts that the association between institutional ownership and firms' income increasing discretionary accruals is expected to vary as the level of institutional ownership increases. Based on a sample of 836 non-financial Australian listed firms for the years between 1993 and 1997 and discretionary accruals calculated from the Modified Jones Model, Sheng (2003) finds a non-linear association between institutional ownership and income increasing discretionary accruals. In particular, a positive association is found at lower institutional ownership levels, consistent with the view that transient (short-term oriented) institutional investors create incentives for firms to manage earnings upwards. On the other hand, a negative association is found at the higher institutional ownership levels, consistent with the view that long-term oriented institutional investors' monitoring opportunistic accruals discretion. In conclusion, it is argued that (Sheng, 2003, p.105) "...institutional investors can act as a complementary corporate governance mechanism in mitigating myopic aggressive earnings management by corporations when they have a sufficiently high ownership level."

Using a sample of 1,541 US firms for the period over 1989-95, Rajpopal et al., (2003) show that absolute value of discretionary accruals calculated from the Modified Jones Model declines with institutional ownership. This result reflects that institutional
investors are better informed than individual investors, which reduces the perceived benefits of managing accruals. In addition, their findings also demonstrate as institutional ownership increases, stock prices tend to reflect a greater proportion of the information in future earnings related to current earnings. This result is consistent with the notion of institutional investors looking beyond current earnings compared to individual investors. Collectively, they conclude that firms do not manipulate earnings due to pressure from institutional investors.

And, the study of Velury and Jenkins (2006) is designed to provide insights into the monitoring role of institutional investors by examining whether institutional ownership affects the quality of reported earnings. In order to address this issue, they develop a multidimensional method of measuring earnings quality using the Financial Accounting Standards Board's (FASB) conceptual framework as a basis. Based on a sample of 4,238 US firm-year observations over the period of 1992-1999, they report a positive association between institutional ownership and earnings quality. By taking ownership concentration into account, however, they find a negative association between concentrated ownership and earnings quality. In conclusion, they state that (Velury and Jenkins, 2006, p.1051) “...there is a general positive association between institutional ownership and earnings quality that is negatively affected by increased ownership concentration.”

Based on a sample of 662 US firm-year observations over 1993-2000, Cornett et al., (2006) find that both institutional ownership of shares and institutional investor representation on the board reduce the use of discretionary accruals as a means of EM practices. And, these factors largely offset the impact of options compensation, which they find strongly encourages EM. Hence, they conclude by stating that “…the results reinforce previous research pointing to the beneficial impact of outside monitoring [from institutional shareholders], but cast doubt on the role of pay-for-performance compensation as a means of eliciting superior performance. The quality of reported earnings improves significantly with monitoring, but degrades dramatically with option compensation” (Cornett et al., 2006, p.20).

On the other hand, as expressed by Bainbridge (2005, p.12-17), institutional investors activism is rare and limited primarily to union and State or local public
employee pensions. Because institutional investors generally are profit maximisers, they will not engage in an activity whose costs exceed its benefits. And, they are likely to step in only where there are serious long-term problems. In the similar vein, McCormack (1998) addresses this issue from both the benefits and costs of being activism. On the benefit side of the equation, he argues that activism is unattractive because in many cases it is unlikely to be availing. In some cases, intervention will come too late. In others, the problem may prove intractable, as where technological changes undercut the firm’s competitive position. Turing to the cost side of the equation, because it is impossible to predict ex ante which corporations are likely to experience problems, activist institutions will be obliged to monitor all of their portfolio firms. Because corporate disclosure rarely give one a full picture of the corporation’s prospects, moreover, additional and more costly monitoring mechanisms must be established. Empirically, Sunil Wahal (1996, p.20) states that “collectively, [my] results cast doubt on the effectiveness of pension fund activism as a substituted for an active market for corporate control.” Karpoff et al., (1996, p.393) agree: “there is no persuasive evidence that [shareholder] proposals increase firm values, improve operating performance, or influence firm policies.” Karpoff (2001, p.1) argues that “...I survey the recent empirical research on shareholder activism, and conclude that the disagreement among researchers is more apparent than real. More evidence indicates that shareholder activism can prompt small changes in target firms’ governance structures, but has negligible impacts on share values and earnings.” And, Black (1997), Gillan and Starks (2000), Johnson and Shackell (1997), Wagster and Prevost (1996) all report that institutional shareholder activism tends to have little impact on the target companies in either improving performance or constraining management discretions.

In summary, the empirical results of the correlation between monitoring provided by institutional investors and EM practices are mixed. On one hand, scholars such as Chung et al., (2002), Rajpopal et al., (2003), Sheng (2003), Velury and Jenkins (2006) provide evidence suggesting a significantly negative correlation between shares held by institutional investors and EM. More generally, their results suggest that institutional investors monitor and constrain the self-serving behaviours. On the other hand, scholars such as Karpoff et al., (1996), Karpoff (2001), Wahal (1996) challenge the activism of institutional shareholders and provide evidence arguing that institutional investors
activism is rare which can’t be classified as an effective mechanism to mitigate opportunistic discretion.

6.5.2. China’s Evidence of Institutional shareholders

One promising feature emerged recently from the A- and B-share markets is the increasing trend in institutional ownership in the listed companies that is both a reflection and a consequence of the government’s efforts to promote institutional investors to enter into the China’s stock markets since 1997. According to Chen and Zhang (2010a), over the period of 1999-2006, there is a significant increase in shareholding held by institutional investors in China. On average, the percentage of institutional shareholding increases to 6% by the end of 2006 from 2% in 1999. By comparing with the institutional shareholding in developed capital market, however, it is still quit low. For instance, in the US, around 55% of US equities are owned and 80% of share trades are made by the institutional investors. In the UK, institutional ownership is around 65%-80%. And, the overseas level of ownership in UK reached approximately to 21% by the end of 2005 (Mallin, 2007).

Other than the smaller shareholding in the listed companies, Zhang (2007, p.741) argues that shareholder activism is very similar to market activism and they both suffer from the same problem, “...not only are they not effective in disciplining serious managerial misbehaviour that offers managers more gain than loss, even their limited value to discourage such misbehaviour as managerial shirking is conditioned on that the opportunities for illegitimate enrichment by managers are few”. In the similar vein, Chen and Zhang (2010a) state that shareholders, market and shareholder activism are one combined mechanism. On one hand, market discipline needs the helps of shareholder voting to oust incompetent management. On the other hand, active participation in corporate governance by shareholders is informed by information from the market. However, if the fraudulent self-enrichment can not be detected, the importance of market will adversely affects the monitoring function of the institutional shareholders, and the ability of shareholder activism to discipline managerial shrinking will also be lost. By putting all together, due to smaller shareholding and lack of effective market discipline, institutional investors may not effectively mitigate opportunistic behaviour (or EM) in China.
6.6. Controlling Shareholders

6.6.1. Global Evidence of Controlling Shareholders

Both AT and TCE propose that most large corporations in the developed capital markets are to a significant extent controlled by their managers who enjoy nontrivial degree of discretion, thus how to minimise the agency costs/transaction costs that originated from managers’ opportunistically discretionary activities is the main concern of these two theories. In other words, both attempt to address the conflict of interests between management and shareholders (Jensen and Meckling, 1976; Williamson, 1984).

Recent developments in corporate governance literature have highlighted another form of conflict of interests—action being taken by the controlling shareholders for their own benefit, at the expense of minority shareholders. As proposed by La Porta et al. (1997); (1999); (2000a;b); Velury and Jenkins, (2006), in some less developed capital markets, even the largest firms tend to have a highly-concentrated ownership structure and top manager represent the interests of controlling shareholders. In comparison with the conflict of interests between management and shareholders, the essential effect of both scenarios is the same: insiders, through their control of the firm, pursue their private benefits at the cost of outsiders (Ding et al., 2007). In transaction, the controlling shareholders and the minority shareholders are the two parties involved, while the firm is dominated by controlling shareholders. In such a circumstance, both parties are bilaterally dependent as the high level of dedicated asset specificity involvement; one party will bear the relevant costs, if the transaction is prematurely terminated by the other party. However, based on the TCE’s arguments of opportunism and feasible foresight, controlling shareholders have the incentives as well as the means to take actions for their own benefits at the expense of minority shareholders. As argued by Shleifer and Vishny (1997, p.758), “large investors may represent their own interests, which need not coincide with the interests of other investors in the firm.”

In order to fight against the expropriation from controlling shareholders, empirical evidence mentions the important role played by the investor protection offered in the stock markets. For instance, La Porta et al., (1998) examine 49 countries around the world at the end of 1993. By classifying the sample countries into four specific groups based on their legal origins as, the common-law, French-civil-law, German-civil-law, and Scandinavian countries, they compare the shareholder protection, quality of
enforcement of law, and ownership concentration among different groups and report evidence suggesting that: (1) laws differ markedly around the world. Countries whose legal rules originate in the common-law tradition tend to protect investors considerably more than the countries whose law originate in civil law, and especially the French-civil-law tradition. The German-civil-law and the Scandinavian countries take an intermediate stance toward investor protections; (2) law enforcement differs a great deal around the world. German-civil-law and Scandinavian countries have the best quality of law enforcement; (3) ownership concentration is extremely high around the world. In an average country, close to half equity in a publicly traded company is owned by the three largest shareholders. Furthermore, good accounting standards and shareholder protection measures are associated with a lower concentration of ownership, indicating that concentration is indeed a response to poor investor protection.

La Porta et al., (1999) use data on ownership structures of 691 different sizes of corporations in 27 wealth economies at the end of 1995 to identify the ultimate controlling shareholders of these firms. By comparing the 26 different variables, such as antidirector index, Widely Held, Family, State, and so forth, they find that outside the US, particularly at countries with poor shareholder protection, even the largest firms tend to have controlling shareholders. Sometimes that shareholder is the State; but more often it is a family, usually the founder of the firm or his descendants. They also report that the controlling shareholders typically have control over firms considerably in excess of their cash flow rights, primarily through the use of pyramids and participation in management. Consequently, they argue that “...[large] firms are not run by professional managers without equity ownership who are unaccountable to shareholders, but by controlling shareholders...[the controlling shareholders] are ideally placed to monitor the management, and in fact the top management is usually part of the controlling family, but at the same time they have the power to expropriate the minority shareholders as well as the interest is so doing” (p.511-512).

Claessens et al., (2000) examine the separation of ownership and control for 2,980 corporations in nine East Asian countries at the end of fiscal year 1996. By following the similar comparison methods used by La porta et al., (1998), (1999), they document evidence suggesting that in all countries, the voting rights frequently exceed cash-flow rights via pyramid and cross-holdings. The separation of ownership and control is most
pronounced among family-controlled firms and small firms. More than two-thirds of firms are controlled by a single shareholder. And, Claessens et al., (2002) disentangle the incentive and entrenchment effects of large ownership. In their regression model, the ratio of the market value of assets to the book value of assets at the end of 1996 is set as the dependent variable. And, the main independent variables are the share of cash-flow rights held by the largest shareholder (ownership) and the share of voting rights held by the largest shareholder (control). To operationalise their model, they use a dataset of 1,301 publicly traded corporations in eight East Asian economies at the end of fiscal year 1996 (same as their previous study, except Japan). On balance, given that concentrated corporate ownership is predominant in most countries, their findings document an inverted “U-shape” correlation between firm’s value measured by sales growth and cash-flow ownership of the largest shareholder. Particularly, firm value increases with the cash-flow ownership of the largest shareholder, consistent with a positive incentive effect. But firm value falls when the control rights of the largest shareholder exceed its cash-flow ownership, consistent with an entrenchment effect.

Implicitly, Leuz and Oberholzer-Gee (2006) study the role of firms’ political connections in Indonesian firms’ financing strategies and their long-run performance. They view political connections as an example for domestic arrangements which can reduce the benefits of global financing. By using 132 Indonesian firms at the end of 1996, they find that firms with strong political connections are less likely to have publicly traded foreign securities.

With regard to EM practices, Leuz et al., (2003) document systematic differences in the level of EM of 70,955 firm-year observations, across 31 countries and 8,616 non-financial firms for the fiscal years 1990-1999. They perform a descriptive cluster analysis to identify groupings of countries with similar institutional characteristics and then show that EM measured by four different models varies systematically across these institutional clusters. In particular, EM is measured as: (1) a country’s firm-level standard deviation of operating earnings divided by the firm-level standard deviation of cash flow from operations; (2) the correlation between changes in accounting accruals and operating cash flows; (3) the magnitude of accruals; (4) the ratio of “small profits [0.00, 0.01]” to “small losses [-0.01, 0.00]”. And, aggregate EM score. The analysis suggests that outsider economies with relatively dispersed ownership, strong investor
protection, and large stock markets exhibit lower levels of EM than insider countries with relatively concentrated ownership, weak investor protection, and less developed stock markets.

Following the similar measurements of EM used by Leuz et al. (2003), Shen and Chih (2007) study the impact of corporate governance on EM for nine Asian countries with 204 firms at the end of year 2000, consistent with the findings of Leuz et al. (2003), they find that a firm in a country with good anti-director rights engages in less earnings smoothing and earnings aggressiveness. And, stronger enforcement of laws can result in less earnings smoothing, but this effect is stronger in countries with sounding corporate governance system. They conclude their study by saying that “...on predicting EM across countries, in addition to country-level governance, the role of corporate governance should have to be taken into account.”

6.6.2. China’s Evidence of Controlling Shareholders

One unique feature of Chinese listed companies is that ownership is highly concentrated (Aharony et al., 2000; Chen and Yuan, 2006; Ding et al., 2007; Jian and Wong, 2004; Liu and Lu, 2002). According to the data by the end of 2006, the five largest shareholders on average account for 58.5% of the total equity, compared with 25.4% in the US and 33.1% in Japan (Mallin, 2007). More strikingly, the largest shareholder holds more than 42% of total shares for an average Chinese listed company. Due to such an ownership structure, the possibility of one form of principal-agent conflicts exists in China’s companies when they are publicly listed, since the separation of ownership and control is a common feature (Ding et al., 2007). In addition, the other form of conflict of interests between the controlling shareholders and the minority shareholders may also exist in China’s listed companies, since the former has the incentives as well as the means to expropriate the latter (Ding et al., 2007; Lo et al., 2010). In practice, controlling shareholders are rarely challenged by other shareholders on important issues. And, minority shareholders cannot take listed companies to court, due to the limitations in the civil law system, and a lack of punishment spectrum in the current securities law (e.g., Chen et al., 2006; Firth et al., 2007; Liu and Lu, 2007). Thus, it is worth reviewing the empirical studies that investigate whether the controlling shareholders engage in EM practices in China.
To date, there are several studies that provide empirical evidence suggesting controlling shareholders utilise different means to engage in EM practices in China’s listed companies. For instance, Ding et al. (2007) examine the relation in Chinese listed firms between EM practices and two different ownership characteristics, namely concentration (holdings of top 1 shareholder) and type of the ownership (privately-owned versus State-owned). By using 273 firms at end of year 2002 and discretionary accruals calculate from the Modified Jones Model as the proxy of EM, they find the relation between EM and ownership concentration exhibits a statistically significant non-linear, inverted “U-shape” pattern. On one hand, large shareholders tend to maximise accounting earnings in order to reap benefits in the future. On the other hand, when ownership concentration reaches high level, large shareholders become the true owners of the firm, and are thus more likely to seek to preserve its future growth potential by minimising account earnings.

Firth et al. (2007) investigate the how ownership structure in China affect the informativeness of earnings in China’s listed companies. They measure the informativeness of earnings by the earnings-returns ratio and discretionary accruals. Using a sample of 5,189 firm-year observations over the period of 1998-2003, their results document that ownership concentration is negatively and significantly correlated with the informativeness of earnings (e.g., low level of earnings-returns ratio, high level of discretionary accruals). It is argued that large shareholders may influence firms to adopt accounting policies that reflect the wishes of the large owners rather than reflect the economic substance of the business transactions.

Using a sample of 131 Chinese listed firms in the basic materials industries such as mining, lumber, chemicals and building materials for the years of 1997-2002, and the related party transactions as the proxy of EM, Jian and Wong (2004) provide evidence suggesting that Chinese listed companies use recurring related party transactions to manage operating earnings and achieve certain ROE targets, or strive to be eligible for rights issues. In addition, listed companies divert the money that obtained from operations to their related firms. And, these EM and tunneling activities are more pronounced for State-controlled companies. In the similar vein, by using a panel data of 633 Chinese listed companies for the 1999-2005 period, Liu and Lu (2007) provide consistent evidence suggesting that controlling shareholders largely engage in using
discretionary accruals measured by the Modified Jones Model to artificially dress-up the performance of the firms in order to avoid de-listing and raise capital through rights issue.

Instead of directly examining EM practices, Jiang et al., (2005) investigate the widespread use of corporate loans by controlling shareholders to extract funds from Chinese listed companies. By focusing on the “Other Receivables (OREC)—these loans represent a substantial portion of the reported assets of Chinese firms” of 1,133 listed companies in China for the period of 1996 to 2002, they show that companies with large OREC balances experience worse future operating performance and are much more likely to become candidates for delisting. High-OREC firms have generally lower market valuations, but still earn negative risk-adjusted returns in the future. And, this behavior is most severe when the blockshareholders’ controlling right is significantly larger than their ownership right.

Wang et al., (2004) use a panel data set of financial and ownership information on 992 China’s publicly listed firms (on both the SHSE and SZSE) between 1990 and 2000 to explore the effectiveness of public listing as a means of reforming State-Owned Enterprises (SOE) in China. They find that public listing is associated with share deterioration in performance for up to six year after the year of listing, and it is true for firms with or without direct State ownership. These findings suggest that firms without formal State ownership do not behave so much differently from firms with State ownership in their quest for profits, and that ownership concentration by large shareholders is ineffective in improving performance when they are likely to be the State agencies or SOE-like institutions. Overall, they conclude that “…using public listings as a means to reform SoEs has not worked wonders…” (Wang et al., 2004, p.17).
6.7. Summary

While the empirical studies based on the Western countries show that executives engage in EM practices to increase compensation, especially the equity-based components (e.g., Baker et al., 2003; Cohen et al., 2008; Gao and Shrieves, 2002; Shuto, 2007), there is no published study on such an important issue in China. In line with AT, it is conjectured that tying executive compensation to performance may become a mechanism to limit EM through aligning the interests of managers with those of the shareholders.

The empirical studies have found mixed results regarding the impact of independent directors on EM (e.g., Ahmed et al., 2006; Park and Shin, 2004; Peasnell et al., 2000; 2005). In China, the empirical results are also inclusive (e.g., Chen et al., 2006; Chen and Cheng, 2007; Clark, 2006). It is argued that the effectiveness of independent directors on monitoring may be jeopardised due to the strong influence from the controlling shareholders.

The empirical studies show a negative correlation between the establishment of an independent audit committee and EM practices (e.g., Abbot et al., 2004; Bedard et al., 2004; Crutchley et al., 2007). In China, Chen and Zhang (2010a) and Ho and Wang (2001) document the similar results. However, as both the compliance and independence of audit committee may be damaged due to the relatively weak enforcement, its effectiveness on mitigating EM is not very clear.

For external auditing (or the Big 4 auditor), it significantly and negatively correlates with EM activities as documented in the literature (e.g., Becher et al., 1998; Core et al., 2001; Fracis et al., 1999). In China, the Big 4 auditor may not provide the same high quality of auditing due to the lack of supporting institutional environment and qualified auditing professionals (e.g., Ball et al., 2000; Chen, 2005; Leuz et al., 2003).

The empirical results with regard to the institutional investor activism are inclusive (e.g., Bainbridge, 2005; Black, 1997; Cornett et al., 2006). In China, the
relatively weak legal environment, smaller ownership and trade volume of institutional investors may limit their role in mitigating EM (Chen and Zhang, 2010a; Zhang, 2007).

And finally, consistent with the global evidence on the impact of the controlling shareholders (e.g., Claessens et al., 2000; La Porta et al., 1998; 1999; Leuz et al., 2003), in China, empirical studies provide evidence of controlling shareholders utilising different means to engage in EM practices (e.g., Ding et al., 2007; Firth et al., 2007; Liu and Lu, 2007).
Table 6.1: A summary of the empirical studies between EM and executive compensation

**Executive Compensation**

Empirical studies of executive compensation and EM (Western countries based) have been reviewed in chapter 5. To date, there is no published study to investigate EM and performance-related executive compensation strategy in China.

Table 6.2: A summary of the empirical studies between EM and board independence

**EM and Board Independence (Global Evidence)**

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
• Dependent variable: abnormal accruals using Modified Jones Model;  
• Independent variables: dummy variable 1 if the observation is from the pre-Cadbury period, 0 otherwise; board size; % independent on the board; % equity owned by executive directors; etc.  
• Regression: OLS regression | Results provide evidence of accrual management to meet earnings targets in both periods. However, their results for the post-Cadbury period indicate less income-increasing accrual management to avoid earnings loss or earnings declines when the proportion of non-executive directors is high. |
• Dependent variable: current discretionary accruals using Modified Jones Model;  
• Independent variables: to differentiate the earnings thresholds, the authors introduce BELOW — is an indicator variable taking 1 if their proxy for pre-managed earnings is below threshold earnings (PMER<0, and PMTt<PMTt-1 respectively) and zero otherwise, HIGH is an indicator variable taking 1 if the proxy for pre-managed earnings (CFO) exceeds zero of EARNt-1; % outside board members on the board; Audit committee; etc.  
• Regression: pooled OLS regression | Results indicate that the likelihood of managers marking income-increasing abnormal accruals to avoid earnings losses and earnings reduction is negatively related to the proportion of outsiders on the board. They also find that the change of abnormal accruals being large enough to turn a loss into a profit or to ensure that profit does not decline is significantly lower for firms with a high proportion of outside board members. |
Table 6.2.: A summary of the empirical studies between EM and board independence (continued)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klein (2002)</td>
<td>U.S.</td>
<td>692 S&amp;P firms for the years of 1992-93</td>
<td>• Research Type: quantitative research;</td>
<td>Their results show a significantly negative relation between board independence and abnormal accruals. Reductions in board or audit committee independence are accompanied by large increases in abnormal accruals.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dependent variable: industry adjusted abnormal accruals using Modified Jones Model;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variables: Bd51% (1 if the firm’s board has at least majority of outside directors, 0 otherwise; % outside directors on the board; AUD 100%, AUD 51%); etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Regression: Mewton-Raphson iterative method</td>
<td></td>
</tr>
<tr>
<td>Xie et al.,(2003)</td>
<td>U.S.</td>
<td>282 firm-year observations during the period of 1992-96</td>
<td>• Research Type: quantitative research;</td>
<td>They report that EM is less likely to occur or occurs less often in companies whose boards include both more independent outside directors and directors with corporate experience. They also find a relation between lower levels of EM and the meeting frequency of the board.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dependent variable: current discretionary accruals using Modified Jones Model;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variables: Number of board meetings; % independent directors on the board; % finance, corporate, legal, and blockholder independent directors; etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Regression: OLS regression</td>
<td></td>
</tr>
<tr>
<td>Kao &amp; Chen (2004)</td>
<td>Taiwan</td>
<td>1,097 firms of 2002</td>
<td>• Research Type: quantitative research;</td>
<td>Their results show that when the board size is large, the higher the extent of EM. However, when there are some outside directors in the board, the extent of EM is lower. And, the effects of outside directors on EM are significant only for the non-electronic firms.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dependent variable: the absolute value of the discretionary accruals calculated using the Modified Jones Model;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variables: the no. of outside directors; the ownership of the outside directors; board size; etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Regression: OLS regression (log-normal distribution)</td>
<td></td>
</tr>
</tbody>
</table>
Table 6.2.: A summary of the empirical studies between EM and board independence (continued)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ebrahim (2007)</td>
<td>U.S.</td>
<td>2,360 firm-year observations in the period of 1999 and 2000</td>
<td>• Research Type: quantitative research;</td>
<td>Their results indicate that the absolute value of abnormal accruals is negatively related to the percentage of independent directors on the board and the audit committee independence. In addition, their results show consistent and significant negative relation between EM and both institutional ownership in the firm and quality of its outside audit.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dependent variable: industry-adjusted discretionary accruals by using Modified Jones Model;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variables: % independent directors on the board; dummy variable for audit committee; no. of board meetings; no. of audit committee meetings; etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Regression: pooled OLS regression</td>
<td></td>
</tr>
<tr>
<td>Beasley (1996)</td>
<td>U.S.</td>
<td>75 fraud and 75 no-fraud (matched) firms for the years of 1979-90</td>
<td>• Research Type: quantitative research;</td>
<td>The results indicate that no-fraud firms have boards with significantly higher percentage of outside members than fraud firms. Additionally, as outside director ownership in the firm and outside director tenure on the board increase, and as the number of outside directorships in other firms held by outside directors decreases, the likelihood of financial statement fraud decreases.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dependent variable: value 1 when a firm is alleged to have experienced financial statement fraud and value of 0 otherwise;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variables: % independent directors on the board; the no. of years that the CEO has served as a director; a dummy variable with a value of one if the chairperson of the board holds the managerial position of CEO or president and value of zero otherwise; etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Regression: logit cross-sectional regression</td>
<td></td>
</tr>
<tr>
<td>Dechow et al. (1996)</td>
<td>U.S.</td>
<td>92 firms subject to enforcement actions by SEC and 92 control firms between 1982-1992</td>
<td>• Research Type: quantitative research;</td>
<td>They find that an important motivation for earnings manipulation is the desire to attract external financing at low cost. They also find that firms manipulating earnings are: (i) more likely to have boards of directors dominated by management, (ii) more likely to have a chief executive officer who simultaneously serve as chairman of the board, (iii) more likely to have a chief executive officer who is also the firm's founder, (iv) less likely to have an audit committee, and (v) less likely to have an outside block holder.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dependent variable: an ex ante measure of a firm's demand for financing. It is coded 1 if the firm's Free Cash is less than -0.5, and 0 otherwise;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variables: % insider on Board; % board holdings held by insiders; audit committee; outside block; 1 if the CEO is also the Chairman of the board, 0 otherwise; Board size; 1 if the CEO is also the Founder of the company, 0 otherwise; etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Regression: logit cross-sectional regression</td>
<td></td>
</tr>
</tbody>
</table>
Table 6.2.: A summary of the empirical studies between EM and board independence (continued)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
| Zhou & Chen (2004) | U.S.      | 989 observations from U.S. bank industry for the period 2000-2001             | • Research Type: quantitative research;  
• Dependent variable: LLP, loan loss provisions/average loans outstanding;  
• Independent variables: board size; % outsider directors on the board; no. of board meetings; audit committee; etc.;  
• Regression: OLS regression | Their results provide evidence suggesting that banks with more active boards are associated with less EM. When they further classify firms into high and low EM groups, they find that the number of board meetings is negatively related to EM for low EM banks. For the high EM group, independence and size of the board play an important role in constraining EM. |
| Park & Shin (2004) | Canada    | 202 Canadian firms for the years of 1991-97                                  | • Research Type: quantitative research;  
• Dependent variable: abnormal accruals by using Modified Jones Model;  
• Independent variables: % outside directors on the board; DOUT—1 if board has a majority of outside directors, zero if otherwise; F1—1 if there is a director from financial services industries on the board, 0 otherwise; BLOCK—fraction of votes attached to all voting shares control by largest block shareholders; etc.;  
• Regression: pooled OLS regression | They find that earnings are managed upward to avoid reporting losses and earnings declines. While outside directors, as a whole, do not reduce abnormal accruals, directors from financial intermediaries reduce EM, and the board representation of active institutional shareholders reduces it further. |
• Dependent variables: Earnings Per Share and share returns;  
• Independent variables: % outside directors; board size; insider ownership; etc.;  
• Regression: OLS regression | Their results show that while a smaller (larger) board size is positively (negatively) associated with earnings informativeness (suggesting that a smaller board size is more effective than a larger board in monitoring the quality of earnings), the fraction of outside directors does not appear to be significantly related with earnings informativeness. They also report a benign effect of Companies and Financial Reporting Act (1993). |
### Table 6.2: A summary of the empirical studies between EM and board independence (continued)

**EM and Board Independence (China's Evidence)**

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chen &amp; Cheng (2007)</td>
<td>China</td>
<td>104 B-share companies for the years of 1999-2003</td>
<td>● Research Type: quantitative research; &lt;br&gt;● Dependent variable: EFFECT—1 if the absolute values of company's earnings gap under two accounting standards (Chinese GAAP and IFRS) after 2001 are lower than that before 2000, 0 otherwise; &lt;br&gt;● Independent variables: % independent directors on the board; Audit committee; % shares hold by the institutional shareholders; etc. &lt;br&gt;● Regression: OLS regression</td>
<td>Overall, they don't to find any significant correlations among independent directors, audit committee, and institutional shareholders with the dependent variable.</td>
</tr>
<tr>
<td>Chen &amp; Zhang (2010a)</td>
<td>China</td>
<td>103 B-share companies for the years of 1999-2006</td>
<td>● Research Type: quantitative research; &lt;br&gt;● Dependent variable: the differences of firm's earnings gap of the 'first-seven items' between pre- and post- 2001; &lt;br&gt;● Independent variables: % outside directors on the board; audit committee; Big4; foreign institutional shareholdings; etc. &lt;br&gt;● Regression: OLS regression</td>
<td>While they find significantly negative correlation between audit committee and earnings gap (or EM), they don't find significant correlations of independent directors and other variables.</td>
</tr>
<tr>
<td>Clarke (2006)</td>
<td>China</td>
<td>150+ empirical studies</td>
<td>Qualitative Research—a survey of the empirical research on the relation between independent directors and corporate performance in the U.S., as well as in China.</td>
<td>The author argues that proponents of the institution of independent directors misconceive the nature of corporate governance problem in China (as well as in the U.S.), and have not taken into account specific features of Chinese institutional environment.</td>
</tr>
</tbody>
</table>
Table 6.2.: A summary of the empirical studies between EM and board independence (continued)

<table>
<thead>
<tr>
<th align="left"><strong>EM and Board Independence (China’s Evidence)</strong></th>
<th align="left"></th>
<th align="left"></th>
<th align="left"></th>
<th align="left"></th>
</tr>
</thead>
<tbody>
<tr>
<td align="left"><strong>Author(s)</strong></td>
<td align="left"><strong>Country</strong></td>
<td align="left"><strong>Sample Size</strong></td>
<td align="left"><strong>Methodology</strong></td>
<td align="left"><strong>Results</strong></td>
</tr>
</tbody>
</table>
| Chen et al., (2006) | China | 338 firms (with 169 fraud firms and 169 pared and non-fraud firms) for the years of 1999-2003 | • Research Type: quantitative research;  
• Dependent variable: a dummy variable taking the value 1 if the firm is subject to an enforcement action;  
• Independent variables: % outside directors on the board; board size; no. of board meetings in a year; no. of years that the chairman has served in that position; etc.  
• Regression: multivariate probit regression model (non-linear) | The results from multivariate analyses show that board characteristics are important in explaining fraud, such as: (1) increasing the proportion of outsiders on the board is one way to reduce fraud. Outsiders monitor management and help deter fraud, (2) the fact that commit frauds have more board meetings suggests directors realise some acts or decisions are borderline legal and so there is more debate about them resulting in more meetings, and (3) chairmen with shorter tenure appear less able to deter fraud. |

Table 6.3.: A summary of the empirical studies between EM and audit committee

<table>
<thead>
<tr>
<th align="left"><strong>EM and Audit Committee (Global Evidence)</strong></th>
<th align="left"></th>
<th align="left"></th>
<th align="left"></th>
<th align="left"></th>
</tr>
</thead>
<tbody>
<tr>
<td align="left"><strong>Author(s)</strong></td>
<td align="left"><strong>Country</strong></td>
<td align="left"><strong>Sample Size</strong></td>
<td align="left"><strong>Methodology</strong></td>
<td align="left"><strong>Results</strong></td>
</tr>
</tbody>
</table>
| Davidson et al., (2005) | Australia | 434 listed Australian firms for the financial year ending in 2000 | • Research Type: quantitative research;  
• Dependent variable: absolute level of discretionary accruals by using Modified Jones Model;  
• Independent variables: audit committee (dummy variable); % independent directors on the audit committee; size of the audit committee; a dummy variable used to measure whether the firm has its own internal audit function; etc.  
• Regression: cross-sectional OLS regression | Their results suggest that while the voluntary establishment of an internal audit function is not significant, a majority of non-executive directors on the audit committee is found to be significantly associated with a lower likelihood of EM. |
Table 6.3.: A summary of the empirical studies between EM and audit committee (continued)

**EM and Audit Committee (Global Evidence)**

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
| Crutchley et al., | U.S.    | 97 scandal and 97 industry-matched and non-scandal firms for the years of 1991-2002 | • Research Type: quantitative research;  
• Dependent variable: EM, measured by: (1) absolute value of discretionary current accruals calculated from Modified Jones Model, and (2) the Q-score of Penman and Zhang (2002), which examines the year-to-year change in estimated reserves and their current level relative to the industry median. A Q-score of 0 indicates good quality, whereas both high and low Q-score indicate that current earnings are of poor quality;  
• Independent variables: board size; % outside directors; % audit outsiders; % compensation outsiders; % Nomination outsiders; % additional boards; % insider ownership; etc.  
• Regression: logistic regression on combined sample | Their results show that the corporate environment most likely to lead to an accounting scandal manifests significant growth and accounting practices that are already pushing the envelope of earnings smoothing. Firms operating in this environment seem more likely to tip over the edge into fraud if there are fewer outsiders on the audit committee and outside directors appear overcommitted. |
| (2007)            |         |                                                                            |                                                                                                                                                                                                          |                                                                                                                                                                                                         |
| Bedad et al., (2004) | U.S.     | 3,947 firm-year observations (U.S. firms)                                   | • Research Type: quantitative research;  
• Dependent variable: abnormal accruals estimated with a cross-sectional version of the Jones Model;  
• Independent variables: FinExpertise, GovExpertise, FirmExpertise—1 for at least one member has financial, number of directorship and number of years of board services of outside members, etc.  
• Regression: logit regression model | On balance, their results suggest that an audit committee's independence and expertise (financial and governance) are significantly and negatively related to the existence of EM. Their results generally support the SOX requirements on audit committee. |
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
| Agrawal & Chadha (2005)          | U.S.    | 159 U.S. companies restated earnings with an industry-size matched sample of control firms for the years 2001-02 | • Research Type: quantitative research;  
• Dependent variable: discretionary accruals calculated from the Modified Jones Model;  
• Independent variables: % independent directors on the audit committee; dummy variable taking 1 if the audit committee includes at least one independent director with financial expertise; % blockholders, CEO chairs the board, etc.  
• Regression: cross-sectional OLS regression | Their results provide evidence suggesting that the probability of engaging in EM practices is lower in companies whose audit committees have an independent director with financial expertise; it is higher in companies in which the chief executive officer belongs to the founding family. |
| Defond & Jiambalvo (1991)       | U.S.    | 41 firms with accounting errors and another 41 control firms with no accounting errors for the years of 1976-87 | • Research Type: quantitative research;  
• Dependent variable: dummy variable: 1 if the firm overstated earnings, 0 otherwise;  
• Independent variables: AUDCOM—1 if the sample firm has an audit committee, 0 otherwise;  
DIFFUSE; GROEARN; ALTGAAP; etc.  
• Regression: logistic regression | Their results show that the earnings overstatements are negatively correlated with the growth in earnings. Analysis also indicates that earnings overstatements are more likely when firms have diffuse ownership, lower growth in earnings, and fewer income-increasing GAAP alternatives available. Overstatements are less likely among firms that have audit committees. |
| McMullen & Raghunandan (1996)   | U.S.    | 51 companies with and without financial reporting problems for 1985-89      | Qualitative research—a survey study, questions are set on outside directors; audit committee; accounting and finance knowledge of the members on audit committee; and frequency of meetings of the audit committee; etc. | They find that firms which have (1) an audit committee composed entirely of non-executive directors, (2) Certified Public Accounts (CPAs) on their audit committee, and (3) frequent audit committee meetings, are less likely to be subject to the SEC enforcement actions or restating their quarterly reports. |
Table 6.3.: A summary of the empirical studies between EM and audit committee (continued)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
- Dependent variable: 1 if the firm reports restatements of annual results, 0 otherwise;  
- Independent variables: INDEP—1 if all audit committee members are independent by BRC' definition, else 0; MINSIZE—1 if the audit committee consists of at least 3 members, else 0; EXPERT—1 if audit committee includes at least 1 director with financial expertise, else 0; MINMEET—1 if audit committee meets at least four times annually, else 0; etc.  
- Regression: pooled regression | They document that the independence and activity level of the audit committee exhibit a significant and negative association with the occurrence of restatement. They also find a significant negative association between an audit committee that includes at least one member with financial expertise and restatement. |
- Dependent variable: 1 if the firm has received a qualified audit reports and 0 if it has received a clean opinion;  
- Independent variables: AUDCOM—1= AC, 0=otherwise; MEMBERS—No. of members of the AC; %INDEP—No. of independent members/total members; LNAT—natural log of the number of years of engagement with the same audit firm, etc.  
- Regression: logistic regression | Their results indicate that the mere presence of an audit committee does not reduce the occurrence of error and non-compliance qualifications, as audit committees are not effective per se. However, the size of the audit committee and the percentage of independent member do have significant influence on the receipt of qualifications of this kind. |
Table 6.3.: A summary of the empirical studies between EM and audit committee (continued)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ho &amp; Wang (2001)</td>
<td>Hong Kong</td>
<td>98 CFOs and 92 financial analysts in the late 1997 and early 1998</td>
<td>Qualitative Research—a survey; questions on the existence of an audit committee; % independent directors on the board and on the audit committee; % family members on the board; the existence of dominant personality; etc.</td>
<td>Using a weighted relative disclosure index for measuring voluntary disclosure, the results indicate that the existence of an audit committee is significantly and positively related to the extent of voluntary disclosure.</td>
</tr>
<tr>
<td>Chen &amp; Zhang (2010a)</td>
<td></td>
<td></td>
<td>SEE TABLE 6.2. FOR DETAILS</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.4.: A summary of the empirical studies between EM and statutory audit

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
- Dependent variable: discretionary accruals using Jones Model;  
- Independent variables: NB6—1 if auditor is non-Big 6, else 0; OldAud—1 if the last sample year is followed by an auditor change; NewAud—1 if the first sample year is the first year with a new auditor, etc.  
- Regression: cross-sectional OLS regression | They find that clients of non-Big 6 auditors report discretionary accruals that increase income relatively more than the discretionary accruals reported by clients of Big 6 auditors. Specifically, clients of non-Big 6 auditors report discretionary accruals that are, on average, 1.5-2.1 percent of total assets higher than the discretionary accruals reported by clients of Big 6 auditors. |
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Francis et al., (1999)</td>
<td>U.S.</td>
<td>74,390 firm-year observations over the period of 1975-94</td>
<td>• Research Type: quantitative research;</td>
<td>The results indicate that even though the Big 6 audited firms have higher levels of total accruals, they still have lower amounts of estimated discretionary accruals. These findings are consistent with Big 6 auditors constraining aggressive and potentially opportunistic reporting by firms with high level of accruals.</td>
</tr>
<tr>
<td>Core et al., (2001)</td>
<td>U.K.</td>
<td>4,779 U.K. firms for the years of 1992-98</td>
<td>• Research Type: quantitative research;</td>
<td>They report evidence that clients’ EM activity to avoid losses and earnings decreases is positively associated with the ratio of non-audit fees to total fees for non-Big 5 auditors but not for Big 5 auditors. Further, the difference in the effectiveness of Big 5 and non-Big 5 auditors in constraining EM widen as the non-audit fee ratio increases.</td>
</tr>
<tr>
<td>Krishnan (2003)</td>
<td>U.S.</td>
<td>4,422 clients of Big 6 auditors for the years of 1989-1998</td>
<td>• Research Type: quantitative research;</td>
<td>The results indicate that clients of nonspecialist auditors report absolute discretionary accruals that are, on average, 1.2 percent of total assets higher than the discretionary accruals reported by clients of specialist auditors. His findings are consistent with the notion that specialist auditors mitigate accruals-based EM more than nonspecialist auditors.</td>
</tr>
</tbody>
</table>
Table 6.4.: A summary of the empirical studies between EM and statutory audit (continued)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zhou &amp; Elder (2004)</td>
<td>U.S.</td>
<td>2,453 observations of seasoned equity offerings between 1991-99</td>
<td>• Research Type: quantitative research;</td>
<td>They find evidence that Big 5 auditors are associated with lower earnings management in the years before, during, and subsequent to the SEOs. In other words, they argue that higher audit quality as evidenced by auditor size (Big 5) is associated with less EM.</td>
</tr>
<tr>
<td>Van Tendeloo &amp; Vanstraelen (2005)</td>
<td>Germany</td>
<td>636 firm-year observations related to the period of 1999-2001</td>
<td>• Research Type: quantitative research;</td>
<td>Their results illustrate that companies which have adopted IFRS engage more in earnings smoothing. However, this increase in earnings smoothing with a adoption of IFRS is significantly reduce when the company has a Big 4 auditor.</td>
</tr>
<tr>
<td>Van Tendeloo &amp; Vanstraelen (2008)</td>
<td>6 EU countries (Belgium, Finland, France, Netherlands, Spain, and U.K.)</td>
<td>Various sample sizes (depend on different countries) range from 10 to 44100 firm-year observations of the private client segment market</td>
<td>• Research Type: quantitative research;</td>
<td>They provide evidence that, after controlling for self-selection, audit quality differentiation between Big 4 and non-Big 4 audit firms also exists in the private client segment market. In addition, their results suggest that audit quality and investor protection are substitute in constraining EM in private firms, in the sense that the Big 4 audit quality effect attenuates when investor protection is stronger.</td>
</tr>
</tbody>
</table>
Table 6.5: A summary of the empirical studies between EM and institutional shareholders

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
| Chung et al., (2002) | U.S.    | 12,478 firm-year observations for the 9-year period of 1988-96 | - Research Type: quantitative research;  
- Dependent variable: discretionary accruals using Modified Jones Model;  
- Independent variables: IS—1 if institutional share ownership for the firm is higher than the cross-sectional median in the year; \( \hat{I}(Cp.Fg) \)—1 if a firm with poor relative performance in the current period and good relative performance in the future period; \( \hat{I}(Cg.Fp) \)—1 if a firm with good performance in the current period and poor relative performance in the future period; etc.  
- Regression: pooled regression model | They find that the presence of large institutional shareholdings inhibit managers from increasing or decreasing reported profits towards the managers’ desired level or range of profits. Their evidence is consistent with institutional investors monitoring and constraining the self-serving behaviour of corporate managers. |
| Chung et al., (2005) | U.S.    | 22,576 firm-year observations over the period of 1984-96 | - Research Type: quantitative research;  
- Dependent variable: income-increasing discretionary accruals using Modified Jones Model;  
- Independent variables: SFCF—1 if retained cash flow is above the sample median and the price-to-book ratio is below the sample median for the year, otherwise 0; IS—1 if the sum of institutional shareholdings and blockholdings is above the sample median for a year, otherwise 0, etc.  
- Regression: cross-sectional OLS regression | Their findings show that low-growth companies with high free cash flow use income-increasing discretionary accruals to offset the low or negative earnings that accompany with negative net present value. In addition, they also provide evidence suggesting that external monitoring by the institutional investors is effective in deterring managers’ opportunistic EM. |
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
| Sheng (2003)    | Australia| 836 firms based on ASX for the year between 1993 and 1997                   | • Research Type: quantitative research;  
• Dependent variable: income increasing discretionary accruals using Modified Jones Model;  
• Independent variables: PISH—% institutional ownership; PISH2—square of % institutional ownership; SIZE; LEV; AUD—1=audited by Big 6 auditors, 0 otherwise; MGRSH—ratio of directors’ shareholdings; etc.  
• Regression: cross sectional OLS regression | The results provide evidence suggesting that, on one hand, a positive association is found at lower institutional ownership levels, consistent with the view that transient (short-term oriented) institutional investors create incentives for managers to manage earnings upwards. On the other hand, a negative association is found at the higher institutional ownership levels, consistent with view that long-term oriented institutional investors’ monitoring limits managerial accruals discretion. |
| Rajpopal et al., (2003) | U.S.     | 1,541 firms for the years of 1989-95                                        | • Research Type: quantitative research;  
• Dependent variable: the absolute value of discretionary accruals using Modified Jones Model;  
• Independent variables: PINST—% of institutional ownership; MGR—% of managerial ownership, stock price; SIZE; LEV; EXPRF—1 if earnings (scaled by total assets) for a firm-year are in the top or bottom decile of earnings for all firm-year; etc.  
• Regression: cross sectional OLS regression | Overall, they show that the absolute value of discretionary accruals calculated declines with institutional ownership. In addition, they also report that as institutional ownership increases, stock prices tend to reflect a greater proportion of the information in future earnings related to current earnings. |
| Velury & Jenkins (2006) | U.S.     | 4,238 firm-year observations over the period of 1992-99                      | • Research Type: quantitative research;  
• Dependent variable: (1) the cash flow-earnings relation; (2) the magnitude of abnormal accruals calculated using Modified Jones Model; (3) the reporting lag from the end of fiscal year to the actual report date; (4) The Earnings Response Coefficient;  
• Independent variables: PIH—% shares held by institutions; CONC—% shares held by the five largest institutions, % shares of managers; etc.  
• Regression: cross-sectional OLS regression | They generally document a positive association between institutional ownership and earnings quality. In addition, they also document evidence indicating a negative association between concentrated ownership and earnings quality. |
Table 6.5: A summary of the empirical studies between EM and institutional shareholders (continued)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cornett et al., (2006)</td>
<td>U.S.</td>
<td>662 firm-year observations from S&amp;P 100 firms for the years of 1993-2000</td>
<td>• Research Type: quantitative research;</td>
<td>Generally, their findings indicate that both institutional ownership of shares and institutional investor representation on the board of directors reduce the use of discretionary accruals in EM. And, these factors largely offset the impact of options compensation, which they find strongly encourages EM.</td>
</tr>
<tr>
<td>Wahal (1996)</td>
<td>U.S.</td>
<td>146 pension firms over seven-year period from 1987-1993</td>
<td>• Research Type: quantitative research; • Using AHP—abnormal holding period returns to measure the long-term performance; using accounting measures for performance—the ratio of operating income to total assets and net income divided by total assets. • Regression: cross-sectional regression method</td>
<td>The author documents that there is no evidence of significant long-term improvement in either stock price or accounting measures of performance at the time and in the post of targeting period. Collectively, these results cast doubt on the effectiveness of pension fund activism as a substitute for an active market for corporate control.</td>
</tr>
<tr>
<td>Karpoff et al., (1996)</td>
<td>U.S.</td>
<td>522 different shareholder proposals from 1986-90^{13}</td>
<td>• Research Type: quantitative research; • Dependent variables: market-to-book ratio (%); operation return on sales; recent sales growth (%); prior three-year abnormal stock return (%); • Independent variables: No. of institutions owning common stock; Leverage; % shares owned by institutions; % shares owned by insiders; etc. • Regression: logistic regression model</td>
<td>They argue that shareholder activism proposals have little effect on firms’ performance. Particularly, the average effect of shareholder corporate governance proposals on stock values is close to, and not significantly different from one. Furthermore, average abnormal returns are not systematically related to proposal type and sponsor. Proposals sponsored by institutions have insignificant stock price effects.</td>
</tr>
</tbody>
</table>
Table 6.5: A summary of the empirical studies between EM and institutional shareholders (continued)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karpoff (2001)</td>
<td>Worldwide</td>
<td>25 empirical studies from 1994-2000</td>
<td>Qualitative research: Survey+Critical Analysis</td>
<td>The author concludes that the disagreement among researchers is more apparent than real. Most evidence indicates that shareholder activism can prompt small changes in target firms’ governance structures, but has negligible impacts on share values and earnings.</td>
</tr>
</tbody>
</table>

Table 6.6: A summary of the empirical studies between EM and controlling shareholders

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
| La Porta et al., (1998) | Worldwide | 49 countries at the end of 1993 | - Research Type: quantitative research;  
- Variables:(1) they classify the countries based on their legal origins to: common-law, French-civil-law, German-civil-law, and Scandinavian countries; and (2) according to these classifications, they compare the shareholders rights, development and investors rights, creditor rights, enforcement, ownership of 10 largest nonfinancial domestic firms by large shareholders, accounting standards, etc.  
- Regression: cross-sectional OLS regression+country rankings | Their results suggest that: (1) laws differ markedly around the world. In particular, countries whose legal rules originate in the common-law tradition tend to protect investors considerably more than the countries whose law originate in civil law, and especially the French-civil-law, tradition. The German-civil-law and the Scandinavian countries take an intermediate stance toward investor protections, (2) law enforcement differs a great deal around the world. German-civil-law and Scandinavian countries have the best quality of law enforcement and (3) ownership concentration is extremely high around the world. In an average country, close to half equity in a publicly traded company is owned by the three largest shareholders. Furthermore, good accounting standards and shareholder protection measures are associated with a lower concentration of ownership, indicating that concentration is indeed a response to poor investor protection. |
### Table 6.6: A summary of the empirical studies between EM and controlling shareholders (continued)

**EM and Controlling Shareholders (Global Evidence)**

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>La Porta et al., (1999)</td>
<td>Worldwide</td>
<td>691 different sizes of corporations in 27 wealth economies at the end of 1995</td>
<td>- Research Type: quantitative research; &lt;br&gt; - Variables: (1) legal origins, and (2) Antidirector Index, widely held, family, State, widely held financial, widely held corporation, miscellaneous, Cap=20% v, Pyramid, Firms/Avy Fam, management, %Mkt WHF, independent financials, associated financials, controlling shareholder is alone, strong banks, corporate dividends and taxed, consolidation for tax purposes, restrictions on cross-ownership, GDP, etc.  &lt;br&gt; - Regression: cross-sectional OLS regression+country rankings</td>
<td>They find that outside the U.S., particularly at countries with poor shareholder protection, even the largest firms tend to have controlling shareholders. Sometimes that shareholder is the State; but more often it is a family, usually the founder of the firm or his descendants. They also report that the controlling shareholders typically have control over firms considerably in excess of their cash flow rights, primarily through the use of pyramids and participation in management.</td>
</tr>
<tr>
<td>Claessens et al., (2000)</td>
<td>East Asian countries</td>
<td>2,980 corporations in 9 East Asian countries at the end of fiscal year 1996</td>
<td>- Research Type: quantitative research; &lt;br&gt; - Variables: market value, shareholders who control over 5% of the votes, voting rights and uses of deviations from one-share-one-vote, pyramidal and cross-holding, widely held financial institutions, etc. &lt;br&gt; - Regression: cross-sectional OLS regression+country rankings</td>
<td>They document evidence suggesting that in all countries, the voting rights frequently exceed cash-flow rights via pyramid and cross-holdings. The separation of ownership and control is most pronounced among family-controlled firms and small firms. More than two-thirds of firms are controlled by a single shareholder.</td>
</tr>
<tr>
<td>Claessens et al., (2002)</td>
<td>East Asian Countries</td>
<td>1,301 corporations in 8 East Asian countries at the end of fiscal year 1996 (same countries as in the previous study, except Japan)</td>
<td>- Research Type: quantitative research; &lt;br&gt; - Dependent variable: the ratio of the market value of assets to the book value of assets; &lt;br&gt; - Main Independent variables: share of cash-flow rights held by the largest shareholder (ownership) and the share of voting rights held by the largest shareholder (control); control minus ownership, etc. &lt;br&gt; - Regression: cross-sectional OLS regression+country rankings</td>
<td>Their findings document an inverted “U-shape” relation between firm’s value measured by sales growth and cash-flow ownership of the largest shareholder. Particularly, firm value increases with the cash-flow ownership of the largest shareholder, consistent with a positive incentive effect. But firm value falls when the control rights of the largest shareholder exceed its cash-flow ownership, consistent with an entrenchment effect.</td>
</tr>
</tbody>
</table>
Table 6.6: A summary of the empirical studies between EM and controlling shareholders (continued)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
</table>
| Leuz & Oberholzer-Gee (2006) | Indonesia | 132 Indonesian firms at the end of 1996                                     | • Research Type: quantitative research;  
• Dependent variable: 1 if the firm has foreign securities and 0 otherwise;  
• Independent variables: political issues about the President Suharto (e.g., Closeness to Suharto, Suharto-Family owned or State-owned enterprise);  
firm size; ROA; capital intensity; etc.  
• Regression: probit regression model | They find that firms with strong political connections are less likely to have publicly traded foreign securities. |
| Leuz et al., (2003) | Worldwide  | A sample consists of 70,955 firm-year observations, across 31 countries and 8,616 non-financial firms for the fiscal years 1990-99 | • Research Type: quantitative research;  
• The authors compare EMs in different institutional clusters (e.g., stock market capitalisation, listed firms, IPOs, ownership concentration, antidirector index, disclosure index, efficiency of Judicial system, rule of law, corruption index efficiency of Judicial system, rule of law, corruption index) of the sample.  
• Regression: cross-sectional OLS regression=country rankings | Their findings show that EM varies systematically across these institutional clusters. The analysis suggests that outsider economies with relatively dispersed ownership, strong investor protection, and large stock markets exhibit lower levels of EM than insider countries with relatively concentrated ownership, weak investor protection, and less developed stock markets. |
Table 6.6: A summary of the empirical studies between EM and controlling shareholders (continued)

**EM and Controlling Shareholders (Global Evidence)**

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shen &amp; Chih (2007)</td>
<td>Asian</td>
<td>204 firms at the end of 2000</td>
<td>• Research Type: quantitative research;</td>
<td>They find that a firm in a country with good anti-director rights engages in less earnings smoothing and earnings aggressiveness. And, stronger enforcement of laws can result in less earnings smoothing, but this effect is stronger in countries with sounding corporate governance system.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dependent variable: EM1=SD(operating earnings)/SD(cash flow from operation); EM2=Spearman (ΔAccrual, Δcash flow from operation); EM3=</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EM3=ΔAccrual/Δcash flow from operation); EM4=RANK (EM1) + RANK (EM2) + RANK (EM3))/3;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variables: CG6 or CG7; the log of firm’s sales, antidirector index, disclosure index, etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Regression: cross-sectional OLS regression + country rankings</td>
<td></td>
</tr>
</tbody>
</table>

**EM and Controlling Shareholders (China Evidence)**

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ding et al., (2007)</td>
<td>China</td>
<td>273 firms at the end of 2002</td>
<td>• Research Type: quantitative research;</td>
<td>They find that the relation between EM and ownership concentration exhibits a statistically significant non-linear, inverted &quot;U-shape&quot; pattern. On one hand, large shareholders tend to maximise accounting earnings in order to reap benefits in the future. On the other hand, when ownership concentration reaches a high level, large shareholders become the true owners of the firm, and are thus more likely to seek to preserve its future growth potential by minimising account earnings. Their analysis also shows that privately-owned listed firms favour earnings boosting methods more than their State-owned counterparts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dependent variable: discretionary accruals using Modified Jones Model;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variables: % share of the largest shareholder; Private=value 1 if the company is privately owned and 0 otherwise; Private_Top1—</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>an interaction variable of Private and Top1; Right_Issue=value 1 if the company applied to rights issue in 2002 and 0 otherwise; Pri—a dummy variable of 1 if the company is privatised from a SOE and 0 otherwise; st_pt—indicates whether a company is ST or PT, etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Regression: cross-sectional OLS regression</td>
<td></td>
</tr>
<tr>
<td>Author(s)</td>
<td>Country</td>
<td>Sample Size</td>
<td>Methodology</td>
<td>Results</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Firth et al., (2007)</td>
<td>China</td>
<td>5,189 firm-year observations from 1998-2003</td>
<td>• Research Type: quantitative research;</td>
<td>Their results document that firms with highly concentrated share ownership have lower earnings informativeness (low level of earnings-returns ratio and high level of discretionary accruals). It is argued that large shareholders may influence firms to adopt accounting policies that reflect the wishes of the large owners rather than reflect the economic substance of the business transactions.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dependent variable: earnings-returns ratio;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent accruals using Modified Jones Model;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variables: % share of the largest shareholder;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• % share of the largest shareholder; ownership of the largest</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>shareholder minus the combined shareholding of the 2nd to 10th largest owner;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• ownership of the foreign investors; board size; % outside directors</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>on the board; etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Regression: cross-sectional OLS regression</td>
<td></td>
</tr>
<tr>
<td>Jian and Wong (2004)</td>
<td>China</td>
<td>131 listed firms for the years of 1997-2002</td>
<td>• Research Type: quantitative research;</td>
<td>Their findings provide evidence that Chinese listed companies use recurring related party transactions to manage operating earnings and achieve certain ROE targets, or strive to be eligible for rights issues. In addition, listed companies divert the money they obtain from operations to their related firms. And, these EM and tunnelling activities are more pronounced for State-controlled companies.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dependent variable: related party transactions as the proxy of EM;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variables: 1 if the firm is a State-owned firm, 0 otherwise;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• ROA; non-core operating earnings; non-operating earnings; etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Regression: GMM regression model</td>
<td></td>
</tr>
<tr>
<td>Liu &amp; Lu (2007)</td>
<td>China</td>
<td>A panel data of 633 listed companies for the 1999-2005 period</td>
<td>• Research Type: quantitative research;</td>
<td>They provide evidence suggesting that controlling shareholders largely engage in using discretionary accruals to artificially dress-up the performance of the firms in order to avoid de-listing and raise capital through rights issue.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dependent variable: discretionary accruals using Modified Jones Model;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variables: mechanisms of corporate governance, i.e., ownership,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>independent director, leadership, etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Regression: cross-sectional OLS regression</td>
<td></td>
</tr>
</tbody>
</table>
Table 6.6: A summary of the empirical studies between EM and controlling shareholders (continued)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country</th>
<th>Sample Size</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jiang et al., (2005)</td>
<td>China</td>
<td>1,133 listed firms for 1996-2002</td>
<td>• Research Type: quantitative research;</td>
<td>They show that companies with large OREC balances experience worse future operating performance and are much more likely to become candidates for delisting. High-OREC firms have generally lower market valuations, but still earn negative risk-adjusted returns in the future.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dependent variable: Other Receivables (OREC);</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variables: SIZE, LEVERAGE, ROE, MV--market value of the stock at the end of the fourth month after the fiscal year end, BIGSHARE--the percentage of shares controlled by the largest shareholder, etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Regression: cross-sectional regression</td>
<td></td>
</tr>
<tr>
<td>Wang et al., (2004)</td>
<td>China</td>
<td>922 China's publicly listed firms (on both the SHSE and SZSE) for 1990-2000</td>
<td>• Research Type: quantitative research;</td>
<td>They find that public listing is associated with share deterioration in performance for up to six year after the year of listing for firms with or without direct State ownership. These findings suggest that ownership concentration by large shareholders is ineffective in improving performance when they are likely to be the State agencies or SOE-like institutions.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dependent variable: operating income;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Independent variables: ROA; (ROS); % of shares held by top 5 shareholders and State divided by total number of shares; growth rate of sales; capital expenditure; etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Regression: pooled regression model</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 7: Hypotheses Development
7.1. Introduction

As proposed by Black (1999) that research questions, objectives, and hypotheses are formulated to bridge the gap between the more abstractly stated research problem and purpose and the detailed design for data collection and analysis. While the research questions are concise and interrogative statements, the research objectives are clear, concise, and declarative statements in relation to the questions formulated. A hypothesis is the formal statement of the expected relationship or relationships between two or more variables in a specific population. More generally, Black (1999) states that the hypothesis translates the research problem and purpose into a clear explanation or prediction of the expected results or outcomes of the study.

Based on both the theoretical and empirical literature reviewed in the previous chapters, this chapter begins with stating the research question coupled with research objectives. In brief, the research question is: how does the passage of the Code with regard to the mechanisms of corporate governance (especially executive compensation) affect EM activities in China’s listed companies? With regard to this research question, it is to investigate the extent of EM activities by comparing two contrasting governance regimes (pre and post- Code periods) in China’s listed companies, and to investigate the impacts of several mechanisms enforced by the Code.

Then, two major categories of hypotheses are formulated regarding (1) the trend in EM activities over time, and (2) the impacts of the main mechanisms enforced by the Code (e.g., executive compensation, independence of the board, internal and external audit, institutional shareholdings, and the characteristics of controlling shareholders) on such activities in China’s listed companies.

The structure of this chapter is provided as the followings:

| 7.1. Introduction | Section 7.1. gives a brief introduction; |
| 7.2. Research Question and Objectives | section 7.2. provides the research question and objectives based on both the theoretical and empirical literature; |
| 7.3. Hypotheses Development | section 7.3. formulates the hypotheses; |
| 7.4. Summary | section 7.4. summaries the whole chapter. |
7.2. Research Question and Objectives

As argued by Argyrous (2005, p.3) that “[a] research question proposes a broad question in general...[a] research objective states the aim of a research project in terms of cases of interest and the variables upon which these cases are thought to differ”. The precisely stated research questions and objectives can guide the research project to be conducted in the meaningful ways and avoid it to end up with a jumble of information which does not create any real knowledge. Thus, clear research questions and objectives have to be formulated before undertaking statistical analysis to avoid the situation where huge amounts of data are gathered unnecessarily and which do not lead to any meaningful results (Argyrous, 2005).

Recall from the previous discussion, based on the OECD principles of corporate governance (2004), the *Code of Corporate Governance for Listed Companies in China* (hereafter the Code) that intends to enhance the integrity of financial statements through improving corporate governance system and bring forward the healthy development of the stock markets in China was published by the CSRC in January 2002. Although the Code proposes sweeping changes (such as independence and structure of the board, duty of controlling shareholders), the consequences of these changes have yet to be systematically studied. With regard to EM activities which have been proved to be rampant in China’s listed companies (e.g., Chen and Yuan, 2006; Chen et al., 2001; Ding et al., 2007; Liu and Lu, 2007; Yu et al., 2006), mitigating such opportunistically discretionary behaviours through improving the quality of financial reporting is laid at the heart of the Code. However, there is still lack of study that directly investigates the trend in and the impact of the Code on EM practices.

And, as reviewed in the previous chapters, several major mechanisms with regard to corporate governance arranged from the executive compensation to the controlling shareholders are enforced by the Code. Among them, there is no published study to empirically investigate the impact of executive compensation on EM practices in China’s listed companies. It still remains unclear whether performance-related executive compensation in China is an incentive of managers to engage in EM practices as proposed by TCE or should be considered as an alignment mechanism (AT) that encourages managers to maximise shareholder wealth, thus limiting the level of EM.
And, it is still unclear how executive compensation is affected by promulgation of the Code. For the monitoring mechanisms arranged from the independent non-executives to the institutional investors, their impacts on EM practices in China are still unclear since the empirical results reviewed are mixed (e.g., Chen et al., 2006; Chen and Cheng 2007; Chen and Zhang, 2010a, Clarke, 2006). Although empirical studies have provided evidence suggesting that controlling shareholders may engage in EM practices in China's listed companies due to the concentrated ownership structure (e.g., Chen and Yuan, 2006; Ding et al., 2007; Liu and Lu, 2007), it is still worth investigating the impact of the Code regarding investor protection on controlling shareholders since there is paucity of study to investigate such an important issue.

By putting all together, motivated by the gap of lacking a comprehensive study that investigates the impact of the Code on EM which is of important policy implication, the research question of this thesis is: how does the passage of the Code with regard to the mechanisms of corporate governance (especially executive compensation) affect EM activities in China's listed companies? In order to address this research question, the corresponding research objectives are formulated. In particular, it is to investigate the prevalence of EM activities across time, and to compare such activities between the pre- and post- Code periods; it is to investigate the impacts of the governance mechanisms enforced by the Code on mitigating EM practices by either tying the interests of managers with those of shareholders (executive compensation) or providing constant monitoring (independent directors, audit committee, statutory audit, and institutional investors); and it is to investigate the impact of investor protection enforced by the Code on limiting controlling shareholders' EM practices.

7.3. Hypotheses Development

According to Argyous (2005), Field (2005), Pallant (2005) the development of hypotheses involves formulation of testable statements for two or more factors identified as relevant to the problem under study. By testing their relationship scientifically, it is possible to obtain some reliable information on what kind of relationships exist among the variables operating in the problem space. In order words, hypothesis is a statement about some characteristics of the distribution of a population. And, hypothesis testing is the procedure for deciding whether some aspects of a
population distribution have specified characteristics. In following sections, two major categories of hypotheses are formulated in relation to (1) the trend in EM activities over time, and (2) the impacts of the main governance mechanisms enforced by the Code on EM practices in China’s listed companies.

7.3.1. The Hypothesis of EM Trend in China’s Listed Companies
Recall from the theories reviewed, TCE predicts the inverse relationship between good corporate governance (higher safeguard intensity) and financing costs: the higher (lower) the safeguard intensity/corporate governance the lower (higher) the external equity financing costs, other things equal. Thus, if the corporation is to perform well financially for its owners, an appropriate level of safeguard intensity (e.g. good corporate governance) will be essential (Williamson, 1984a; 2005b). In terms of AT, it proposes the similar argument by arguing that corporate governance is regarded as a set of mechanisms that can offer investors protections in order to mitigate opportunistic behaviour. Furthermore, both theories propose that any improvements of corporate governance system can be seen as the efforts to minimise opportunistically discretionary behaviour thus lower agency costs and transaction costs among different groups according to the different risk bearing and asset-specialised transactions respectively (Fama and Jensen, 1983a, b; Williamson, 1984a; 2005b).

According to the China’s 2002 Code, it is formulated to promote the establishment and improvement of modern enterprise system of listed companies, to standardise the operations of listed companies, to enhance the integrity of financial information provided to the public, and to bring forward the healthy development of the securities markets. All listed companies shall act in the spirit of the Code in their efforts to improve corporate governance. In line with the theories, since improved corporate governance system can constrain discretionary behaviours, it is hypothesised that the degree of earnings manipulations towards the desired level is declined after the passage of the Code. In alternative form:

**H1: Ceteris paribus, the Chinese listed companies’ level of EM is lower in the post-Code period.**
In order to test this hypothesis, the level of discretionary accruals of the listed companies is analysed prior to and after the passage of the Code.

**7.3.2. The Hypotheses of Corporate Governance and EM in China’s Listed Companies**

**7.3.2.1. Executive Compensation**

As discussed early, there is a continuing debate about effectiveness of tying executive compensation to firm’s performance on mitigating opportunistic discretion. While AT argues that managers are more likely to make operating and investing decisions that can maximise shareholder wealth by tying their compensation to performance, TCE states that remuneration strategy as an *ex ante* alignment may not be an effective mechanism to prevent opportunistic discretion given that the written contracts are never complete and managers are given to be opportunism. The empirical studies based on the Western countries provide consistent results suggesting that EM practices (mostly measured by discretionary accruals) and/or other opportunistic behaviours (e.g., accounting fraud, restating financial statements, providing misleading financial information) are concurrent with the use executive compensation, especially the equity-based components (e.g., Baker et al., 2003; Cohen et al., 2008; Gao and Shrieves, 2002; Shute, 2007).

However, due to lack of empirical evidence, it still remains unclear about the impact of performance-related executive compensation on EM practices in China’s listed companies. In line with AT, the hypotheses formulated in below follow its major arguments on executive compensation. More generally, it is conjectured that due to the lack of stock options utilised in China which have been largely blamed as the root of EM practices based on the Western experiences, tying executive compensation to performance advanced from the one that totally separated compensation from firms’ performance in the 1980s may become a mechanism to align the interests of managers with those of the shareholders, thus may encourage them to act on behalf of shareholders and limit their opportunistically discretionary behaviour EM. Furthermore, the China’s 2002 Code highlights and strengthens the role played by the performance-based executive compensation by mentioning that “to attract qualified personnel and to maintain the stability of management, a listed company shall establish rewarding systems that link the compensation for management personnel to the
company’s performance and to the individual’s work performance”, and “the performance assessment shall become a basis for determining the compensation and other rewarding arrangements” (Section 3, Chapter 5). Correspondingly, it is hypothesised that executive compensation can reduce EM practices in China, and such impact is hypothesised to be more pronounced after the Code.

**H2a:** Ceteris paribus, there is a negative correlation between executive compensation and EM in the Chinese listed companies.

**H2b:** Ceteris paribus, the negative correlation between executive compensation and EM in the Chinese listed companies is more pronounced in the post-Code period.

It is to test the relationship between discretionary accruals as the dependent variable (proxy of EM) and executive compensation (cash compensation of top 3 highest paid executives) as the independent variable. Given that the managerial and director shareholdings are very small and executive stock option scheme are rare, stock options or stock ownership could hardly be considered as an effective incentive for the executives in Chinese listed firms (Firth et al., 2006; Chen and Zhang, 2010c, Chen et al., 2010). For this reason, the total cash compensation received by top 3 executives is thus examined. Time measurement is introduced to differentiate the pre-Code period value from the post-Code period value of the independent variable.

### 7.3.2.2. Independent Board of Directors

Both TCE and AT have mentioned the role of the board in monitoring opportunistic behaviour. TCE argues that the board evolves as a way by which to reduce the costs of capital for projects that involve limited redeployability (Williamson, 1984a; 1988). AT (Fama and Jensen, 1983a;b) states that the board could be regarded as a major control instrument in a corporation for safeguarding equity finance. For the board composition, both theories argue corporate boards should include outside members, that is, members who are not internal managers, and hold a majority of seats. The outside board members act as arbiters in disagreements among internal managers and carry out tasks that involve severe problems between internal managers and residual claimants, for instance, setting executive compensation or searching for replacements for top managers (Fama and Jensen, 1983b; Jensen, 2004; 2005; Williamson, 1984a).
In regard to the empirical studies that are mainly conducted in the US and UK, the results of the effectiveness offered by the independent non-executives on mitigating EM are still inclusive. On one hand, Beasley (1996), Dechow et al. (1996), Klein (2002), Peasnell et al. (2000), (2005), Xie et al. (2003) document a significantly negative correlation between the proportion of independent non-executives on the board and EM which is mostly measured by discretionary accruals or earnings fraud. On the other hand, Ahmed et al. (2006), Monk and Minow (2008), Park and Shin (2004) state that adding outside directors to the board may not achieve improvement in governance practices by itself.

Based on the Chinese experiences, while Chen et al. (2006) provide evidence suggesting that increasing the proportion of outsiders on the board is one way to reduce financial fraud, Chen and Cheng (2007), Chen and Zhang (2010a), Clarke (2006) argue that independent non-executive directors on the board remain inactive in mitigating firm’s opportunistic behaviour in China. Due to the dominance of controlling shareholders in listed companies, the effectiveness of independent directors on monitoring managerial discretion may be jeopardised.

Despite these mixed results, this thesis follows the arguments proposed by TCE and AT and hypothesises that independent non-executives can mitigate EM in Chinese listed companies. Furthermore, the China’s Code (2002) requires a listed company to introduce independent directors to its board. These directors shall be independent from the listed company that employs them and the company’s major shareholders. And, by June 30th 2002, at least two members of the board of directors shall be independent directors, and by June 30th 2003, at least one third of the board shall be independent directors. Accordingly, since the Code enforces the power of independent of non-executive directors on the board, it is thus hypothesised that the effectiveness of independent non-executives on constraining EM practices in China after promulgation of the Code is more pronounced. In alternative form:

**H3a:** Ceteris paribus, there is a negative correlation between the proportion of independent non-executives on the board and EM in the Chinese listed companies.
H3b: Ceteris paribus, the **negative** correlation between the proportion of independent non-executives on the board and EM in the Chinese listed company is **more pronounced** in the post-Code period.

In order to investigate these hypotheses, the dependent variable—discretionary accruals as the proxy of EM, and the independent variable—the proportion of independent non-executives on the board are used. In order to differentiate the pre-Code value of the board independence from its post-Code value, time measurement is included.

### 7.3.2.3. The Internal and External (Statutory) Audit

Both TCE and AT highlight the important roles played by internal and external (statutory) audit in mitigating the opportunistic behaviour of management. In particular, TCE argues that some managements play “end games” (undisclosed strategic decisions to cut and run before corrective measures can be taken) and individual managers commonly disclose information selectively or distort data. In order to minimise the transaction costs derived from such concealment and distortion, additional checks are thus required to be created. As pointed out by Williamson (1984a) “…an audit committee composed of outside directors and the certification of financial reports by an accredited auditing firm can mitigate management’s opportunistically discretionary behaviours in information disclosure” (Williamson, 1984a, p.1211). In the similar vein, AT proposes that an audit committee should be an outstanding function in monitoring activities. In order to be efficient, it has to be entirely composed of outside directors. And, in principle, external (statutory) auditor could act as a checking point to make sure the financial information published is comprehensive, punctual, and accurate (Jensen, 2000).

**The Internal Audit—Audit Committee**

The benefits of creating an audit committee have been documented in the literature (Archambeault and DeZoort, 2001; Defond and Jiambalvo, 1991; Kunitake, 1983). As proposed by Archambeault and Dezoort (2001), audit committee could provide diligent oversight to ensure that management is not compromising shareholder interests. Empirical studies have provided evidence suggesting that the independent audit committee is significantly and negatively related to EM practices and other
discretionary behaviours, such as overstatement errors, lowering the quality of financial statements (e.g., Abbot et al., 2004; Agrawal and Chadha, 2005; Bedard et al., 2004; Crutchley et al., 2007; Davidson et al., 2005; Defond and Jiambalvo, 1991; Ho and Wang, 2001).

Based on the Chinese stock markets, few studies investigate the impact of the audit committee on constraining firms from self-dealing in accounting policies. For instance, Ho and Wang (2001) provide empirical evidence suggesting that the existence of an audit committee on firms’ boards is significantly and positively related to the extent of voluntary disclosure. Chen and Zhang (2010a) report a significantly negative correlation between the existence of audit committee and earnings gap which is used as the proxy of EM for companies in China’s B-share market. However, given that the sample size of both studies is relatively small, the measurements used may be questionable. While the extent of voluntary disclosure used by Ho and Wang (2001) may be an implicit proxy of EM, earnings gap under the Chinese GAAP and the IFRS introduced by Chen and Zhang (2010a) may not be necessarily the same with EM. Thus, the pervasiveness and magnitude of the effectiveness of audit committee on mitigating EM practices in China’s listed companies may not be well presented.

In line with the arguments proposed by TCE and AT with regard to audit committee, this thesis hypothesises that audit committee can mitigate EM practices in China’s listed companies. And, the 2002 Code recommends that various committees of the board be established in China’s listed companies. Among these board subcommittees, audit committee has the responsibility to review the scope and outcome of audit, and to ensure the objectivity of auditors is maintained. Further, the Code requires it to be composed of a majority of independent directors, and at least one independent director should be an accounting professional served on the committee. Since the Code strengthens the role played by the audit committee, it is hypothesised that the effectiveness of creating an audit committee on the board on mitigating EM practices is more pronounced in the post-Code period. In alternative form:

\[ H_{4a}: \text{Ceteris paribus, there is a negative correlation between the creation of an audit committee on the board and EM in the Chinese listed companies.} \]
**H4b:** Ceteris paribus, the **negative** correlation between the creation of an audit committee on the board and EM in the Chinese listed companies is **more pronounced** in the post-Code period.

In order to test these hypotheses, the dependent variable is designed as discretionary accruals, and the independent variable is the establishment of audit committee. Time measurement is included to distinguish the value of the independent variable in the post-Code period from those in the pre-Code period.

**External (Statutory) Audit—The Big4 Auditor**

It is argued that the quality of external auditing can have a significant influence on quality of reported earnings, and therefore, constitutes a constraint on EM. The large international reputable audit firms (or the Big 4) are reasonably and usually used as the proxy for quality auditing. As expressed by Krishnan (2003), not only do the large audit firms have more resources and experts to detect EM, but they also have greater incentive to protect their reputation because of their large client base. Empirically, Becker et al., (1998), Francis et al., (1999), Gore et al.,(2001), Krishnan (2003), Van Tendeloo and Vanstraelen (2005, 2008) provide results that are consistent with the notion of large international reputable auditors constraining aggressive and potentially opportunistic reporting by firms.

In China, recent years have seen a significant increase of auditor concentration in China, with strong support from the CSRC. Many local Chinese CPA firms have merged with the Big 4, hoping to improve the quality of their auditing. Statistically, the total number of Chinese local CPA firms declined from 106 in 1999 to 71 in 2002 and less than 50 in 2006 (CSRC, 2007). Furthermore, the Big 4 concentration ratio increased from 18% in 1999 to 37% in 2002 and 51% in 2006 (CSRC, 2007). While such a trend may be an indication of the quality auditing performed by the Big 4, however, some researchers state that the Big 4 may not provide the same high quality of auditing in China comparing with that provided in the Western countries. This is in large part determined by the Chinese underlying economic and institutional factors (e.g., monitoring system, ethic education or training, legal infrastructure and enforcement) which have not been well developed to ensure the reliability of financial reporting in China that investors would expect (e.g., Ball et al., 2000; Chen, 2005; Chen and Zhang, 2009).
2010a; La Porta et al., 2000b; Leuz et al., 2003). And, the lack of qualified auditing professionals in China is another reason that contributes significantly to the inefficient performance of external (statutory) auditor on monitoring managerial discretion (Chen et al., 2002; Chen and Zhang, 2010a).

Despite these inconsistent results, in line with the theories, this thesis hypothesises that international reputable auditors (or the Big 4 auditor) can constrain the EM practices in Chinese listed companies, and such impact is hypothesised to be more pronounced in the post-Code period. In alternative form:

\[ H_{5a} \]: Ceteris paribus, there is a negative correlation between the use of an international reputable auditor and EM in the Chinese listed companies.

\[ H_{5b} \]: Ceteris paribus, the negative correlation between the use of an international reputable auditor and EM in the Chinese listed companies is more pronounced in the post-Code period.

In order to test these hypotheses, the variables will be used are: the dependent variable—discretionary accruals (proxy of EM), the independent variable—the Big 4 auditor. The time measurement is included to differentiate the value of the independent variable between the pre- and post-Code periods.

7.3.2.4. The Institutional Shareholders
Theoretically, AT argues that monitoring activities to become specialised to those institutions and individuals who are holding significant amount of firm’s shares and possess comparative advantages in these activities. For institutional investors and financial institutions, the importance of being active in minimising agency costs is the core in AT’s argument. In perspective of TCE, Williamson (2007) states that large institutional investors have the opportunity, resources, and ability to monitor, discipline, and influence managers. Corporate monitoring conducted by these institutional investors can force managers to focus more on corporate performance and less on opportunistic or self-serving behaviour. TCE also state that in order to secure the value of ultimate beneficiaries (or stakeholders) through constant monitoring companies’ performance, the institutional investors are required to be active. This is to be backed up
by direct engagement in the firms where appropriate (Gillan and Starks, 2003; Mallin, 2007).

However, empirical evidence based on the Western countries is mixed. On one hand, some researchers (e.g., Chung et al., 2002; Cornett et al., 2006; Rajpopal et al., 2003; Sheng, 2003; Velury and Jenkins, 2006) provide evidence showing that large institutional shareholders inhibit managers from increasing or decreasing reported profits towards their desired level or range of profits. On the other hand, others (e.g., Bainbridge, 2005; Black, 1997; McCormack, 1998; Gillan and Starks, 2000; Johnson et al., 2000; Karpoff et al., 1996; Karpoff, 2001) argue that institutional shareholder activism can prompt only small changes in target firms’ governance structures on monitoring and controlling. Institutional investors generally are profit maximizers, they will not engage in an activity whose costs exceed its benefits. And, they are likely to step in only where there are serious long-term problems.

In China, one promising feature emerged recently from the A- and B-share markets is the increasing trend in institutional ownership in the listed companies that is both a reflection and a consequence of the government’s efforts to promote institutional investors to enter into the stock markets since 1997. On average, the percentage of institutional shareholding increases to 6% by the end of 2006 from 2% in 1999. By comparing with the institutional shareholding in developed capital markets, however, it is still quite low. For instance, in the US, around 55% of US equities are owned and 80% of share trades are made by the institutional investors. In the UK, institutional ownership is around 65%-80%. And, the overseas level of ownership in UK reached approximately to 21% by the end of 2005 (Mallin, 2007). Other than smaller shareholding in the listed companies, Zhang (2007) and Chen and Zhang (2010a) argue that shareholder activism is very similar to market activism and they both suffer from the lack of effective market discipline. Chen and Zhang (2010a) state that shareholders, market and shareholder activism are one combined mechanism. On one hand, market discipline needs the helps of shareholder voting to oust incompetent management. On the other hand, active participation in corporate governance by shareholders is informed by information from the market. However, if the fraudulent self-enrichment can not be detected, the importance of market will adversely affects the monitoring function of the
institutional shareholders, and the ability of shareholder activism to discipline managerial shrinking will also be lost.

Despite these inclusive results, this study follows the arguments of TCE and AT and hypothesises that institutional shareholders in Chinese listed companies can mitigate opportunistic discretion in accounting through constant monitoring, thus reduce EM. Furthermore, given that the 2002 Code encourages the involvement of institutional investors in monitoring firms by stating that institutional investors shall play a role in the appointment of company directors, the compensation and supervision of management and major decision-making processes, the above impact is hypothesised to be more pronounced in the post-Code period. In alternative form:

**H6a:** Ceteris paribus, there is a negative correlation between institutional shareholdings and EM in the Chinese listed companies.

**H6b:** Ceteris paribus, the negative relationship between institutional shareholdings and EM in the Chinese listed companies is more pronounced in the post-Code period.

In order to examine these hypotheses, the dependent variable—discretionary accruals as the proxy of EM, and the independent variable—institutional shareholdings are used. To differentiate the value of institutional shareholdings in the pre-Code period from those in the post-Code period, time measurement will be introduced.

7.3.2.5. The Controlling Shareholders

Both AT and TCE propose that most large corporations in the developed capital markets are to a significant extent controlled by their managers who enjoy nontrivial degree of discretion, thus how to minimise the agency costs/transaction costs that originated from managers’ opportunistically discretionary activities is the main concern of these two theories. In other words, both attempt to address the conflict of interests between management and shareholders (Jensen and Meckling, 1976; Williamson, 1994). Recent developments in corporate governance have highlighted another form of conflict of interests—action being taken by controlling shareholders for their own benefits, at the expense of minority shareholders. As argued by Shleifer and Vishny (1997, p.758), “large investors may represent their own interests, which need not coincide with the
interests of other investors in the firm.” Comparing with the conflict of interests between management and shareholders, the essential effect of both scenarios is the same: insiders, through their control of the firm, pursue their private benefits at the costs of outsiders (Ding et al., 2007).

Empirically, followed by the works of La Porta et al. (1998; 1999) that focus on the ultimate controlling shareholders in the firms and the relevant legal systems around the world, Claessens et al. (2000; 2002), Leuz et al. (2003), Leuz and Oberholzer-Gee. (2006), Shen and Chih, (2007) study the impact of controlling shareholders on the EM practices of firms. In consistent with La Porta et al.’s works (1998; 1999), they document that outsider economies with relatively dispersed ownership, strong investor protection, and large stock markets exhibit lower level of EM than insider countries with relatively concentrated ownership, weak investor protection, and less developed stock markets.

In China, a unique feature in the listed companies is the concentrated ownership structure. By the end of 2006, the five largest shareholders on average account for 58.5% of the total equity, compared with 25.4% in the US and 33.1% in Japan (Mallin, 2007). More strikingly, the largest shareholder holds more than 42% of total shares for an average Chinese listed company. In addition, since the stock market is originally designed as a place to raise much-needed capital for the State-owned Enterprises (SoEs), and financing through the equity market shows a tremendous bias in favour of SoEs over non-SoEs (Ding et al., 2007). For this historical reason, majority of current listed companies originated from restructured SoEs are still under control of the State and/or other non-listed SoEs. These controlling shareholders are reported to be inefficient in improving firms’ performance and sometimes involved in EM activities (e.g., Aharony et al., 2000; Chen and Yuan, 2006; Ding et al., 2007; Jian and Wong, 2004; Liu and Lu, 2007; Wang et al., 2004).

The China’s 2002 Code formulates higher corporate governance with regard to investor protection in order to promote fair and equal treatment towards all shareholders. In particular, it clearly states the duties and responsibilities, behaviour, and rights of controlling shareholders of listed companies and illustrates the legal means that shareholders, especially the minority shareholders can use to protect their interests and
rights. The controlling shareholders owe a duty of good faith toward the listed companies and other shareholders. In addition, it states that a listed company shall establish a corporate governance structure sufficient for ensuring the full exercise of shareholders’ rights. Consequently, the investor protection in China’s stock market may be enhanced after passage of the Code. In line with the notion of constraining the controlling shareholders from engaging in the opportunistically discretionary behaviours through improved investor protection (e.g., Claessens et al., 2000; 2002; Leuz et al., 2003; Leuz and Oberholzer-Gee, 2006), it is hypothesised that EM practices of the controlling shareholders in Chinese listed companies are declined after the Code. And, the EM activities in the State-controlled companies should also be mitigated in the post-Code period. In alternative form:

**H7:** *Ceteris paribus, the controlling shareholders in the Chinese listed companies engages less in EM in the post-Code period.*

**H8:** *Ceteris paribus, the State-controlled Chinese listed companies engage less in EM in the post-Code period.*

The dependent variable—discretionary accruals as the proxy of EM, and the independent variables—the shareholdings and the ownership type of the controlling shareholders will be used to test these hypotheses. Time measurement will be included to distinguish the value of the independent variables between the pre- and post-Code periods. The structure of the hypotheses formulated is summarized in Figure 7.1.
Figure 7.1.: The structure of the corresponding hypotheses

Earnings Management Practices (H1-trend) MITIGATE/INFLUENCE

The Major Corporate Governance Mechanisms Enforced by the Code (H2-H8) ENFORCED

Executive Compensation (H2, +H2b)

Board Independence (H3, +H3b)

Audit Committee (H4, +H4b)

External Auditors (H5, +H5b)

Institutional Shareholders (H6, +H6b)

Characteristics of Controlling Shareholders (H7 & H8)

Shareholding (H7)

Ownership Type (H8)
7.4. Summary

Based on both the theoretical and empirical literature reviewed, it is highlighted that there is still a paucity of empirical research to directly investigate the impacts of the China’s 2002 Code coupled with several major mechanisms of corporate governance on EM practices in China’s listed companies.

Motivated by the gap of lacking a comprehensive empirical study, this chapter starts with stating the research question and objectives. The research question is: how does the passage of the Code with regard to the mechanisms of corporate governance (especially executive compensation) affect EM activities in China’s listed companies? And, the corresponding research objectives in relation to the China’s Code and several mechanisms of governance enforced by the Code are developed to address this research question.

In the rest of the chapter, two major categories of hypotheses have been formulated regarding (1) the trend in EM activities over time, (2) the impacts of the main mechanisms of corporate governance enforced by the Code on such activities in China’s listed companies. The mechanisms are composed of the independent directors, audit committee, external audit, institutional investors, and controlling shareholders (ownership concentration and type). And finally, Figure 7.1. provides a structural review of the hypotheses formulated.
Chapter 8: Research Design
8.1. Introduction

Having the research question, the corresponding research objectives and the relevant hypotheses been formulated in the previous chapter, this chapter aims to provide the research method of the thesis. It starts with an analysis of the basic elements of the quantitative research. By definition, quantitative research is about quantifying relationships between variables. Using a deductive approach, it seeks to establish facts, make predictions and test hypotheses that have already been stated. Given that the research objectives of this thesis are to shed some lights on the trend in E&M activities over time and the impacts of the China’s 2002 Code on such activities, the quantitative research approach is applied.

Next, measurements of the key variables with reasons of using them are provided. The dependent variable (discretionary accruals) is calculated from the Modified Jones Model (Dechow et al., 1995) and the Larcker and Richardson (2004) Model (or I.&R Model) respectively. The independent variables arrange from the executive compensation to the characteristics of the controlling shareholder (shareholding and ownership type). The control variables are composed of firm size, leverage, sales, trading status, and additional share issuing. And then, the study period and the sample description and data collection procedure are demonstrated correspondingly. Finally, the hypotheses testing approaches and the regression models are illustrated. Two appendices are provided, including the Chinese industry classifications (Appendix 8.A.) and the review of some fundamentals of basic econometrics (Appendix 8.B.).

The structure of this chapter is provided as the followings:

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1. Introduction</td>
<td>Section 8.1. gives a brief introduction of the chapter.</td>
</tr>
<tr>
<td>8.2. Quantitative Research</td>
<td>Section 8.2. reviews the basic elements of a quantitative research.</td>
</tr>
<tr>
<td>8.3. Research Design</td>
<td>Section 8.3. provides the research design that includes the demonstration of the study period, variable measurements, sample and data description, hypotheses testing approaches.</td>
</tr>
<tr>
<td>8.4. Summary</td>
<td>Section 8.4. summaries.</td>
</tr>
</tbody>
</table>
8.2. Quantitative Research

There are numerous definitions of quantitative research. For instance, Aliaga and Gunderson (2002) describe quantitative research as a means to explain phenomena by collecting numerical data that are analysed using mathematically based methods, in particular statistics. A more scientific approach to defining quantitative research comes from Huysamen (1998, p.19), “descriptions of quantitative research typically discern a cycle of successive phases of hypothesis formulation, data collection, analysis and interpretation”. And, Johns and Lee-Ross (1998, p.29) propose that “[q]uantitative research is inclined to be deductive. In other words it tests theory. This is in contrast to most qualitative research which tends to be inductive. In other words it generates theory...[and], in perspective of data collection, quantitative research is the most useful method in gathering measurable information that can be tracked over time”. In an overview form, quantitative research is about quantifying relationships between variables. Using a deductive approach, it seeks to establish facts, make predictions and test hypotheses that have already been stated.

There are throng proponents of both qualitative and quantitative research methods. Each has presented their arguments, usually focusing on the advantages of one over the other or the disadvantages of one of the basic forms of research. Although providing a detailed analysis of the debate is out of the scope of the current thesis, a brief analysis of the advantages and disadvantages of both the quantitative and qualitative research is demonstrated in the following paragraphs.

More generally, qualitative research is said to have two primary advantages. Not only does it allow the moderator or interviewer for the interaction with the respondents, but it also facilitates the interactions among the respondents (group members). The primary disadvantage of qualitative research has been said to be its unreliability as a predictor of the population (Black, 1999). On the other hand, quantitative research has two distinct advantages. The first is that the results are statistically reliable. That is,
quantitative research can reliably determine whether one concept, idea, product, package, and so forth, is better than the alternatives. The second distinct advantage is that the results are projectable to the population. As the quantitative research aims to evaluate an existing phenomenon instead of generating new theories through deductive approach, the primary disadvantage of quantitative research is the issues that are going to be investigated must be measurable and known prior to the beginning of the research study (Balnaves and Caputi, 2001). Generally speaking, quantitative research is thought to be objective, whereas qualitative research often involves a subjective element. It is proposed that in gaining, analysing, and interpreting quantitative data, the researcher remains detached and objective. Often this is not possible with qualitative research where the researcher may actually be involved in the situation of the research.

Given that the research objectives formulated in the previous chapter are to shed some lights on the trend in EM over time and the impacts of the China's 2002 Code on EM practices, the quantitative research approach is utilised by the current thesis.

8.3. Research Design

Having the fundamentals of the quantitative research been briefly reviewed, the research design of the current thesis will be presented in this section. It starts with demonstrating the measurements of the main variables, including the means to capture the dependent variable—discretionary accruals (or EM proxy), the independent variables including the measurements of executive compensation, board independence, internal and external audit, institutional and controlling shareholders, and control variables that are composed of firm's size, leverage, sales, trading status, and additional share issuing. Followed the variables design and measurements, the study period and the description of sample and data collection will be analysed respectively. And finally, the hypotheses testing approaches are formulated.
8.3.1. Variables Design and Measurements

By definition, a variable is a “condition or quality that can differ from one case to another” (Argyrous, 2005, p.4). And it can be identified by two distinguishing concepts namely, the conceptual definition (or nominal definition) and the operational definition. The conceptual definition of a variable “uses literal terms to specify the qualities of a variable” (Argyrous, 2005, p.5). It is much like a dictionary definition; it provides a working definition of the variable so that researchers can have a general sense of what it ‘means’. However, the conceptual definition of a variable is only the beginning; researchers still need a set of rules and procedures—operations—that will allow them to actually ‘observe’ a variable for individual cases. This is the problem of operationalisation. Thus, the operational definition of a variable “specifies the procedures and criteria for taking a measurement of that variable for individual cases” (Argyrous, 2005, p.5). The determination of an operational definition for a variable is a major, if not the major, source of disagreement in research. Any variable can usually be operationalised in many different ways, and no one of these definitions may be perfect.

In relation to the hypotheses formulated, different groups of variables will be identified in the following subsections. They are composed of the proxy of EM (the dependent variable), the independent variables with regard to corporate governance, and the control variables.

8.3.1.1. The Proxy of EM

Following the prior research on EM which has been mentioned in the previous chapters, this thesis uses accruals measures as a proxy of EM. The accrual component of earnings contains accounting estimates based on forecasts and is therefore easier to manipulate than cash flows. Thus, the flexibility offered by accruals makes it a useful measure for examining the quality of financial reports (Butler et al., 2004; Frankel et al., 2002; Larcker and Richardson, 2004; Myers et al., 2003). Rather than simply examining total accruals, this thesis is interested in identifying the unexpected component of total
accruals, namely the discretionary accruals. Recall from the early chapter, a large body of research attempts to identify the unexpected accrual component. Jones (1991) provides the standard techniques used for this decomposition. Total accruals are regressed on variables that are expected to vary with normal accruals. Her model can be estimated in either a time series approach for each firm or in the cross-sectional approach for each industry. While the cross-sectional approach has a cost on ignoring possible reveals of discretionary accruals from prior periods thereby reducing the power of detecting EM, it helps maximizing sample size and overcomes the survivorship bias problem inherent in the time-series version (Bartov et al., 2001; 2002; Becker et al., 1998; Defond and Jiambalvo, 1994; Larcker and Richardson, 2004; McNichols, 2000; 2002).

Attempts to decompose total accruals into expected and unexpected components can always be criticized for misclassifying expected accruals as unexpected because the model of expected accruals is incomplete (Bernard and Skinner, 1996). To address this issue, this thesis uses both the Modified Jones Model (Dechow et al., 1995) and I.&R Model developed by Larcker and Richardson (2004). This method allows the current thesis to show if there is any consistency between the two models. To start with, the Modified Jones Model is estimated for each industry based on the Chinese Official Standard Industry Classification (CSRC, 2001) in order to control for industry-wide changes in economic conditions that affect total accruals while allowing the coefficients to vary across time (e.g., Cohen et al., 2003; 2007; DeFond and Jiambalvo, 1994).

\[
\frac{TAC_{i,t}}{TA_{i,t-1}} = a_0 + a_1 \left( \frac{\Delta REV_{i,t}}{TA_{i,t-1}} \right) + a_2 \left( \frac{PPE_{i,t}}{TA_{i,t-1}} \right) + \varepsilon_{i,t}
\]

(8.1)

\(TAC_{i,t}\) = the total accruals;
\(\Delta REV_{i,t}\) = the change in revenues from the preceding year;
\(PPE_{i,t}\) = the gross value of property, plant and equipment from year \(t\);
\(TA_{i,t-1}\) = total assets from the previous fiscal year (t-1).
The regression equation is deflated by lagged total assets in order to reduce heteroskedasticity (Cohen et al., 2008; Dechow et al., 1995). The coefficient estimates from equation (8.1.) are used to estimate firm-specific normal (nondiscretionary) accruals \((NA_{j,t})\) for the sample firms:

\[
NAC_{j,t} = \hat{a}_0 \left( \frac{1}{TA_{j,t-1}} \right) + \hat{a}_1 \left( \frac{\Delta REV_{j,t} - \Delta REC_{j,t}}{TA_{j,t-1}} \right) + \hat{a}_2 \left( \frac{PPE_{j,t}}{TA_{j,t-1}} \right)
\]  

\( (8.2.) \)

In equation (8.2.), where \(\hat{a}_0\) is the estimated intercept; \(\hat{a}_1, \hat{a}_2\) are the slope coefficients for the sample firms. The reported revenues of sample firms (or \(\Delta REV_{j,t}\)) are adjusted for the change in accounts receivable (or \(\Delta REC_{j,t}\)) to capture any potential accounting discretion arising from credit sales. The \(\hat{a}_1\) coefficient is predicted to be positive, as changes in revenues are expected to be positively related to changes in working capital accounts. The expected sign on \(\hat{a}_2\) is negative, as the level of fixed assets is expected to drive depreciation expenses and deferred taxes (Klein, 2002).

Following the methodology used in the literature (Cohen et al., 2008; DeFond and Jiambalvo, 1994), the industry specific regressions are estimated using the change in reported revenues, implicitly assuming no discretionary choices with respect to revenue recognition. However, while computing the normal accruals, the reported revenues of sample firms are adjusted for the change in account receivable to capture any potential accounting discretion arising from credit sales. The measure of discretionary accruals is the difference between total accruals and fitted normal accruals, defined as:

\[
DAC_{j,t} = \left( \frac{TAC_{j,t}}{TA_{j,t-1}} \right) - NAC_{j,t}
\]  

\( (8.3.) \)

The L&R Model has been introduced by Larcker and Richardson (2004) which is based on the cross-sectional Modified Jones Model. As they expressed, this model (1)
has far greater explanatory power than the cross-sectional Modified Jones Model; (2) identifies unexpected accruals that are less persistent than other components of earnings; and (3) identifies unexpected accruals that are associated with lower future earnings and lower future stock returns. It is assumed that the change in revenues less the change in accounts receivable is free from managerial discretion (e.g. credit sales are assumed to be abnormal) and that capital intensity drives normal accruals. In addition, this model includes two additional independent variables that are shown to be correlated with the measures of unexpected accruals. First, it includes the book-to-market ratio (BM). BM is measured as the ratio of the book value of common equity to the market value of common equity. BM is included as a control for extreme growth in firm’s operations. It is expected to see large accruals for growing firms—a negative correlation between BM and total accruals. Second, a measure of current operating performance is included (Larcker and Richardson, 2004). It is argued that measures of unexpected accruals are more likely to be misspecified for firms with extreme level of performance (Dechow et al., 1995). Thus, the current operating cash flows, CFO, is introduced as an additional independent variable. L&R Model in calculating total accruals is estimated as follows:

$$\frac{TAC_{st}}{ATA_{st}} = a_0 \left( \frac{1}{ATA_{st}} \right) + a_1 \left( \frac{\Delta REV_{st} - \Delta REC_{st}}{ATA_{st}} \right) + a_2 \left( \frac{\text{PPE}_{st}}{ATA_{st}} \right) + a_3 \left( BM_{st} \right) + a_4 \left( \frac{\text{CFO}_{st}}{ATA_{st}} \right) + \epsilon_{st} \quad (8.4.1)$$

Where, for firm $i$:
- $ATA_{st}$ = the average of total assets from the start and end of the fiscal year $t$;
- $BM_{st}$ = the ratio of the book value of common equity to the market value of common equity in year $t$;
- $CFO_{st}$ = the current operating cash flows in year $t$;

Taking the relevant coefficients estimated in equation 8.4., the non-discretionary accruals can be estimated from the following:

$$\text{NAC}_{st} = \hat{a}_0 \left( \frac{1}{ATA_{st}} \right) + \hat{a}_1 \left( \frac{\Delta REV_{st} - \Delta REC_{st}}{ATA_{st}} \right) + \hat{a}_2 \left( \frac{\text{PPE}_{st}}{ATA_{st}} \right) + \hat{a}_3 (BM_{st}) + \hat{a}_4 \left( \frac{\text{CFO}_{st}}{ATA_{st}} \right) \quad (8.5.)$$
Having the non-discretionary accruals been estimated from equation 8.5. above, the amount of discretionary accruals for sample firm j in year t is calculated as: 
\[ DAC_{jt} = (TAC_{jt}/ATA_{jt}) - NAC_{jt} \]
In the tests that follow, both the directional values for abnormal accruals and their absolute values are used. In particular, if the EM is directional, the appropriate metric is the raw value. In this case, the signed measures of unexpected accruals should be focused on. On the other hand, if the EM is nondirectional, the absolute value of unexpected accruals is appropriate. And, the deviations from a normal level of accruals should be concentrated on.

The relevance and suitability of using discretionary accruals as an EM measure in the Chinese context is often challenged in the literature (Ding et al., 2007; Jian and Wong, 2004; Srinidhi et al., 2004). One of the main arguments has been put forward by these authors is around the efficiency of recent policies on accounting harmonization. Before the 1970s, Chinese accounting had been tax-oriented, for instance the treatments used to be virtually the same for accounting and tax purposes. To ensure stable fiscal income, the Chinese authorities excluded almost all accounting choices from accounting conservatism, such as provisions and reversals, choice of depreciation method and the useful life of fixed assets. This system made it difficult for Chinese firms to adjust their earnings via non-cash accruals (Chen et al., 1999; Chen et al., 2002; Davidson et al., 1996). However, the situation has totally changed over the past years (Haverty, 2006; Kuan and Noronha, 2007; Lin and Chen, 2005; Ping, 2008; Xiao et al., 2004), and it is argued that for the period concerned by this thesis (2000-06), using discretionary accruals for EM is possible because of the recent full application of the conservatism principle in China\textsuperscript{35}. Since 1999, the Chinese capital markets watchdog has required listed firms to make provisions for various potential losses. Baker and Barbu (2007) argue that this has brought the Chinese accounting language closer to international standards, while also offering Chinese firms the opportunity to manage their earnings via more conventional discretionary accruals. By putting all together, using discretionary accruals as a proxy of EM should be an appropriate measurement for this thesis.
8.3.1.2. The Independent Variables

With regard to corporate governance, seven independent variables coupled with the specific measurements are defined. They arrange from the executive compensation which is measured by the natural logarithm value of cash compensation for the top three highest paid executives to the type of the controlling shareholders which is measured by a dummy variable takes the value of 1 if the sample firm’s ultimate owner is the State and 0 otherwise.

(1) This thesis questions the effectiveness of executive compensation on EM practices and how it is affected by the passage of Code. An independent variable named ‘EXCOM’ is included and measured by the natural logarithm value of cash compensation for the top three highest paid executives. This logarithm procedure mitigates heteroskedasticity resulting from extreme skewness and facilitates the comparison of results with previous studies (Murphy, 1999; Firth et al., 2007).

(2) This thesis also questions whether independent directors on the board enforced by the 2001 Guidelines for independent directors and 2002 Code can effectively mitigate EM practices in China’s listed companies. The variable ‘INDBOARD’ is set as number of independent directors/non-executive board members divided by total number of board members. As proposed by Beasley (1996), Fama (1980), Fama and Jensen (1983a,b), that higher percentage of independent directors increases the board’s effectiveness as a monitor of management. In other words, the effectiveness of monitoring activity is proportional to the weight they have on the total number of members on the board. Following the literature, the proportion is used and not the absolute number of independent directors.

The current thesis uses two independent variables respectively to examine the effectiveness of audit committee and external audit enforced by the 2002 Code on
mitigating earnings manipulation.

(3) The independent variable ‘AUDCOM’ is defined as the establishment of an audit committee on the board. This variable takes the value of 1 if a firm establishes an audit committee on its board, and 0 otherwise.

(4) An independent variable ‘AUDITOR’ is to assess the quality of auditing. The notable change since the 2002 Code is the merger of local Chinese CPA with the Big 4 auditor, and, as a result, the Big 4 auditor are invited by more Chinese companies to audit their annual reports. The variable, ‘AUDITOR’, takes the value of 1 if a firm’s auditor is one of the Big 4 auditor, and 0 otherwise.

The current thesis also aims to investigate the impact of institutional investors enforced by the 2002 Code on mitigating EM practices in China’s listed firms. One notable feature is the increasing involvement of domestic institutional investors although their shareholdings have not been very significant.

(5) An independent variable ‘INSTITUTE’ is defined as the proportion of shareholding held by institutional investors among the top ten shareholders. This is because that only the holdings of the top ten shareholders are disclosed in company’s annual report. And, Chen and Cheng (2007, p. 288) argue that “…by further examining our data, it reveals that China’s listed companies held by more than 10 institutional investors were rare, and therefore it is reasonable to assume that they had fewer opportunities to monitor the management opportunism”.

In order to examine the impact of ownership concentration in the hands of the controlling shareholders on EM practices in Chinese listed companies with regard to the China’s 2002 Code, and to be consistent with the prior literature (Boubakri et al., 2005; Firth et al., 2007, Lo et al., 2010), the shareholding percentage of the largest shareholder is used as the measure of ownership concentration. And, the measurement on the types of the largest shareholder is also included. As the objective here is to investigate the ultimately dominant power of the largest shareholder in the listed companies, the definition of a State-owned listed company has twofold: first, if a listed
company’s largest shareholder is the State or a State’s agency, then this company is a State-owned listed company; in addition, if a listed company’s largest shareholder is a non-listed SOEs but ultimately controlled by the State, it is classified as a State-owned company.

(6) An independent variable ‘TOPI’ is set as the shareholding percentage of the largest shareholder among the top 10 shareholders.

(7) An independent variable ‘STATE’ is defined as a dummy variable takes the value of 1 if the sample firm’s ultimate owner is the State and 0 otherwise.

8.3.1.3. The Control Variables
To control the effect of possible confounding factors (Bartov et al., 2000), this thesis includes five different variables that prior studies have found to be associated with EM or governance variables (Chen and Zhang, 2010a; Davidson, et al., 2005; Park and Shin, 2004). In particular, the control variables are composed of firm’s size, leverage, sales, trading status, and additional share issuing.

a. Size
The relationship between firm’s size and EM is somewhat controversial. One view is that the capital market pressures are greater for larger firms because they are subject to closer scrutiny by the investment banks and analyst community, leading them to adopt aggressive accounting policies. Therefore, larger firms have higher incentives to manage earnings upwards (Richardson, 2000). On the other hand, the political cost hypothesis argues that larger firms are more likely to prefer downward EM because the political cost of breaching the tighter government scrutiny is high for larger firms (Watts and Zimmerman, 1990; Yong, 1999). Recently, some empirical evidence also supports the negative relationship (Lee and Choi, 2002; Van Tendeloo and Vanstraelen, 2005). It is argued that large firm is often required to disclose their financial information and hence have less probability to manage earnings. In the case of China’s listed companies, due to the severe information asymmetry in its financial markets and the political
interference from the government, the size effect on EM is uncertain. Following the measurement of this variable in the literature, the natural logarithm of total assets (variable quoted as ‘Ln_Size’) is used to proxy the size of a company.

b. Leverage

Two opposite evidence are found between leverage and EM. One stand of evidence is that highly leveraged firms are more likely to engage in upward EM to avoid debt covenant violations (Defond and Jiambalvo, 1994; Press and Weintrop, 1990; Richardson, 2000; Sweeny, 1994; Watts and Zimmerman, 1990; Young, 1999). Specifically, firms that face financial constrains or distress have incentive to adjust earnings upwards in order to avoid a potential loss from disclosing a financial problem. Truthful revelation of financial statements by firms in short-term financial difficulty may lead to debt-covenant violation and an increase in financing costs, as well as the loss of key employees (Park and Shin, 2004). Thus, a debt-covenant violation argument would predict a positive relationship between EM and financial leverage. Opposite to the above view, highly leveraged firms may be less able to practice EM because they are under close scrutiny of lenders (Dechow and Skinner, 2000). In particular, lenders may intensify the monitoring of EM for firms that are likely to miss earnings targets. If the lender monitoring effect prevails, then EM will decrease with financial leverage. Becker et al., (1998) argue that high leverage may induce income-decreasing EM in financially distressed firms in view of contractual renegotiations. Chung and Kallapur (2003) do not find evidence of a statistically significant association between abnormal accruals and leverage. As a result, the relation between leverage and EM is uncertain. This thesis introduces a variable named ‘LEVERAGE’ and is measured as the ratio of total debt and total assets to capture the impact of debt on EM. This ratio is regarded as the most suitable indicator to reflect the leverage status in China’s listed firms (Chen, 2004).

c. Sales, Trading status (ST_PT) and Additional share issuing

This thesis also examines whether firm’s performance has an impact on EM. Two notable reasons can be obtained: requirements on the new offerings and delisting policy.
Recall from the previous discussions, for a firm, the core requirement of additional offerings is to have an average ROE above 10% in the past three years but not lower than 6% in any of these years, and main standard of delisting is based on negative net profits for three consecutive years. All of these requirements are related to the financial performance of a firm. Empirically, numerous studies (e.g., Abarony et al., 2000; Chen and Yuan, 2006; Chen et al., 2004; Chen and Wang, 2007; Haw et al., 2005; Liu and Lu 2007; Yu et al., 2006) provide evidence suggesting the executives in the Chinese listed firms and especially in those are poorly performed have high motivations to manipulated reported earnings.

By following the study of Chen and Zhang (2010a) and Ding et al., (2007), three additional control variables are used in the current thesis. In order to capture the effect of a firm’s performance on EM, the variable quoted as ‘Ln_Sale’ is used which calculated as the natural logarithm of the annual sales from main operations. Since a company’s financial performance may have a reverse effect on its EM behaviour, this thesis expects a negative relationship between EM and Ln_Sales. In order to measure the incentives of engaging in EM in China, the variables ‘ST_PT’ and ‘ISSUING’ are introduced. While the former is a dummy variable takes the value of 1 if the sample firms are labelled as either ST or PT in a given year and 0 otherwise, the latter equal to 1 if the sample firms issue new shares in a given year and 0 otherwise. It is expected that these two variables are positively correlated with EM practices.

8.3.2. The Study Period

This thesis focuses in analysis on EM practices across two main time periods – the pre-Code period, and the post-Code period. The pre-Code period extends from 2000 through 2001, and the post-Code period extends from 2002 through the end of 2006. The starting year in the post-Code period is 2002, since China’s Code was passed in 2002. And, the ending year is 2006 to control for possible lagged effect of the policy reform. Figure 8.1. depicts different time periods analysed.
8.3.3. Sample Description and Data Collection

The population of the current thesis is composed of Chinese companies listed on both the SZSE and SHSE stock exchanges for the period of 2000-2006. However, the companies issue shares only on the foreign exchanges (e.g., H-share, N-share, and S-share companies) are excluded. There are two possible reasons: one is that the 2002 Code is exclusively focused on the companies listed in the mainland China; the other reason is that those companies listed on the overseas markets are required to following the principles/guidelines of the local markets. More generally, the firms are then segregated into 13 industrial groups arranging from the Agriculture, Forestry, & Fishing (A) to Miscellaneous products & services (M) industry based on the Chinese Official Standard Industry Classification (CSRC, 2001). The manufacturing group (or group C) is further divided into 10 sub-groups as it includes over 60% of the sample firms.

In order to calculate the discretionary accruals metrics employed in the analysis, and to be consistent with the previous researchers (e.g., Cohen et al., 2008; Van Tendeloo and Vanstraelen, 2005), the sample is restricted to all non-financial firms with available data. Financial institutions are excluded because of their specific accounting requirements, which may differ substantially from those of industrial and commercial companies. This way, Group I (the finance industry) has to be excluded. And, the sample is required to have at least eight observations in each year, each industrial group or sub-group (Cohen et al., 2008; Larcker and Richardson, 2004). Group C3 (the wood products and furniture manufacturing industry) is excluded as there are only 3 observations on average in each year over the study period. Furthermore, this thesis
requires the sample firms to have both the financial and corporate governance data in
each year over the period of 2000-2006. While this restriction facilitates the comparison
of the results between the pre- and the post-Code periods, it likely introduces a
survivorship bias, biasing the sample toward larger and more successful firms. However,
it is expected that this bias will reduce the variation in EM metric, resulting in a more
conservative test of the research question.

To facilitate data collection procedures, the current thesis uses secondary data as
the main data source. By definition, secondary data is the information that has been
gathered by someone other than the researcher and/or for some other purpose than the
project at hand. And, the amount of secondary data available is overwhelming, and
researchers have to locate and use the data relevant to their research (Black, 1999).
Schmidt and Hollensen (2006) highlight some advantages of using secondary data in
conducting research. While a detailed analysis of the secondary data is not a concern of
the current thesis, however, the main advantages secondary data offer are highlighted as:
quick way to obtaining data, low cost, less effort expended, less time taken, and
sometime more accurate than the primary data.

In particular, the financial data are obtained from the Shenzhen Securities Info Co.,
Ltd., while the data of corporate governance are collected from the China Centre for
Economic Research (CCER) database and China Stock Market & Accounting Research
Database (CSMAR). In order to ensure the reliability and accuracy of the data that
obtained from above database, the published annual reports are used to constantly
cross-check the data over the study period. The electronic annual reports are available
on the website of China Finance Online (http://www.jrj.com.cn), which is the major
Chinese financial information provider and currently listed on the U.S. exchange
(NASDAQ NM: JRJC). If some annual reports can not be found on this website, the
official websites of the SHSE and the SZSE (http://www.see.com.cn and
http://www.cninfo.com.cn) will be used.
Overall, the sample consists of 447 firms from 22 different industries representing 3,129 firm-year observations over the period of 2000-2006. Among these firms, 218 firms come from the SZSE stock exchange, and other 229 firms belong to the SHSE stock exchange.

8.3.4. The Hypotheses Testing Approaches

Generally speaking, the trend in EM activities across the study period (H1) and the impacts of the main mechanisms with regard to corporate governance enforced by the Code on mitigating such activities in China’s listed companies (H2-H8) are examined.

**H1 Testing (Univariate Analysis):**

*Univariate Test of Earnings_Management*

H1 is tested through the univariate statistical test. It is to compare the accrual-based EM practices measured by both the Modified Jones Model and L&R Model in the post-Code period with those in the pre-Code period. Both the absolute and directional values of discretionary accruals are investigated. It is expected that the level of EM is declined in the post-Code period.

**H2-H8 Testing (Multivariate Regression Analysis):**

More generally, there are two approaches in the panel data analysis, namely the fixed effects approach and the random effects approach. On one hand, the fixed effects approach is appropriate in situations where the individual-specific effects may be fixed and correlated with one or more regressors. By estimating the corresponding ordinary least squares (or OLS) regression model, the variations resulted from the individual-specific effects over individuals and/or time in the intercept as well as in the slope coefficients can be captured (Green, 2003). On the other hand, the random effects approach mainly differs from the fixed effects approach by treating the individual-specific effects as random and uncorrelated with the included explanatory
variables, and considering them as the components of the error term. The corresponding model of such an approach is the generalised least squares (or GLS) regression model (Green, 2003).

Given that this thesis is interested in the impacts of the Code with regard to the governance mechanisms on EM practices, the OLS regression model may be more appropriate in measuring the time-specific effects due to the passage of the Code. It allows for the time-specific effects in the sense that EM and the impacts of governance mechanisms on EM may be different (or changed) between the pre- and post-Code periods. Similar model estimation methods are used by Peasnell et al., (2000) and Cohen et al., (2008) to investigate the impact of Cadbury Report (UK) and Sarbanes-Oxley Act (US) on EM practices across time respectively. In order to examine the hypotheses 2-8, the OLS regression model is estimated below. The same regression is run two times using the Modified Jones Model and the I,R Model respectively. Both the absolute and directional values of discretionary accruals are investigated.

\[ \text{Earnings}_n = \beta_0 + \beta_1 \text{TIME}_i + \beta_2 \text{CODE}_i + \beta_3 \text{EXCOM}_i + \beta_4 \text{EXCOM}_i \times \text{CODE} + \beta_5 \text{INDBOARD}_i + \beta_6 \text{INDBOARD}_i \times \text{CODE} + \beta_7 \text{AUDCOM}_i + \beta_8 \text{AUDCOM}_i \times \text{CODE} + \beta_9 \text{AUDITOR}_i + \beta_{10} \text{AUDITOR}_i \times \text{CODE} + \beta_{11} \text{INSTITUTE}_i + \beta_{12} \text{INSTITUTE}_i \times \text{CODE} + \beta_{13} \text{TOP1}_i + \beta_{14} \text{TOP1}_i \times \text{CODE} + \beta_{15} \text{STATE}_i + \beta_{16} \text{STATE}_i \times \text{CODE} + \beta_{17} \text{Ln Size}_i + \beta_{18} \text{LEVERAGE}_i + \beta_{19} \text{Ln Sales}_i + \beta_{20} \text{ST}_i \times \text{PT}_i + \beta_{21} \text{ISSUING}_i + \epsilon \]

As proposed by Gujarati (2003) that the specific-time effects can be accounted for by introducing the relevant time measurements. In the above OLS regression model, two time measurements are introduced, namely the variable TIME which is measured as the calendar year minus 2000 and the variable CODE which takes the value of 1 for the years 2002 onwards (or the post-Code period) and 0 otherwise. While the coefficient on the former (\(\beta_1\)) aims to present the trend in EM practices across time, the coefficient on the latter (\(\beta_2\)) demonstrates how the China’s 2002 Code itself influences EM by
providing the differences (or changes) of the magnitude of EM between the pre- and post- Code periods. The coefficients ($\beta_3$, $\beta_5$, $\beta_7$, $\beta_9$, $\beta_{11}$, $\beta_{13}$, $\beta_{15}$) on the variables for corporate governance mechanisms reflect the overall impacts of such mechanisms on EM practices (Cohen et al., 2008). The interactive (or differential) variables by multiplying a corporate governance variable with the time variable (CODE) can account for the differences (or changes) in slope coefficients (Gujarati, 2003). Thus, the coefficients ($\beta_4$, $\beta_6$, $\beta_8$, $\beta_{10}$, $\beta_{12}$, $\beta_{14}$, $\beta_{16}$) show the differences (or changes) of the impacts of governance mechanisms on EM between the pre- and post- Code periods. And finally, the coefficients ($\beta_{17}$, $\beta_{18}$, $\beta_{19}$, $\beta_{20}$, $\beta_{21}$) on the control variables present the impacts of firms’ characteristics. The definitions and expected signs of the dependent, independent, and control variables are provided in the following Table 8.1.

Table 8.1.: Definitions of variables

<table>
<thead>
<tr>
<th>Name(s) &amp; Symbol(s) of the Variable(s)</th>
<th>Definition(s) of the variable(s)</th>
<th>Expected Sign(s) of the variable(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Dependent Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discretionary Accruals (</td>
<td>DA</td>
<td>and DA)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and DA represent the absolute and directional values of the discretionary accruals respectively. They are obtained by using both Modified Jones Model and L&amp;R Model.</td>
</tr>
<tr>
<td><strong>The Time Trend Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicator for years of observations (TIME)</td>
<td>= (calendar year) - 2000</td>
<td></td>
</tr>
<tr>
<td>The impact of the Code (CODE)</td>
<td>CODE is taking the value of 1 if the observation is from the post-Code period (2002-2006), and 0 otherwise.</td>
<td></td>
</tr>
<tr>
<td>Compensation received by the top 3 executives (EXCOM)</td>
<td>It is the natural logarithm value of cash compensation for the top three highest paid executives</td>
<td></td>
</tr>
<tr>
<td>CODE*EXCOM</td>
<td>To differentiate the value of compensation of two periods.</td>
<td></td>
</tr>
</tbody>
</table>
### The Independent Variables— the Mechanisms of Corporate Governance

<table>
<thead>
<tr>
<th>Variable Description</th>
<th>Formula</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fraction of independent directors (INDBOARD)</td>
<td>$\frac{INDEPENDENT}{TOTAL}$, where $INDEPENDENT$ is the number of independent directors on the board and $TOTAL$ is the total directors of the board (or the board size).</td>
<td>-</td>
</tr>
<tr>
<td>$\text{INDBOARD} \times \text{CODE}$</td>
<td>To differentiate the value of INDBOARD of two periods.</td>
<td>-</td>
</tr>
<tr>
<td>Establishment of an audit Committee (AUDCOM)</td>
<td>If the firm establishes an audit committee on the board, value of 1; otherwise, 0.</td>
<td>-</td>
</tr>
<tr>
<td>$\text{AUDCOM} \times \text{CODE}$</td>
<td>To differentiate the value of AUDCOM of two periods.</td>
<td>-</td>
</tr>
<tr>
<td>Auditor type (AUDITOR)</td>
<td>If the firm is audited by one of the Big 4 auditors, value of 1; otherwise, 0.</td>
<td>-</td>
</tr>
<tr>
<td>$\text{AUDITOR} \times \text{CODE}$</td>
<td>To differentiate the value of AUDITOR of two periods.</td>
<td>-</td>
</tr>
<tr>
<td>Fraction of equity owned by the institutional shareholders (INSTITUTE)</td>
<td>$\frac{ISHARE}{TSHARE}$, where $ISHARE$ is the total shares held by the institutional shareholders (in the TOP ten list) of the firm and $TSHARE$ is the total ordinary shares outstanding.</td>
<td>-</td>
</tr>
<tr>
<td>$\text{INSTITUTE} \times \text{CODE}$</td>
<td>To differentiate the value of INSTITUTE of two periods.</td>
<td>-</td>
</tr>
<tr>
<td>Fraction of equity owned by the largest shareholder (TOP1)</td>
<td>$\frac{TOPSHARE}{TSHARE}$, where $TOPSHARE$ is the total shares held by the largest shareholder of the firm and $TSHARE$ is the total ordinary shares outstanding.</td>
<td>-</td>
</tr>
<tr>
<td>$\text{TOP1} \times \text{CODE}$</td>
<td>To differentiate the value of TOP1 of two periods.</td>
<td>-</td>
</tr>
<tr>
<td>Type of the largest shareholder (STATE)</td>
<td>If the firm’s controlling shareholder is the state, value of 1; otherwise, 0.</td>
<td>-</td>
</tr>
<tr>
<td>$\text{STATE} \times \text{CODE}$</td>
<td>To differentiate the value of STATE of two periods.</td>
<td>-</td>
</tr>
</tbody>
</table>

### The Control Variables

<table>
<thead>
<tr>
<th>Variable Description</th>
<th>Formula</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm’s size (Ln-Asset)</td>
<td>$\ln(\text{ASSETS}_{t})$, the natural logarithm of total assets of the sample firms in year $t$.</td>
<td>-</td>
</tr>
<tr>
<td>Firm’s leverage (LEVERAGE)</td>
<td>$\frac{\text{LTD}<em>{t} + \text{STD}</em>{t}}{\text{ASSETS}_{t}}$, where $\text{LTD}$ is the long-term debt and $\text{STD}$ is the short-term debt, $\text{ASSETS}$ is the total assets of the sample firms in year $t$.</td>
<td>-</td>
</tr>
<tr>
<td>Firm’s performance (Ln_Sales)</td>
<td>$\ln(\text{Sales})$, the natural logarithm of the annual sales from main operations of the sample firms in year $t$.</td>
<td>-</td>
</tr>
<tr>
<td>Trading status (ST_PT)</td>
<td>If the firm is labelled as either ST or PT in a given year, value of 1; otherwise, 0.</td>
<td>+</td>
</tr>
<tr>
<td>Additional Share issuing (ISSUING)</td>
<td>If the firm issues additional shares in a given year, value of 1; otherwise, 0.</td>
<td>+</td>
</tr>
</tbody>
</table>
8.4. Summary

Firstly, this chapter begins with the analysis of the basic elements of a quantitative research method. In comparison with the qualitative research method, the quantitative research aims to establish facts, make predictions and test hypotheses that have already been stated. And, it is thought to be objective in gaining, analysing, and interpreting quantitative data. Given that the current thesis is to shed some lights on the trend in EM over time and the impacts of the China’s 2002 Code on EM practices, quantitative research approach is utilised.

The measurements of variables have been provided in the second part of this chapter. The variables are composed of the dependent variable—EM (measured by discretionary accruals using Modified Jones and Larcker and Richardson (2004) Model (or L&R Model), the independent variables (e.g., executive compensation, board independence, internal and external audit, institutional investors, and controlling shareholders), and five control variables.

The overall study period arranges from year 2000 to 2006. And it is further divided into two time periods: the period prior to the passage of the Code (the pre-Code period: 2000, 2001), and the period after the passage of the Code (the post-Code period: 2002 through 2006). While the financial data are obtained from the Shenzhen Securities Info Co., Ltd., the data of corporate governance are collected from the China Centre for Economic Research (CCER) database and China Stock Market & Accounting Research Database (CSMAR). Overall, the sample consists of 447 firms from 22 different industries representing 3,129 firm-year observations over the period of 2000-2006.

The rest of the chapter has provided the statistical approaches to test the hypotheses formulated. While hypothesis 1 is tested through a univariate statistical approach, the hypotheses of 2 to 8 are examined by the multivariate regression analysis.
Appendix 8.A. Chinese Industry Classification

Figure 8.2.: China's standard industry classification (2001)

China’s SIC (2001)

A. Agriculture, forestry, & fishing
B. Mining
C. Manufacturing
   C0. Food and beverages
   C1. Textiles suits and leathers
   C2. Wood products and furniture
   C3. Paper making and printing
   C4. Petroleum refining, chemical products
   C5. Electronic components and home appliances
   C6. Mineral products and metal products
   C7. Equipments and machineries
   C8. Drugs and biologic products
   C9. Tobacco and others
   D. Water, electricity, and gas
   E. Construction
   F. Transport and public utilities
   G. Information technology
   H. Wholesale and retail trade
   I. Financial and insurance
   J. Real estate
   K. Service
   L. Publishing, media, and allied services
   M. Miscellaneous products and services

Appendix 8.B. Econometric Analysis

Since the objective of this study is to empirically investigate the impact of corporate governance on EM of China’s listed companies, it thus becomes indispensable to utilise econometric techniques. As expressed by Gujarati (2003, p.1), “literally interpreted, econometrics means ‘economic measurement’”; and “econometrics…consists of the application of mathematical statistics to economic data to lend empirical support to the models constructed by mathematical economics and to obtain numerical results.” In the similar vein, Green (2003, p.1) states that “…its main object shall be to promote studies that aim at a unification of the theoretical-quantitative and that are penetrated by constructive and rigorous thinking similar to that which has come to dominate the natural sciences.”

Further, Gujarati (2003) points out that in econometrics the statistical technique of regression analysis is the main tool used to obtain empirical support for the economic models. For example, he explicates that “regression analysis is concerned with the study of the dependence of one variable, the dependent variable, on one or more variables, the explanatory variables, with a view of estimating or predicting the [population] mean or average value of the former in terms of the known or fixed [in repeated sampling] values of the later” (Gujarati, 2003, p.7). In the followings, the basic concepts of the econometric regression analysis will be reviewed.

8.6.1. The Classical Linear Regression Model (CLRM)

The linear regression model is the single most useful tool in the econometrician’s kit. Though to an increasing degree in the contemporary literature, it is often only the departure point for the full analysis, it remains the device used to begin almost all empirical research. The CLRM can be expressed as:

\[ y = \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_k x_k + \epsilon \]

or

\[ y_i = \sum_{j=1}^{k} \beta_j x_{ij} + \epsilon_i \tag{A.1} \]

Where \( y_i \) is the \( i^{th} \) observation on the dependent variable \( y \), \( \beta_j \) is the coefficient on the \( j^{th} \) explanatory variable \( x_{ij} \), and the \( \epsilon_i \) is the \( i^{th} \) observation on the unobserved error term \( \epsilon \).
Usually, equation (A.1) is re-expressed in a more convenient format in matrix notation as:

\[ y = X\beta + \epsilon \] \hspace{1cm} (A.2)

Where \( y \) and \( \epsilon \) are \( n \times 1 \) column of vectors, \( \beta \) is a \( k \times 1 \) column vector and \( X \) is an \( n \times k \) matrix where each column corresponds to a different explanatory variable. When the regression contains an intercept, by convention this is the first column of the matrix and consists of a vector of ones.

More generally, there are six assumptions of the CLRM, including: (1) the model specifies a linear relationship between \( y \) and \( x_1 \ldots x_k \), (2) there is no exact linear relationship among any of the independent variables in the model. This assumption will be necessary for estimation of the parameters of the model; (3) it is assumed that the expected value of the disturbance at observation \( i \) in the sample is not a function of the independent variables observed at any observation, including this one. This means that the independent variables will not carry useful information for prediction of \( \epsilon \); (4) each disturbance has the same finite variance and is uncorrelated with every other disturbance; (5) it is assumed that the data in \( (x_{i,1}, x_{i,2}, \ldots, x_{i,k}) \) may be any mixture of constants and random variables. The ultimate source of the data in \( X \) is unrelated (statistically and economically) to the source of \( \epsilon \); and (6) the disturbances are normally distributed.

8.8.1.1.: The Ordinary Least Square Estimator (OLS)

Since it is usually not feasible to obtain all possible extant observations in a population to estimate the population regression function (PRF) shown in equations (A.1) and (A.2) above, a sample regression function (SRF) is habitually estimated using the Ordinary Least Square (OLS) method. This method has some very attractive statistical properties that have made it one of the most powerful and popular methods of regression analysis. In particular, let estimator \( \hat{\beta} \) denote the unknown parameter vector \( \beta \), then the sample regression function can be expressed as:

\[ y = X\hat{\beta} + \epsilon \] \hspace{1cm} (A.3)
Where $\mathbf{e}$ is a $n \times 1$ vector of the residuals than are not explained by the regression. Moreover, $\hat{\beta}$ here is the OLS estimator that minimise the sum of squared residuals.

$$s = \mathbf{e}'\mathbf{e} = \sum_{i=1}^{n} e_i^2$$

$$\min_{\beta} s = \mathbf{e}'\mathbf{e} = (\mathbf{y} - \mathbf{X}\beta)'(\mathbf{y} - \mathbf{X}\beta)$$

(A.4)

Expanding the expression,

$$s = \mathbf{y}'\mathbf{y} - \mathbf{y}'\mathbf{X}\beta - \beta'\mathbf{X}'\mathbf{y} + \beta'\mathbf{X}'\mathbf{X}\beta$$

(A.5)

Differentiating $s$ with respect to $\hat{\beta}$ gives the vector of first order conditions

$$\frac{\partial s}{\partial \hat{\beta}} = 2\mathbf{X}'\mathbf{y} - 2\mathbf{X}'\hat{\beta}$$

(A.6)

rearranging,

$$\mathbf{X}'\hat{\beta} = \mathbf{X}'\mathbf{y}$$

(A.7)

Assuming that the matrix $\mathbf{X}$ is of rank $k$, the $k \times k$ symmetric matrix $\mathbf{X}'\mathbf{X}$ will be of full rank and its inverse $(\mathbf{X}'\mathbf{X})^{-1}$ will thus exist. Pre-multiplying (A.7) by this inverse gives the expression for the OLS estimator of $\hat{\beta}$:

$$\hat{\beta} = (\mathbf{X}'\mathbf{X})^{-1}\mathbf{X}'\mathbf{y}$$

(A.8)

8.8.1.2.: Unbiasedness of the OLS estimator

Substituting the $\mathbf{y}$ from the equation (A.2) into the OLS estimator (A.8) yields

$$\hat{\beta} = (\mathbf{X}'\mathbf{X})^{-1}\mathbf{X}'(\mathbf{X}\hat{\beta} + \mathbf{e})$$

$$= (\mathbf{X}'\mathbf{X})^{-1}\mathbf{X}'\mathbf{X}\beta + (\mathbf{X}'\mathbf{X})^{-1}\mathbf{X}'\mathbf{e}$$

$$= \beta + (\mathbf{X}'\mathbf{X})^{-1}\mathbf{X}'\mathbf{e}$$

(A.10)

Taking the expectations of (A.10)

$$E(\hat{\beta}) = \beta + E((\mathbf{X}'\mathbf{X})^{-1}\mathbf{X}'\mathbf{e})$$

$$= \beta + (\mathbf{X}'\mathbf{X})^{-1}\mathbf{X}'E(\mathbf{e})$$

(A.11)

Where, in the second line, $\mathbf{X}$ is taken out of the equation because of the assumption that matrix $\mathbf{X}$ is fixed in repeated sampling. Moreover, it is assumed that $E(\mathbf{e}) = 0$, the second item is zero so that:
Therefore, it is argued that the estimator $\hat{\beta}$ of OLS is unbiased.

### 8.B.1.3. The Variance of the OLS estimator

From equations (A.10) and (A.12)

$$\hat{\beta} = \beta + (X'X)^{-1}X'e$$

$$= E(\beta) + (X'X)^{-1}X'e$$

thus,

$$\hat{\beta} - E(\hat{\beta}) = (X'X)^{-1}X'e$$

(A.13)

Since the variance is the expected value of the square of the deviation of $\hat{\beta}$ from its own mean, it gives:

$$\text{var}(\hat{\beta}) = E((X'X)^{-1}X'e'X(X'X)^{-1})$$

$$= (X'X)^{-1}X'Eee'X(X'X)^{-1}$$

(A.14)

Taken the assumptions that the matrix $X$ is fixed in repeated sampling, and $\text{Var}(e) = E(ee') = \sigma^2 I_n$, equation (A.14) can thus be re-expressed as:

$$\text{var}(\hat{\beta}) = (X'X)^{-1}X'E(\sigma^2 I_n)X(X'X)^{-1}$$

$$= \sigma^2(X'X)^{-1}X'X(X'X)^{-1}$$

(A.15)

By cancelling $X'X$ and its inverse $(X'X)^{-1}$, the expression for the variance of the OLS estimator (also referred to as the variance covariance matrix) can be obtained:

$$\text{var}(\hat{\beta}) = \sigma^2(X'X)^{-1}$$

(A.16)

### 8.B.1.4. Some Remarks on OLS

Up to this point, the typical derivation of the formulas to compute the OLS estimators necessary to estimate the sample regression function (SRF), and some of the major assumptions of the OLS method have been shown. However, this review has only scratched the surface of the topic. For example, it has been shown that the derivation of the variance of the OLS estimator as a function of the error variance $\sigma^2$ that appears in formula (A.16), however, the $\sigma^2$ itself is unknown and needs to be estimated in practice. Since the topic is obviously too broad to be covered in details here, this subsection only gives a verbal account of some important issues.
Firstly, the significance of the OLS estimator is determined using t-test which utilises the estimated values of the standard deviations of the OLS estimator (not covered here). The null hypothesis of the t-test is that the OLS estimator is not different from zero while the alternative hypothesis is that the null is false. The hope in regression analysis is to reject the null and accept the alternative hypothesis with a two or one tail test. If \( \varepsilon \) is assumed to be normally distributed, \( \sigma^2 \) is also normally distributed since the \( X \) is assumed to be fixed. As a result, \( \hat{\beta} \) is also normally distributed. To test the significance of an individual parameter in the vector \( \hat{\beta} \), the t-distribution must be used. It is because that while \( \hat{\beta} \) is normally distributed, \( \text{var}(\hat{\beta}) \) is unknown due to \( \sigma^2 \) is unknown. The specific procedure for an individual parameter is that:

\[
t = \frac{(\hat{\beta}_i - 0)}{S(\hat{\beta}_i)}
\]

where \( \hat{\beta}_i \) is an individual parameter and \( S(\hat{\beta}_i) \) is its standard deviation. This test statistic is assumed to follow the t-distribution with \( n-k \) degrees of freedom, where \( n \) is the number of the observations and \( k \) is the number of parameters estimated. The decision rule is that if the test statistic is greater than the ‘critical value’ taken from a table of the t-distribution with \( n-k \) degrees of freedom then the null hypothesis is rejected. Secondly, the goodness of fit of an estimated regression is determined by the coefficient of determination or \( R^2 \), which measures the proportion or percentage of total variation in \( y \) explained by the regression model. And finally, no discussion about the CLRM is complete without an examination of the consequences of the violations of the assumptions of the model. Common problems due to the violations of the assumptions which have been examined above include heteroscedasticity, multicollinearity, and model misspecification (e.g., exclusion of relevant variables and inclusion of irrelevant variables in the model)\(^{37}\).

8.B.2.: Panel Data Analysis

According to Gujarati (2003), in panel data the same cross-sectional unit (say a family or a firm or a state) is surveyed over time. In short, panel data have space as well as time dimensions. In literature, four different names are used for describing panel data, such as pooled data (pooling of time series and cross-sectional observations),
combination of time series and cross-section data, micropanel data, longitudinal data (a
study over time of a variable or group of subjects), event history analysis (e.g., studying
the moment over time of subjects through successive states or conditions), cohort
analysis (e.g., following the career path of 1965 graduates of a business school).
Although there are subtle variations, all these names essentially connote movement over
time of cross-sectional units. The current study therefore uses the term panel data in a
generic sense to include one or more of these terms. Panel data are now increasingly
used in economic research. The topic of panel data regressions is vast, and some of the
mathematics and statistics involved is quite complicated. At here, it is only expected to
touch on some of the essentials of the panel data regression models. To start with, the
general panel data model can be written as:

\[ y_{it} = \beta' x_{it} + e_{it} \]  \hspace{1cm} (A.17)

where \( i = 1 \ldots n \) and \( t = 1 \ldots T \).

\( y_{it} \) is the observation on the dependent variable \( y \) for the \( i \)th cross-sectional unit in
the \( t \)th period, \( x_{it} \) is a \( 1 \times k \) vector of observations on \( k \) explanatory variables for the \( i \)th
individual in the \( t \)th period, and \( \beta \) is a \( k \times 1 \) vector of parameters. \( e_{it} \) is the disturbance
term and it is assumed that

\[ e_{it} = \mu_{it} + u_{it} \]  \hspace{1cm} (A.18)

the error term contains an unobservable individual effect \( \mu_{it} \) and a disturbance \( u_{it} \).

The unobservable individual effect is supposed to capture the “time invariant”
characteristics of individual \( i \) which are not picked up by the variables in \( x_{it} \).

**8.2.1.: The Fixed Effects Approach**

The term “fixed effects” is due to the fact that, although the intercept may differ across
individuals, each individual’s intercept does not vary over time; that is, it is time
invariant. Thus, the Fixed Effects (regression) Model can be expressed as:

\[ y_{i} = X_{i} \beta + i \alpha_{i} + \epsilon_{i} \]  \hspace{1cm} (A.19)

This formulation of the model assumes that differences across units can be
captured in differences in the constant term. Each \( \alpha_{i} \) is treated as an unknown parameter
to be estimated. \( y_{i} \) and \( X_{i} \) are the \( T \) observations for the \( i \)th unit, \( i \) is a \( T \times 1 \) column of
ones, and \( \epsilon_{i} \) is associated \( T \times 1 \) vector of disturbances.

Collecting these terms gives:
Where $d_i$ is a dummy variable indicating the $i^{th}$ unit. Let the $nT\times n$ matrix $D=[d_1\ d_2\ ...\ d_n]$. Then assembling all $nT$ rows gives:

$$y = X\beta + Da + \varepsilon$$  \hspace{1cm} (A.21)

This model is usually referred to as the **least square dummy variable (LSDV)** model. It is a classical regression model, so no new results are needed to analyse it. If $n$ is small enough, then the model can be estimated by ordinary least squares with $K$ regressors in $X$ and $n$ columns in $D$, as a multiple regression with $K+n$ parameters.

### 8.2.2. Random Effects Approach

The basic idea of the Random Effects Model (REM) or Error Components Model (ECM) is that instead of treating the individual’s intercept ($\beta_{1i}$) as fixed, it is assumed that the intercept term is a random variable with a mean $\beta_1$. And the intercept value can be expressed as:

$$\beta_{1i} = \beta_1 + v_i \quad i=1,2,...,N$$  \hspace{1cm} (A.22)

Where $v_i$ is a random error term with a mean value of zero and variance of $\sigma^2$.

It is essential to state that due to samples are drawing from a much larger universe and that they have a common mean value for the intercept ($=\beta_1$) and the individual differences in the intercept values of the individual are reflected in the error term $v_i$. Thus the general regression model of the random effects approach is written as:

$$y_{it} = \beta_1 + \beta_2 x_{2it} + \beta_3 x_{3it} + ... + \beta_n x_{nit} + v_i + \epsilon_{it}$$  \hspace{1cm} (A.23)

Where $\omega_{it} = (v_i + \epsilon_{it})$, this composite error term, $v_i$ which is the cross-section, or individual-specific, error component, and $\epsilon_{it}$ which is the combined time series and cross-section error component. The term error components model derives its name because the composite error term $\omega_{it}$ consists of two (or more) error components.

More generally, the basic assumptions made by ECM are that: (1) both error terms ($v_i$ and $\epsilon_{it}$) are normally distributed with the variance of $\sigma^2$; (2) the individual error components are not correlated with each other; and (3) they are not autocorrelated across both cross-section and time series units. Based on these assumptions:
Further, it can be shown that $\omega_{it}$ is correlated with $\omega_{it'}$; that is, the error terms of a given cross-sectional unit at two different points in time are correlated. The correlation coefficient, $\text{corr} (\omega_{it}, \omega_{it'})$, is as follows:

$$\text{corr} (\omega_{it}, \omega_{it'}) = \frac{\sigma_v^2}{\sigma_v^2 + \sigma_\varepsilon^2}$$  \hspace{1cm} (A.25)

Notice two special features of the preceding correlation coefficient. First, for any given cross-sectional unit, the value of correlation between error terms at two different times remains the same no matter how far apart the two time periods are, as is clear from (A.25). Second, the correlation structure given in (A.25) remains the same for all cross-sectional units; that is, it is identical for all individuals. As argued by Gujarati (2003), Greene (2003), the most appropriate method here is the method of generalised least squares estimator (known as the GLS).

### 8.B.2.3.: Fixed Effects (LSDV) versus Random Effects Model

The challenge facing a researcher is: which model is better, FEM or REM? The answer to this question hinges around the assumption one makes about the likely correlation between individual, or cross-section specific, error component $\nu_i$ and the $X$ regressors: if it is assumed that $\nu_i$ and the $X$'s are uncorrelated, REM may be appropriate, whereas if $\nu_i$ and the $X$'s are correlated, FEM may be appropriate. According to Gujarati (2003, p.650-651), four general criteria are listed in the followings:

1. if $T$ (the number of time series data) is large and $N$ (the number of cross-sectional units) is small, there is likely to be little difference in the values of the parameters estimated by FEM and REM. Hence the choice here is based on computational convenience. On this score, FEM may be preferable.

2. when $N$ is large and $T$ is small, the estimate obtained by the two methods can differ significantly. FEM will be appropriate if the researcher strongly believes that the individual, or cross-sectional, units in the sample are not random drawings from a larger sample. On the other hand, if the cross-sectional units in the sample are regarded as random drawings, then REM is appropriate.

3. if the individual error component $\nu_i$ and one or more regressors are correlated, then the REM estimators are biased, whereas those obtained from FEM are unbiased.
4. if \( N \) is large and \( T \) is small, and if the assumptions underlying REM hold, REM estimators are more efficient than FEM estimators.
Chapter 9: Empirical Analysis of the Results
9.1. Introduction

Drawing upon 3,129 firm-year observations obtained from 447 Chinese listed firms of 22 different industries over period of 2000-2006, this chapter presents the empirical results by running several statistical tests using the Eviews 5.0 software. It begins with the descriptive statistics of the explanatory and the control variables. By comparing the pre-Code results with those in the post-Code periods, the statistical changes of a specific variable over time are well represented. Next, the mean coefficient estimates of parameters calculated using the Modified Jones Model and L&R Model respectively are demonstrated.

For the hypotheses testing, hypothesis 1 of the Chinese listed companies’ level of EM is lower in the post-Code period (H1) is examined by applying the univariate statistical tests. By using the multivariate regression tests, the second phase is to investigate the impacts of the main mechanisms of corporate governance enforced by the Code on EM practices in China. The specific mechanisms included arrange from the executive compensation (coded as EXCOM) to the characteristics of the largest shareholder (ownership concentration-TOPI and type-STATE) (or H2-H8). Before running the main regression models, the tests for skewness, kurtosis, multicollinearity, and heteroscedasticity of the explanatory and control variables are provided.

The structure of this chapter is provided as the followings:

- 9.1. Introduction: Section 9.1. gives a brief introduction of the chapter; section 9.2. provides the descriptive statistics of both the explanatory and control variables; section 9.3. analyses the mean coefficient estimates of parameters calculated using the Modified Jones Model and L&R Model respectively; section 9.4. tests the formulated hypotheses including time-trend in EM metrics and the impacts of the main corporate governance mechanisms on EM practices in China’s listed companies; section 9.5. summaries the whole chapter.
9.2. Descriptive Statistics

This section starts with providing the descriptive statistics of the explanatory variables and the control variables. By comparing the pre-Code results with those in the post-Code periods, the statistical changes of a specific variable over time are well represented.

9.2.1. Descriptive Statistics

--Explanatory Variables

Table 9.1 illustrates the descriptive statistics of the explanatory variables introduced by the current thesis. The whole study period is categorised in pre- and post-Code periods. p-value for the differences between two contrasting regimes is provided through different statistical tests, such as t-test (mean differences), z-test (median differences), and chi-square test (categorical variables). Furthermore, the post-Code period is divided into sub-periods, namely the post-Code period (A) extends from 2002 to 2003, post-Code period (B) extends from 2002 to 2004, and post-Code period (C) extends from 2002 through the end of 2005. The rational behind this is to show the time trend in the variables and to control any extreme cases in the sample for a given year which may bias the results obtained in the post-Code period (2002-2006).

Table 9.1. Panel A. reports the summary statistics of the continuously explanatory variables arranged from compensation of top 3 executives to shareholding concentration of the largest shareholder in Chinese listed companies. The statistics summary is composed of the 25th, 75th percentile, mean, median, and standard deviation (or S.D.).

First of all, the results of natural logarithm value of cash compensation for the top three highest paid executives (quoted as EXCOM) show an increasing trend over time. For instance, both mean and median of EXCOM are increased significantly in the post-Code period compared with those in the pre-Code period. In particular, by the end of 2006, on average, EXCOM is increased to 12.811 from 11.083 in the pre-Code period. And, the median grows to 12.867 from 11.092. The p-value for difference in either mean or median is statistically significant at 1%. In the post-Code period (B) (or 2002-04), the mean and median are increased to 12.866 and 12.970 from 12.801 and 12.847 in the post-Code period (A) (or 2002-03) respectively. And, the post-Code period (C)
(or 2002-05) shows a slight decrease both in mean (12.768) and median (12.815) comparing with the post-Code period (B). But comparing with the pre-Code period, all the sub-periods demonstrate significant increases in top 3 executive compensation (difference significant at 0.01 level). Overall, the compensation of top executives in Chinese listed companies increases significantly across the study period. In the similar vein, Chen et al., (2010) study the trend and determinants of executive compensation of 502 Chinese listed companies over the period of 2000 to 2006. They report that the top 3 executives earn approximately RMB0.20 million in cash compensation which is relatively stable before 2002. It, however, increases dramatically afterwards and reaches RMB0.45 million on average by the end of 2006. In addition, from the perspective of the Western countries, similar results are documented. For instance, based on the US listed companies, both Bergstresser and Philippon (2006) and Cohen et al., (2008) report that while the performance-related executive compensation (cash bonuses and share options) remains relatively stable before 2001, over the period of 2001 to 2005, it increases significantly in each year.

In order to comply with the requirements of the Code that a listed company shall introduce independent non-executive directors to its board and by 30 June 2003, at least one third of the board shall be independent non-executives, the proportion of independent non-executive directors (INDBOARD) on the board in Chinese listed companies increases significantly (difference significant at 0.01 level) in the post-Code period compared with that in the pre-Code period. In particular, as indicated in the second row of Table 9.1. Panel A., the average proportion of independent directors on the board arises from 3.4% in the pre-Code period to 33.7% in the post-Code period. In other words, it shows a more than 8-fold growth in INDBOARD. By further dividing the post-Code period into sub-periods, the results demonstrate that the proportion of independent directors on the board increases gradually over time. By the end of 2003, on average, 32.6% of the board is composed of independent non-executives, and this proportion increases to 32.9% and 33.3% by the end of 2004 and 2005 correspondingly. By comparing with the pre-Code period, the mean differences of these sub-periods are all significant at 0.01 level. For the median, it increases to 33.3% in the post-Code periods from 0% in the pre-Code period, and the differences are significant at 0.01 level. In literature, Chen and Zhang (2010a) study the trend in independent non-executive directors on the board by comparing the proportion of 103 B-share issuing companies in
the pre-2001 period (1999-2000) with that in the post-2001 period (2002-2006). Their results demonstrate a significant increase over time, since both the mean and median differences between two periods are around 30% and significant at 1%. Chen et al., (2010) analyse the median of the proportion of independent directors in order to study board independence of 502 Chinese listed companies over the period of 2000 to 2006. Statistically, they report that while the median increases to 22.2% by the end of 2002 from 0.00% in either year 2000 or 2001, it is stabilised at 33.33% until the end of the study period.

As stated in the previous chapter, in China, one promising feature emerged recently from the A- and B-share markets is the increasing trend in institutional ownership in the listed companies that is both a reflection and a consequence of the government’s efforts to promote institutional investors to enter into the stock markets since 1997. In addition, the Code encourages the involvement of institutional investors in monitoring firms by stating that institutional investors shall play a role in the appointment of company directors, the compensation and supervision of management and major decision-making processes. Regarding the results of INSTITUTE, the average shareholding owned by institutional shareholders in China increases to 6% with the median of 0.016 in the post-Code period from 2.6% with the median of 0.005 in the pre-Code period. The p-value of either mean or median difference is statistically significant at 1% level. And, the results of sub-periods also demonstrate a significant increase in both mean and median. In particular, the mean shareholding increases to 4.4% in post-Code period (A) and (B) and 5.1% by the end of 2005. The corresponding p-value is significant at 1%. For the median, it increases to 0.007 by the end of 2004 and further raises to 0.009 in 2005 from 0.005 in the pre-Code period. And the p-value is significant at 5% and 1% level respectively. All in all, it shows the increasing interests of institutional investors in holding more companies’ shares in China. However, comparing with the institutional ownership in developed market, such as around 55% of US equities are owned by institutional shareholders, and institutional ownership is around 41% in UK, the shares owned by institutional investors in Chinese listed companies are still quite small (around 6% on average by the end of 2006). This fact may indicate Chinese stock market is inefficient, since the institutional environment is still incomplete. Accordingly, the institutional investors may find themselves in a disadvantageous position in the Chinese stock market and concern more about their
welfare being expropriated by other controlling shareholders. They are more likely to keep low shareholding and typically hold their shares for a short term. Regarding involvement in mitigating opportunistic discretion, Chen and Zhang (2010b) argue that only the large institutional investors have the incentive to undertake monitoring as the increased return from their monitoring may be sufficient to cover the associated transaction costs which are composed of the costs of gathering and analysing information, the costs of price effects and suboptimal tax timing, the problem of "free-rider" problem (Grossman and Hart, 1980), and so forth. Thus, high transaction costs associated with being active in monitoring further lower the incentive of smaller institutional investors in China to influence company's policy and monitor the management. In addition, Gillan and Starks (2000) propose that with low ownership, proposals sponsored by institutional investors may not perceived by other shareholders as being effective enough in pressuring corporate management to pursue them.

The last row of Table 9.1. Panel A. presents the summary statistics of shares held by the largest shareholder (TOP1) in China's listed companies between the pre- and post-Code periods. Overall, the findings document a decreasing trend in shareholding of TOP1 in Chinese listed companies over time which is consistent with the results provided in the literature (e.g., Aharony et al., 2000; Chen and Yuan, 2006; Chen and Zhang, 2010a; Ding et al., 2007; Liu and Lu, 2007). For instance, Chen and Zhang (2010a) find a significant reduction by 2.6% in the holdings of controlling shareholders over time in the B-share companies. According to the results of current thesis, the average shareholding of TOP1 in a Chinese listed company is about 44.9%, and the median is 44.4% in the pre-Code period. By the end of the 2006, on average, the biggest shareholder holds 40.5% of a listed firm's shares and the median shareholding drops to 37.8%. The differences of the mean and median between these two periods are significant at 0.01 level. Ding et al. (2007) report the similar result as the mean interest held by the largest shareholder is about 41.9% in their sample firms. By dividing the post-Code period, it reveals that shareholding of the largest investor in Chinese listed companies is reduced year by year. For instance, the shareholding reduces to 42.8% in the post-Code period (A), 42.4% in the post-Code period (B), and further, by the end of 2005 it decreases to 41.9%. Repeatedly, the differences between the post-Code sub-periods and pre-Code period are significant at 0.01 level. Despite the reduction in shareholding of the largest investors in listed companies, they still directly hold more
than 40% on average of shares in the post-Code period and, indirectly they may use pyramidal ownership structures to gain control of the firm. As argued by Rajagopalan and Zhang (2008), the dominant shareholders in China normally use pyramidal ownership structures whereby they can achieve control through interlocking ownership. Thus, this thesis argues that although the holding of largest shareholders in Chinese listed companies reduces gradually, they are still in the dominating position in most companies and have incentives to obtain benefits, at the expenses of minority shareholders’ interests, through opportunistic behaviours, such as reported earnings manipulation.

Panel B of Table 9.1. reports the statistics of three categorically explanatory variables, establishment of audit committee (AUDCOM), statutory audit (AUDITOR), and the type of the controlling shareholders or government control (STATE).

The 2002 Code recommends that various committees of the board be established in China’s listed companies. And among these board sub-committees, audit committee has the responsibility to review the scope and outcome of audit, and to ensure the objectivity of auditors is maintained. Thus, it is argued that the passage of the Code should lead to an increase in the number of companies that establish audit committees on their boards. This argument is well supported by the findings reported in the first row of Panel B. In the post-Code period (A), the number of companies which establish audit committees (AUDCOM) on their boards increases to 195 (43.6%) from 24 (5.4%) by the end of 2001. The difference is significant at 0.01 level. The number of companies established an audit committee is stable with a slight increase in both post-Code period (B) with 203 (45.4%) and post-Code period (C) with 210 (47%). And finally, the number ends in 209 by the end of 2006. Again the differences are significant at 0.01 level by comparing with the pre-Code period. Overall, the results show a significant increase in audit committee establishment in Chinese listed companies over time. It is consistent with the results reported by Chen and Zhang (2010a) that the number of B-share companies established audit committee during the period of 2002-2004 increases by approximately 30% compared to that during the period of 1999-2000.

The number of companies that employ one of the international reputable audit firms (or the Big 4) increases gradually over the study period (AUDITOR). It increases
from 28 (6.3%) in the pre-Code period to 38 (8.5%) by the end of 2006. But, none of
the p-value reported in the post-Code periods is at significant level compared with the
pre-Code period. Based on 103 B-share companies in China, Chen and Zhang (2010a)
also document an increasing trend in number of companies that employ the Big 4 over
period. However, comparing with the period of 1999-2000, the difference is
insignificant as there are only 24 more companies employ the Big 4 to audit their annual
reports over 2002-2004. Thus, it is argued that the impact of the statutory audit on I:M
practices in the following statistical tests may be insignificant.

As stated earlier, the original purpose of the stock market in China is to raise
much-needed capital for State-owned Enterprises (SoEs), and financing through the
equity market shows a tremendous bias in favour of SoEs over non-Sol:s. For this
historical reason, majority of current listed companies originated from restructured SoEs
are still under control of the State and/or other non-listed SoEs (Chen and Zhang, 2010a;
Chen et al., 2010). The findings of the largest shareholder type (STATE) are reported in
the last row of Panel B. In particular, over 87% (393) of the sample companies are
directly owned by either the government or other administrative agencies in the pre-
Code period. In the post-Code period, the number of listed companies in China owned
by the government is reduced to 348 (77.9%). And, the p-value for the difference
between the pre- and post-Code period is significant at 0.01 level. By further dividing
the post-Code period, there are 373 (83.4%), 366 (81.9%), and 352 (78.7%) companies
are controlled by the government in relation to the different sub-periods. All differences
are significant (arranged from 0.10 level to 0.01 level) comparing with the pre-Code
period. Overall, although the number of State-owned listed companies in China reduces
significantly, about 78% of sample firms are still controlled by the State in the post-
Code period. This reflects the dominant position held by the government in Chinese
listed companies as stated by Ding et al. (2007) that although the number and
importance of privately-owned firms increase considerably in recent years, over 80% of
the total number of listed companies in China stock market is still in hands of the State.
Table 9.1.: Descriptive statistics for the explanatory variables

Panel A: Continuously explanatory variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Statistics Summary</th>
<th>Pre-Code (2000-01)</th>
<th>Post-Code (2002-06)</th>
<th>p-value for Pre-Code and Post-Code difference*</th>
<th>Post-Code (A) (2002-03)</th>
<th>p-value for Pre-Code and Post-Code (A) difference*</th>
<th>Post-Code (B) (2002-04)</th>
<th>p-value for Pre-Code and Post-Code (B) difference*</th>
<th>Post-Code (C) (2002-05)</th>
<th>p-value for Pre-Code and Post-Code (C) difference*</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXCOM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>10.765</td>
<td>11.352</td>
<td></td>
<td></td>
<td>11.300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>11.083</td>
<td>12.811</td>
<td>0.000***</td>
<td></td>
<td>12.801</td>
<td>0.000***</td>
<td>12.866</td>
<td>0.000***</td>
<td>12.768</td>
<td>0.000***</td>
</tr>
<tr>
<td>Median</td>
<td>11.092</td>
<td>12.867</td>
<td>0.000***</td>
<td></td>
<td>12.847</td>
<td>0.000***</td>
<td>12.970</td>
<td>0.000***</td>
<td>12.815</td>
<td>0.000***</td>
</tr>
<tr>
<td>75&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>11.887</td>
<td>13.379</td>
<td></td>
<td></td>
<td>13.277</td>
<td></td>
<td>13.550</td>
<td></td>
<td>13.080</td>
<td></td>
</tr>
<tr>
<td>S.D.</td>
<td>0.373</td>
<td>0.403</td>
<td></td>
<td></td>
<td>0.410</td>
<td></td>
<td>0.450</td>
<td></td>
<td>0.411</td>
<td></td>
</tr>
<tr>
<td>INDBOARD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>0.000</td>
<td>0.322</td>
<td></td>
<td></td>
<td>0.315</td>
<td></td>
<td>0.317</td>
<td></td>
<td>0.321</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>0.034</td>
<td>0.337</td>
<td>0.000***</td>
<td></td>
<td>0.326</td>
<td>0.000***</td>
<td>0.329</td>
<td>0.000***</td>
<td>0.333</td>
<td>0.000***</td>
</tr>
<tr>
<td>Median</td>
<td>0.000</td>
<td>0.333</td>
<td>0.000***</td>
<td></td>
<td>0.333</td>
<td>0.000***</td>
<td>0.333</td>
<td>0.000***</td>
<td>0.333</td>
<td>0.000***</td>
</tr>
<tr>
<td>75&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>0.056</td>
<td>0.357</td>
<td></td>
<td></td>
<td>0.353</td>
<td></td>
<td>0.354</td>
<td></td>
<td>0.354</td>
<td></td>
</tr>
<tr>
<td>S.D.</td>
<td>0.061</td>
<td>0.049</td>
<td></td>
<td></td>
<td>0.055</td>
<td></td>
<td>0.058</td>
<td></td>
<td>0.052</td>
<td></td>
</tr>
<tr>
<td>INSTITUTE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>0.0001</td>
<td>0.0008</td>
<td></td>
<td></td>
<td>0.0001</td>
<td></td>
<td>0.0000</td>
<td></td>
<td>0.0004</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>0.026</td>
<td>0.060</td>
<td>0.000***</td>
<td></td>
<td>0.044</td>
<td>0.000***</td>
<td>0.044</td>
<td>0.000***</td>
<td>0.051</td>
<td>0.000***</td>
</tr>
<tr>
<td>Median</td>
<td>0.005</td>
<td>0.016</td>
<td>0.000***</td>
<td></td>
<td>0.007</td>
<td>0.020**</td>
<td>0.007</td>
<td>0.013**</td>
<td>0.009</td>
<td>0.000***</td>
</tr>
<tr>
<td>75&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>0.030</td>
<td>0.078</td>
<td></td>
<td></td>
<td>0.047</td>
<td></td>
<td>0.049</td>
<td></td>
<td>0.060</td>
<td></td>
</tr>
<tr>
<td>S.D.</td>
<td>0.046</td>
<td>0.095</td>
<td></td>
<td></td>
<td>0.077</td>
<td></td>
<td>0.079</td>
<td></td>
<td>0.089</td>
<td></td>
</tr>
<tr>
<td>TOP1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>0.300</td>
<td>0.276</td>
<td></td>
<td></td>
<td>0.290</td>
<td></td>
<td>0.286</td>
<td></td>
<td>0.284</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>0.449</td>
<td>0.405</td>
<td>0.000***</td>
<td></td>
<td>0.428</td>
<td>0.000***</td>
<td>0.424</td>
<td>0.000***</td>
<td>0.419</td>
<td>0.000***</td>
</tr>
<tr>
<td>Median</td>
<td>0.444</td>
<td>0.378</td>
<td>0.000***</td>
<td></td>
<td>0.409</td>
<td>0.000***</td>
<td>0.402</td>
<td>0.000***</td>
<td>0.399</td>
<td>0.000***</td>
</tr>
<tr>
<td>75&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>0.596</td>
<td>0.534</td>
<td></td>
<td></td>
<td>0.585</td>
<td></td>
<td>0.574</td>
<td></td>
<td>0.556</td>
<td></td>
</tr>
<tr>
<td>S.D.</td>
<td>0.177</td>
<td>0.163</td>
<td></td>
<td></td>
<td>0.180</td>
<td></td>
<td>0.174</td>
<td></td>
<td>0.170</td>
<td></td>
</tr>
</tbody>
</table>

*For the continuous variables, the p-value for the difference in mean (median) is for a t- (z-) test. For the indicator variables, the p-value is for a chi-square test.

** *** *** Denote significance (2-tailed) at 0.100, 0.050 and 0.010 level, respectively.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDDCOM</td>
<td>YES</td>
<td>24(5.4%)</td>
<td>209(46.8%)</td>
<td>195(43.6%)</td>
<td>0.000***</td>
<td>0.000***</td>
<td>0.000**</td>
<td>2.10(47%)</td>
<td>2.37(53%)</td>
<td>0.000***</td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td>423(94.6%)</td>
<td>238(53.2%)</td>
<td>252(56.4%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUDITOR</td>
<td>YES</td>
<td>447(100%)</td>
<td>447(100%)</td>
<td>447(100%)</td>
<td>0.686</td>
<td>0.686</td>
<td>4.12(92.5%)</td>
<td>4.47(100%)</td>
<td>4.47(100%)</td>
<td>4.47(100%)</td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td>28(6.3%)</td>
<td>38(8.5%)</td>
<td>31(6.9%)</td>
<td>0.201</td>
<td>0.201</td>
<td>4.12(92.5%)</td>
<td>4.47(100%)</td>
<td>4.47(100%)</td>
<td>4.47(100%)</td>
</tr>
<tr>
<td>STATE</td>
<td>YES</td>
<td>493(87.9%)</td>
<td>348(77.9%)</td>
<td>373(83.4%)</td>
<td>0.000***</td>
<td>0.000***</td>
<td>0.012**</td>
<td>81(18.1%)</td>
<td>74(16.6%)</td>
<td>95(21.3%)</td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td>54 (11.2%)</td>
<td>99 (22.1%)</td>
<td>74 (16.6%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* For the continuous variables, the p-value for the difference in mean (median) is for a t (z) test. For the indicator variables, the p-value is for a chi-square test.

** * Denote significance (2-tailed) at 0.10, 0.05 and 0.01 level, respectively.
9.2.2. Descriptive Statistics

--Control Variables

Five variables that prior studies have found to be associated with EM or governance variables are included in the current thesis to control the possible confounding effects (Chen and Zhang, 2010a; Davidson, et al., 2005; Park and Shin, 2004). They are composed of firm's size, leverage, sales, trading status, and share issuing.

Table 9.2. Panel A presents the statistics summary of each continuously control variables, namely the Ln_Size, LEVERAGE, and Ln_Sales. Each statistic summary contains the 25th, 75th percentile, mean, median, and standard deviation (S.D.) of the variable. By running the t-test and z-test respectively, a comparison of values between the pre- and post-Code periods is provided. And the post-Code period is further divided into sub-periods to control extreme cases effects in the sample for the given year and to show the time trend in a particular variable.

Ln_Size is the proxy used for controlling sample firm's size effect and calculated as the natural logarithm of total assets based on the literature (e.g., Lee and Choi, 2002; Richardson, 2000; Van Tendeloo and Vanstraelen, 2005, 2008). Regarding the results, there is a significant increase in the size of Chinese listed companies over time. By comparing with the pre-Code period, the mean of Ln_Size increases to 20.152 and the median grows to 20.513 in the post-Code period. And, the p-value of either the mean or median difference between these two periods is significant at 0.01 level. The results for the other sub-periods are stable with a slight increase over time, such as by the end of 2005, the mean and median reach 20.939 and 20.443 respectively from 20.828 and 20.286 by the end of 2004. Comparing with the pre-Code period, the p-value for each sub-period is significant at 0.01 level.

Secondly, LEVERAGE is the proxy introduced to capture the effect of debt financing on EM in the sample firms and is measured as the ratio of total debt and total assets (e.g., Chen and Wang, 2004; Park and Shin, 2004). Due to the fierce competition from the foreign banks, the Chinese government has promoted the domestic banks to engage in wider business areas since 2000, such as insurance, financing (Liu and Liu, 2007). This is supported by the findings reported in the second row of Panel A. Table
9.2. since there is a significant increase in the percentage of debt financing used by the listed companies in China. In the pre-Code period, on average, around 44.2% of a firm’s total asset is financed using debt. It increases to 55.9% by the end of 2006, and the p-values for both mean and median differences between the pre- and post-Code period are significant at 0.01 level. Similar results are reported in the sub-periods. And repeatedly, the p-values between the sub-periods and pre-Code period are all significant at 0.01 level.

For the financial performance measured as the natural logarithm of annual sales from main operations (\(\ln \text{Sales}\)) of the listed companies (Ding et al., 2007), it shows a significant increase over time. In the post-Code period, while the mean of \(\ln \text{Sales}\) increases to 20.658 from 20.365 in the pre-Code period, the median arises to 20.620. Both mean and median are different significantly at 0.01 level from the pre-Code period. By analysing the findings of sub-periods, it is observed that performance of the listed companies increases steadily. By the end of 2003, the mean and median increases to 20.479 and 20.462 respectively. And, in the post-Code period (B), the mean is 20.519 with the median of 20.487. And finally, they reach 20.588 and 20.559 correspondingly by the end of 2005. The results of in these periods are significantly different from those in the pre-Code period at 0.01 level.

As documented in literature that Chinese listed companies are likely to manipulate reported earnings in order to meet thresholds of offering more shares and avoid being delisted (e.g., Chen and Yuan, 2006; Chen et al., 2004; Chen and Wang, 2004; Haw et al., 2005; Liu and Lu 2007). Thus, trading status (\(ST\_PT\)) and additional share issuing (ISSUING) are examined and their results are demonstrated in Panel B of Table 9.2. The p-value calculated from chi-square test is provided by comparing the results in the post-Code periods with those in the pre-Code period.

For the trading status, it is observed that the number of companies that labelled as either ST or PT in the post-Code periods grows significantly over time (difference level at 0.01). In the pre-Code period, 19 companies are labelled as either ST or PT, it increases to 44 (9.8%) and 46 (10.3%) in post-Code period (A) and (B) respectively, while the number decreases slightly to 39 (8.7%) in the post-Code period (C). by the end of 2006, there are 48 (10.7%) listed companies labelled as either ST or PT.
For the *ISSUING*, it shows a significant reduction (difference level at 0.01) in number of listed companies that issue additional shares in the post-Code periods. Comparing with 318 listed companies issue more shares in the pre-Code period, 77 (17.2%), 53 (11.9%), and 61 (13.6%) listed companies issue additional shares in the sub-periods, while the number increases to 130 companies by the end of 2006.
Table 9.2.: Descriptive statistics for the control variables  
Panel A: Continuously control variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Statistics Summary</th>
<th>Pre-Code (2000-01)</th>
<th>Post-Code (2002-06)</th>
<th>p-value for Pre-Code and Post-Code difference&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Post-Code (A) (2002-03)</th>
<th>p-value for Pre-Code and Post-Code (A) difference&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Post-Code (B) (2002-04)</th>
<th>p-value for Pre-Code and Post-Code (B) difference&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Post-Code (C) (2002-05)</th>
<th>p-value for Pre-Code and Post-Code (C) difference&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln_Size</td>
<td>25&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>19.856</td>
<td>20.163</td>
<td>0.000***</td>
<td>19.944</td>
<td>0.000***</td>
<td>19.950</td>
<td>0.000***</td>
<td>19.955</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>20.098</td>
<td>21.152</td>
<td>0.000***</td>
<td>20.719</td>
<td>0.000***</td>
<td>20.828</td>
<td>0.000***</td>
<td>20.939</td>
<td>0.000***</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>19.054</td>
<td>20.513</td>
<td>0.000***</td>
<td>20.177</td>
<td>0.000***</td>
<td>20.286</td>
<td>0.000***</td>
<td>20.443</td>
<td>0.000***</td>
</tr>
<tr>
<td></td>
<td>75&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>20.309</td>
<td>21.918</td>
<td>0.000***</td>
<td>21.385</td>
<td>0.000***</td>
<td>21.497</td>
<td>0.000***</td>
<td>21.515</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>0.371</td>
<td>0.440</td>
<td>0.424</td>
<td>0.422</td>
<td>0.431</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>25&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>0.300</td>
<td>0.394</td>
<td>0.348</td>
<td>0.365</td>
<td>0.378</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>0.442</td>
<td>0.559</td>
<td>0.533</td>
<td>0.537</td>
<td>0.550</td>
<td>0.550</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>0.423</td>
<td>0.531</td>
<td>0.500</td>
<td>0.505</td>
<td>0.505</td>
<td>0.518</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>75&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>0.560</td>
<td>0.640</td>
<td>0.628</td>
<td>0.635</td>
<td>0.641</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>0.205</td>
<td>0.513</td>
<td>0.540</td>
<td>0.543</td>
<td>0.627</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>20.365</td>
<td>20.658</td>
<td>0.000***</td>
<td>20.497</td>
<td>0.000***</td>
<td>20.519</td>
<td>0.000***</td>
<td>20.588</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>20.262</td>
<td>20.620</td>
<td>0.000***</td>
<td>20.462</td>
<td>0.000***</td>
<td>20.487</td>
<td>0.000***</td>
<td>20.559</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>0.573</td>
<td>0.603</td>
<td>0.600</td>
<td>0.595</td>
<td>0.602</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>For the continuous variables, the p-value for the difference in mean (median) is for a t- (z-) test. For the indicator variables, the p-value is for a chi-square test.

* * * * Denote significance (2-tailed) at 0.100, 0.050 and 0.010 level, respectively.
### Table 9.2: Descriptive statistics for the control variables (continued)

#### Panel B: Categorically control variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pre-Code (2000-01)</th>
<th>Post-Code (2002-06)</th>
<th>( p )-value for Pre-Code and Post-Code difference*</th>
<th>Post-Code (A) (2002-03)</th>
<th>( p )-value for Pre-Code and Post-Code (A) difference*</th>
<th>Post-Code (B) (2002-04)</th>
<th>( p )-value for Pre-Code and Post-Code (B) difference*</th>
<th>Post-Code (C) (2002-05)</th>
<th>( p )-value for Pre-Code and Post-Code (C) difference*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ST_PT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>19 (4.3%)</td>
<td>48 (10.7%)</td>
<td>0.000***</td>
<td>44 (9.8%)</td>
<td>0.001***</td>
<td>46 (10.3%)</td>
<td>0.001***</td>
<td>39 (8.7%)</td>
<td>0.007***</td>
</tr>
<tr>
<td>NO</td>
<td>428 (95.7%)</td>
<td>399 (89.3%)</td>
<td></td>
<td>403 (90.2%)</td>
<td></td>
<td>401 (89.7%)</td>
<td></td>
<td>408 (91.3%)</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>447 (100%)</td>
<td>447 (100%)</td>
<td></td>
<td>447 (100%)</td>
<td></td>
<td>447 (100%)</td>
<td></td>
<td>447 (100%)</td>
<td></td>
</tr>
<tr>
<td><strong>ISSUING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>318 (71.1%)</td>
<td>130 (29.1%)</td>
<td>0.000***</td>
<td>77 (17.2%)</td>
<td>0.000***</td>
<td>53 (11.9%)</td>
<td>0.000***</td>
<td>61 (13.6%)</td>
<td>0.000***</td>
</tr>
<tr>
<td>NO</td>
<td>129 (28.9%)</td>
<td>317 (70.9%)</td>
<td></td>
<td>370 (82.8%)</td>
<td></td>
<td>394 (88.1%)</td>
<td></td>
<td>386 (86.4%)</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>447 (100%)</td>
<td>447 (100%)</td>
<td></td>
<td>447 (100%)</td>
<td></td>
<td>447 (100%)</td>
<td></td>
<td>447 (100%)</td>
<td></td>
</tr>
</tbody>
</table>

*For the continuous variables, the \( p \)-value for the difference in mean (median) is for a t- (z-) test. For the indicator variables, the \( p \)-value is for a chi-square test.

** *** *** ** Denote significance (2-tailed) at 0.100, 0.050 and 0.010 level, respectively.
9.3. Statistics of EM Models

This section starts with providing the regression fit statistics of parameters calculated using the Modified Jones Model (Dechow et al., 1995) and L&R Model (e.g., Butler et al., 2004; Larcker and Richardson, 2004) respectively. Table 9.3. presents the statistical results. The parameter estimates are averages from the respective 140 industry regressions for 2000 to 2006. The t-statistics are reported in parentheses below parameter estimates with the relevant significance level.

According to Panel A of Table 9.3., the mean value of the coefficient on $\Delta REV_{it}$, in the Modified Jones Model is 0.031 (3.1%), which is significantly different from zero at 0.01 level ($t=2.645$). This result properly supports the argument proposed in prior research (e.g., Klein, 2002; Peasnell et al., 2000; 2005) that changes in revenues are usually positively related with changes in working accounts. For instance, account receivable, inventory and account payable are parts of total accruals and are positively related to changes in revenues. The findings also document a negative mean coefficient on $PPE_{it}$ with the value of -0.027 (-2.7%) which is significantly different from zero at 0.05 level ($t=-2.247$). It is consistent with the notion that the level of fixed assets is expected to drive depreciation expenses and deferred taxes (Klein, 2002). Such as higher fixed assets are expected to lead to higher depreciation expenses, which reduce total accruals. And, the mean adjusted $R^2$ is about 26% in the Modified Jones Model.

Table 9.3.: Regression fit statistics of the parameters using the Modified Jones Model and L&R Model

Panel A\(^a\): Mean coefficient estimates using the Modified Jones Model

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Intercept</th>
<th>$\Delta REV_{it}$</th>
<th>$PPE_{it}$</th>
<th>Adj. $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.098**</td>
<td>0.031***</td>
<td>-0.027**</td>
<td>0.263</td>
</tr>
<tr>
<td></td>
<td>(-2.447)</td>
<td>(2.645)</td>
<td>(-2.247)</td>
<td></td>
</tr>
</tbody>
</table>

Panel B\(^b\): mean coefficient estimates using the L&R Model

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Intercept</th>
<th>$\Delta REV_{it}$</th>
<th>$\Delta REC_{it}$</th>
<th>$PPE_{it}$</th>
<th>$BM_{it}$</th>
<th>$CFO_{it}$</th>
<th>Adj. $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.117***</td>
<td>0.067***</td>
<td>-0.020**</td>
<td>0.056***</td>
<td>-0.741***</td>
<td>(-27.955)</td>
<td>0.450</td>
</tr>
<tr>
<td></td>
<td>(-3.101)</td>
<td>(5.014)</td>
<td>(-2.009)</td>
<td>(4.546)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\): The accrual model is estimated using the Modified cross-sectional Jones technique:

$$TAC_{it}=a_0+a_1 \Delta REV_{it}+a_2 PPE_{it}+a_3,$$

where $TAC_{it}$ is the difference between operating cash flow and income before extraordinary items and discontinued operations; $\Delta REV_{it}$ is the change in revenues from the preceding year; and $PPE_{it}$ is the...
The accrual model is estimated using the L&R technique:

\[ \text{TAC}_{it} = \alpha_0 + \alpha_1 (\Delta \text{REV}_{it} - \Delta \text{REC}_{it}) + \alpha_2 \text{PPE}_{it} + \alpha_3 \text{BM}_{it} + \alpha_4 \text{CFO}_{it} + \epsilon_{it} \]

where TAC\(_{it}\) is the difference between operating cash flow and income before extraordinary items and discontinued operations; \(\Delta \text{REV}_{it}\) is the change in revenues from the preceding year; \(\Delta \text{REC}_{it}\) is the difference in accounts receivable from the start to the end of the year; PPE\(_{it}\) is the gross value of property, plant, and equipment; BM\(_{it}\) is measured as the ratio of the book value of common equity to the market value of common equity; and CFO\(_{it}\) is the current operating cash flows. All variables are scaled by the average of total assets using assets from the start and end of the fiscal year.

* *** Denote significance (2-tailed) at 0.100, 0.050 and 0.010 level, respectively.

Panel B of Table 9.3 reports the statistics summary of mean coefficient estimates calculated through the L&R Model (e.g., Butler et al., 2004; Larcker and Richardson, 2004). Consistent with the findings of Larcker and Richardson (2004) in testing their model on coefficients for parameter estimates, the current thesis finds a positive coefficient on \(\Delta \text{REV}_{it} - \Delta \text{REC}_{it}\), (0.067 or 6.7%) and a negative coefficient on PPE\(_{it}\), (-0.020 or -2%). The values of these two variables are significantly different from zero at 0.01 \(t=5.014\) and 0.05 \(t=-2.009\) level respectively. Given the notion that investment in inventory and other assets are likely to accompany growth phases of firm’s life cycle, McNichols (2000, 2002) argues large accruals are expected to be seen in growing firms. This argument is well supported by the findings in the third column of Panel B Table 9.3. BM\(_{it}\) is introduced as a proxy to control the growth in firm’s operations. Its mean value of 0.056 (5.6%) is positively related with the total accruals, and is significantly different from zero at 0.01 level \(t=4.546\). The mean coefficient estimate of the current cash flows (CFO\(_{it}\)) is -0.741 and significantly different from zero at 0.01 level \(t=-27.955\). Larcker and Richardson (2004) also report a negative correlation in their study and argue that accruals and cash flows are negatively correlated as they are two contradictory phenomena. While the mean adjusted \(R^2\) is documented as about 30% in Larcker and Richardson (2004)’s work, it is reported as about 45% in the current thesis.

As reviewed in the previous chapters, the Modified Jones Model may lead to misspecified results, when it is applied to samples of firm-year experiencing extreme financial performance (Dechow et al., 1995; McNichols, 2000; 2002, Larcker and Richardson, 2004). In order to control the extreme financial performance, BM (control for extreme growth in the firms) and CFO (control for extreme performance) are introduced in the L&R Model. By comparing the mean adjusted \(R^2\) which may limit the issue of higher \(R^2\) resulted from the additional variables in Panel A and B of Table 9.3.
the one obtained from the L&R Model is higher on average than that found using the Modified Jones Model. This fact reflects the L&R Model may provide better goodness of fit of the regression equation, as around 45% of total variation in the total accruals (dependent variable) is explained by the explanatory variables included in the model. And, it seems that the L&R Model may mitigate the misclassification issues in the Modified Jones Model (Bernard and Skinner, 1996; Dechow et al., 2003) to certain extent.

9.4. Hypotheses Testing

9.4.1. The Hypothesis of EM Trend in China’s Listed Companies—Univariate Analysis

Recall from the previous chapters, both TCE and AT propose that any improvements of corporate governance system can be seen as the efforts to minimise opportunistically discretionary behaviour thus lower transaction costs or agency costs among different groups according to the asset-specialised transactions or different risk bearing respectively (e.g., Fama and Jensen, 1983a,b; Williamson, 1984a; 2005b). From the perspective of Chinese Code 2002, it is formulated to enhance the integrity of financial statements through improving corporate governance system and bring forward the healthy development of the stock markets. Thus, this section to test whether the Chinese listed companies’ level of EM is lower after the Code (or \( H_1 \)).

The results of the univariate tests through comparing the discretionary accruals (hereinafter referred to as DAs) in the post-Code period with those in the pre-Code period are illustrated in Table 9.4. It contains the absolute (\( ABS\ DAs \)), positive (\( Positive\ DAs \)), and negative (\( Negative\ DAs \)) values of DAs. In order to facilitate comparison, the post-Code period is further divided into sub-periods, namely the post-Code period (A), (B), and (C) respectively.

The statistics summary of absolute DAs (\( ABS\ DAs \)) calculated from the Modified Jones Model is documented in Panel A of Table 9.4. It contains the 25\(^{th}\), 75\(^{th}\) percentile, mean, median, and standard deviation (S.D.). Overall, the results show a statistically significant reduction (significance level arranges from 0.05 to 0.10) in \( ABS\ DAs \) in Chinese listed companies after promulgation of the China’s 2002 Code. In particular,
with 0.046 (4.6%) in the 25th and 0.110 (11%) in the 75th percentile, the mean and median of \textit{ABS\_DAs} in the pre-Code period is around 0.091 (9.1%) and 0.072 (7.2%) respectively. By the end of 2006, while the results in the 25th percentile and median are relatively stable, the 75th percentile of \textit{ABS\_DAs} reduces to 0.101 (10.1%) from 11% in the pre-Code period. The reduction of standard deviation from 0.110 in the pre-Code period to 0.101 suggests less variation in \textit{ABS\_DAs} in the post-Code period. More importantly, the mean value of \textit{ABS\_DAs} reduces significantly at 0.05 significance level \((p\text{-value}=0.021)\) to 0.082 (8.2%) from 9.1% in the pre-Code period. By taking all together, with less variation in the value, the findings of \textit{ABS\_DAs} show a significant reduction in the post-Code period. By further dividing the post-Code period into sub-periods, similar results are reported. In the post-Code period (A) and (B), while the mean of \textit{ABS\_DAs} reduces to 0.083 (8.3%) and 0.080 (8.0%), the median falls to 0.065 (6.5%) and 0.062 (6.2%) respectively. With the \(p\text{-value}\) arranged from 0.081 to 0.033, differences of mean and median between these two sub-periods and the pre-Code period are statistically significant (significant level arranges from 0.05 to 0.10 level). In the post-Code period (C) (or 2002-05), while the difference in median remains insignificant, the mean of \textit{ABS\_DAs} decreases to 8.3% with the significance level of 0.10 \((p\text{-value}=0.066)\) from the pre-Code period.

The second row of Panel A of Table 9.4. provides the statistical results for positive DAs (\textit{Positive\_DAs}) calculated from the Modified Jones Model of Chinese listed companies. With the 25th percentile of 0.000 and 75th percentile of 0.038 (3.8%), the findings show the mean and median of \textit{Positive\_DAs} is 0.029 (2.9%) and 0.008 (0.08%) respectively with a standard deviation of 0.052 in the pre-Code period. In the post-Code period, while the value of the 25th percentile remains (0.000) and a statistically insignificant \((p\text{-value}=0.721)\) increase in the median (0.012, or 1.2%), the mean, 75th percentile, and standard deviation of \textit{Positive\_DAs} all demonstrate reductions to certain extent. Among these, the reduction of the mean from 2.9% in the pre-Code period to 2.5% in the post-Code period is significant at 0.10 level \((p\text{-value}=0.104)\). Furthermore, in the post-Code period (A), the mean of \textit{Positive\_DAs} falls to 0.023 (2.3%) from 0.029 in the pre-Code period, and the difference is significant at 0.10 level \((p\text{-value}=0.064)\). But the difference of median is insignificant. For the post-Code period (B), the difference of either mean or median is insignificant. By the end of 2005, while the median is stable, the mean reduces to 0.024 (2.4%) which is
significantly different from that in the pre-Code period at 0.10 level ($p$-value=0.068). In summary, the results document that the level of positive DAs in Chinese listed companies reduces significantly in the post-Code periods by comparing with those in the pre-Code period.

For negative DAs (coded as Negative DAs) of Chinese listed companies, with the 25th percentile of -0.089 (-8.9%) and 75th percentile of -0.012 (-1.2%), the mean and median of Negative DAs is -0.062 (-6.2%) and -0.044 (-4.4%) respectively in the pre-Code period. And, the standard deviation is around 0.068 (6.8%). In the post-Code period, Negative DAs is, on average, lower in magnitude (0.050, or 5%) than that in the pre-Code period. And, the mean difference between these two periods is significant at 0.05 level ($p$-value=0.040). This is not only true for the mean, but also for the 25th percentile, median, and standard deviation. Thus, it is argued that Negative DAs reduce significantly in the post-Code period comparing with that in the pre-Code period. In the post-Code period (A), the magnitude of average Negative DAs declines to 0.053 (5.3%) and the median reduces to 0.038 (3.8%). However, only the difference in mean between this sub-period and the pre-Code period is significant at 0.05 level ($p$-value=0.054). By the end of 2004, the difference in mean remains significant at 0.05 level ($p$-value=0.044), as the magnitude of the mean further reduces to 0.052 (5.2%). In the post-Code period (C), while the magnitude of median shows a slight increase, the magnitude of mean of Negative DAs reduces to 0.055 (5.5%) from 0.062 (6.2%) in the pre-Code period. But, the differences in mean and median between these two periods are statistically insignificant. Overall, the results also document the level of negative DAs is decreased significantly after the Code.

By comparing the magnitude of mean and median between Negative DAs and Positive DAs over the study period, it shows that Negative DAs have larger magnitude in both mean and median than the latter. In particular, Panel B of Table 9.4, provides a comparison of mean magnitude between Positive DAs and Negative DAs across the study period by running t-test analysis. In contrast to the results of Cohen et al. (2008) that larger earnings increasing DAs are followed by smaller reversals or negative DAs in the US listed firms over the period of 1987 to 2005, the findings of the current thesis illustrate an adverse direction of DAs in the case of China. The Chinese listed companies engage in larger earnings decreasing DAs are followed by smaller positive
reversals. And, it is also true by dividing the whole post-Code period into sub-periods. The rational behind this is that rampant use of income-increasing DAs to meet target earnings may easily attract attention from regulators or other exterior institutions which eventually lead to additional monitoring mechanisms being imposed on firms. As stated by Peasnell et al. (2000), it may be either infeasible or prohibitively costly to manage earnings upwards to meet target earnings. Thus, this suggests a preference of listed companies to adopt a 'big bath' strategy through income decreasing choices to store up positive earnings for future periods (Degeorge et al., 1999; Healy, 1985) since these choices are relatively hidden from other stakeholders.

Panel C of Table 9.4 reports the statistic summary of DAs in Chinese listed companies calculated using the L&R Model (e.g., Butler et al., 2004; Larecker and Richardson, 2004). For the absolute values (ABS_DAs) in the post-Code period, while the mean reduces to 0.061 (6.1%) from 0.073 (7.3%) in the pre-Code period, the median decreases to 0.051 (5.1%) from 0.059 (5.9%). And, the differences in both values are statistically significant at 0.01 (p-value=0.001) and 0.10 (p-value=0.081) level respectively. Moreover, the findings show that the 25th, 75th percentile, and standard deviation of ABS_DAs in the post-Code period are also decreased. By further breaking down the post-Code period into sub-periods, the findings illustrate a reduction in both mean and median in post-Code period (A) and (B), but only the differences in median between these two sub-periods and pre-Code period are reported to be significant at 0.10 level (p-value=0.080 and 0.067). In the post-Code period (C), although the median of ABS_DAs is relatively stable, the magnitude of mean shows a significant reduction at 0.10 level (p-value=0.074) comparing with that in the pre-Code period. Consistent with results calculated from the Modified Jones Model, ABS_DAs of Chinese listed companies in the L&R Model also demonstrate a significant decrease in the post-Code period.

The last two rows of Panel C, Table 9.4, present the statistics summary of positive and negative DAs obtained by running the L&R Model correspondingly. In particular, on average, Postive_DAs in the post-Code period falls to 0.020 (2.0%) from 2.6% in the pre-Code period, and the difference is significant at 0.01 (p-value=0.000) level. The results also demonstrate a reduction in both the 75th percentile and standard deviation of Postive_DAs. All in all, and consistent with the results obtained through the Modified
Jones Model, positive DAs of Chinese listed companies decrease significantly in the post-Code period. Furthermore, in all the sub-periods, both mean and median show reductions to certain extent comparing with those in the pre-Code period. And most importantly, all differences are statistically significant at 0.05 and 0.01 level correspondingly.

For negative DAs (Negative DAs), there is a significant reduction in their magnitude across the study period. For instance, in the post-Code period, the magnitude of mean and median decreases to 4.5% and 2.4% respectively. By comparing with that in the pre-Code period, the differences are significant at 0.01 level. And, it is also true for the 25th, 75th percentile, standard deviation of Negative DAs in the post-Code period. For the post-Code period (A), the reduction in magnitude of mean and median is also significant at 0.10 (p-value=0.088) and 0.05 (p-value=0.035) level respectively. In the post-Code period (B), while the mean remains, the magnitude of the median is further decreased to 0.023 (2.3%). Thus, comparing with those in the pre-Code period, the difference of mean is still significant at 0.10 level, but the difference of median reaches 0.01 significant level. In the post-Code period (C), while the reduction in magnitude of median appears insignificant, the magnitude of mean reduces significantly at 0.10 level (p-value=0.104) from that in the pre-Code period.

And repeatedly, the findings illustrates Negative DAs have larger magnitude in both mean and median than Positive DAs. A comparison analysis of mean magnitude between Negative DAs and Positive DAs calculated using the L&R Model is given in Panel D of Table 9.4. More generally, the results are consistent with those generated in the Modified Jones Model. It reflects that the Chinese listed companies engage in larger earnings decreasing DAs are followed by smaller income increasing DAs.

In summary, firstly the findings obtained by applying the univariate statistical tests have provided consistent evidence to support hypothesis 1 (H1) as DAs (in all types) are declined significantly after the passage of the Code. Secondly, the results also reveal that Chinese listed companies engage in larger earnings decreasing DAs are followed by smaller income-increasing DAs. And finally, the findings of DAs reported by running the Modified Jones Model and the L&R Model are consistent. This suggests the findings obtained are robust.
Figure 9.1. Panel A and B provide graphical illustration of DAs using the Modified Jones and L&R Model respectively. In Panel A, the trends in ABS_DAs, Positive_DAs, and Negative_DAs indicate reduction in the level of EM to certain extent across the study period. More importantly, the trends demonstrate that the post-Code period (2002-2006) is, indeed, associated with a higher level of decrease in EM comparing with that in the pre-Code period (2000-2001). Consistent with the results represented in Panel A, Panel B also shows a higher level of decrease in DAs in the post-Code period.

Figure 9.1.: The trends in discretionary accruals across the study period
Panel A: Discretionary accruals calculated from the Modified Jones Model

Panel B: Discretionary accruals calculated from the L&R Model
Table 9.4.: Univariate analysis for the discretionary accruals
Panel A: Discretionary accruals (DAs) calculated from the Modified Jones Model

<table>
<thead>
<tr>
<th>Variables</th>
<th>Statistics Summary</th>
<th>Pre-Code (2000-01)</th>
<th>Post-Code (2002-06)</th>
<th>p-value for Pre-Code and Post-Code difference</th>
<th>Post-Code (A) (2002-03)</th>
<th>p-value for Pre-Code and Post-Code (A) difference</th>
<th>Post-Code (B) (2002-04)</th>
<th>p-value for Pre-Code and Post-Code (B) difference</th>
<th>Post-Code (C) (2002-05)</th>
<th>p-value for Pre-Code and Post-Code (C) difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS_DAs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25th Percentile</td>
<td>0.046</td>
<td>0.047</td>
<td>0.043</td>
<td>0.040</td>
<td>0.044</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>0.091</td>
<td>0.082</td>
<td>0.021**</td>
<td>0.083</td>
<td>0.042**</td>
<td>0.080</td>
<td>0.033**</td>
<td>0.083</td>
<td>0.066*</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>0.072</td>
<td>0.071</td>
<td>0.336</td>
<td>0.065</td>
<td>0.081*</td>
<td>0.062</td>
<td>0.060*</td>
<td>0.071</td>
<td>0.327</td>
<td></td>
</tr>
<tr>
<td>75th Percentile</td>
<td>0.110</td>
<td>0.101</td>
<td>0.107</td>
<td>0.101</td>
<td>0.105</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.D.</td>
<td>0.072</td>
<td>0.052</td>
<td>0.070</td>
<td>0.065</td>
<td>0.056</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive_DAs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25th Percentile</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>0.029</td>
<td>0.025</td>
<td>0.104*</td>
<td>0.023</td>
<td>0.064*</td>
<td>0.027</td>
<td>0.496</td>
<td>0.024</td>
<td>0.068*</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>0.008</td>
<td>0.012</td>
<td>0.721</td>
<td>0.007</td>
<td>0.151</td>
<td>0.009</td>
<td>0.710</td>
<td>0.009</td>
<td>0.212</td>
<td></td>
</tr>
<tr>
<td>75th Percentile</td>
<td>0.038</td>
<td>0.034</td>
<td>0.033</td>
<td>0.037</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.D.</td>
<td>0.052</td>
<td>0.035</td>
<td>0.044</td>
<td>0.041</td>
<td>0.036</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative_DAs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25th Percentile</td>
<td>-0.089</td>
<td>-0.079</td>
<td>-0.079</td>
<td>-0.079</td>
<td>-0.081</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>-0.062</td>
<td>-0.050</td>
<td>0.040**</td>
<td>-0.053</td>
<td>0.054**</td>
<td>-0.052</td>
<td>0.044**</td>
<td>-0.055</td>
<td>0.151</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>-0.044</td>
<td>-0.041</td>
<td>0.753</td>
<td>-0.038</td>
<td>0.120</td>
<td>-0.038</td>
<td>0.119</td>
<td>-0.050</td>
<td>0.679</td>
<td></td>
</tr>
<tr>
<td>75th Percentile</td>
<td>-0.012</td>
<td>-0.025</td>
<td>-0.017</td>
<td>-0.012</td>
<td>-0.019</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.D.</td>
<td>0.068</td>
<td>0.049</td>
<td>0.070</td>
<td>0.070</td>
<td>0.055</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*: The p-value for the difference in mean (median) is for a t- (z-) test.
** *** Denote significance (2-tailed) at 0.100, 0.050 and 0.010 level, respectively.
Table 9.4.: Univariate analysis for the discretionary accruals (continued)
Panel B: Positive_DAs vs. Negative_DAs calculated from the Modified Jones Model

<table>
<thead>
<tr>
<th>Periods</th>
<th>Positive_DA (1)</th>
<th>Negative_DA (2)</th>
<th>Mean Difference in Magnitude ((1)-(2))^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Code (2000-01)</td>
<td>0.029</td>
<td>-0.062</td>
<td>-0.033***</td>
</tr>
<tr>
<td>Post-Code (2002-06)</td>
<td>0.025</td>
<td>-0.050</td>
<td>-0.025***</td>
</tr>
<tr>
<td>Post-Code (A) (2002-03)</td>
<td>0.023</td>
<td>-0.053</td>
<td>-0.030***</td>
</tr>
<tr>
<td>Post-Code (B) (2002-04)</td>
<td>0.027</td>
<td>-0.052</td>
<td>-0.025***</td>
</tr>
<tr>
<td>Post-Code (C) (2002-05)</td>
<td>0.024</td>
<td>-0.055</td>
<td>-0.031***</td>
</tr>
</tbody>
</table>

^a: The p-value for the difference in mean (median) is for a t- (z-) test.
* ** *** Denote significance (2-tailed) at 0.100, 0.050 and 0.010 level, respectively.
Table 9.4: Univariate analysis for the discretionary accruals (continued)
Panel C: Discretionary accruals (DAs) calculated from the L&R Model

| Variables | Statistics Summary | Pre-Code (2000-01) | Post-Code (2002-06) | p-value for Pre-Code and Post-Code difference | Post-Code (A) (2002-03) | p-value for Pre-Code and Post-Code (A) difference | Post-Code (B) (2002-04) | p-value for Pre-Code and Post-Code (B) difference | Post-Code (C) (2002-05) | p-value for Pre-Code and Post-Code (C) difference  \\
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS_DAs</td>
<td>25&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>0.033</td>
<td>0.027</td>
<td>0.001***</td>
<td>0.040</td>
<td>0.009</td>
<td>0.039</td>
<td>0.036</td>
<td>0.074*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>0.073</td>
<td>0.061</td>
<td>0.072</td>
<td>0.409</td>
<td>0.072</td>
<td>0.402</td>
<td>0.070</td>
<td>0.744</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>0.059</td>
<td>0.051</td>
<td>0.071*</td>
<td>0.053</td>
<td>0.080*</td>
<td>0.051</td>
<td>0.067*</td>
<td>0.059</td>
<td></td>
</tr>
<tr>
<td></td>
<td>75&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>0.090</td>
<td>0.079</td>
<td>0.089</td>
<td>0.092</td>
<td>0.092</td>
<td>0.085</td>
<td>0.051</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>0.059</td>
<td>0.054</td>
<td>0.066</td>
<td>0.069</td>
<td>0.069</td>
<td>0.051</td>
<td>0.051</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pos_DAs</td>
<td>25&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>0.000</td>
<td>0.001</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>0.026</td>
<td>0.020</td>
<td>0.000***</td>
<td>0.021</td>
<td>0.003***</td>
<td>0.018</td>
<td>0.000***</td>
<td>0.023</td>
<td>0.015**</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>0.011</td>
<td>0.012</td>
<td>0.447</td>
<td>0.005</td>
<td>0.000***</td>
<td>0.008</td>
<td>0.000***</td>
<td>0.008</td>
<td>0.000***</td>
</tr>
<tr>
<td></td>
<td>75&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>0.044</td>
<td>0.030</td>
<td>0.030</td>
<td>0.026</td>
<td>0.026</td>
<td>0.031</td>
<td>0.031</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>0.033</td>
<td>0.024</td>
<td>0.033</td>
<td>0.027</td>
<td>0.027</td>
<td>0.028</td>
<td>0.028</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neg_DAs</td>
<td>25&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>-0.077</td>
<td>-0.051</td>
<td>-0.700</td>
<td>-0.070</td>
<td>-0.068</td>
<td>-0.068</td>
<td>-0.068</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>-0.055</td>
<td>-0.045</td>
<td>0.001***</td>
<td>-0.050</td>
<td>0.088*</td>
<td>-0.050</td>
<td>0.077*</td>
<td>-0.052</td>
<td>0.104*</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>-0.034</td>
<td>-0.024</td>
<td>0.007***</td>
<td>-0.028</td>
<td>0.035**</td>
<td>-0.023</td>
<td>0.005***</td>
<td>-0.033</td>
<td>0.815</td>
</tr>
<tr>
<td></td>
<td>75&lt;sup&gt;th&lt;/sup&gt; Percentile</td>
<td>-0.010</td>
<td>0.000</td>
<td>-0.001</td>
<td>-0.001</td>
<td>-0.001</td>
<td>-0.001</td>
<td>-0.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>S.D.</td>
<td>0.064</td>
<td>0.058</td>
<td>0.066</td>
<td>0.074</td>
<td>0.056</td>
<td>0.056</td>
<td>0.056</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*: The p-value for the difference in mean (median) is for a t- (z-) test.
** *** *** Denote significance (2-tailed) at 0.100, 0.050 and 0.010 level, respectively.
Table 9.4.: Univariate analysis for the discretionary accruals (continued)
Panel D: Positive_DAs vs. Negative_DAs calculated from the L&R Model

<table>
<thead>
<tr>
<th>Periods</th>
<th>Positive_DA (1)</th>
<th>Negative_DA (2)</th>
<th>Mean Difference in Magnitude [(1)-(2)]*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Code (2000-01)</td>
<td>0.026</td>
<td>-0.055</td>
<td>-0.029***</td>
</tr>
<tr>
<td>Post-Code (2002-06)</td>
<td>0.020</td>
<td>-0.045</td>
<td>-0.025**</td>
</tr>
<tr>
<td>Post-Code (A) (2002-03)</td>
<td>0.023</td>
<td>-0.050</td>
<td>-0.027***</td>
</tr>
<tr>
<td>Post-Code (B) (2002-04)</td>
<td>0.021</td>
<td>-0.050</td>
<td>-0.029***</td>
</tr>
<tr>
<td>Post-Code (C) (2002-05)</td>
<td>0.018</td>
<td>-0.052</td>
<td>-0.034***</td>
</tr>
</tbody>
</table>

*: The p-value for the difference in mean (median) is for a t- (z-) test.
** *** Denote significance (2-tailed) at 0.100, 0.050 and 0.010 level, respectively.
9.4.2. The Hypotheses of Corporate Governance and EM in China’s Listed Companies—Multivariate Regression Analysis

9.4.2.1. Model Fitness Tests

By using the univariate analysis to investigate the time-trend in EM metrics in Chinese listed companies (H1), the results provided in the previous section have approved EM activities are declined significantly after passage of the China’s 2002 Code. Through the multivariate regression analysis, the second phase is to investigate the impacts of the mechanisms of corporate governance enforced by the Code on EM practices in China. The mechanisms included arrange from the executive compensation (coded as EXCOM) to the characteristics of the largest shareholder (ownership concentration and type) in the listed companies (or H2-H8). Before moving to this phase, current section provides the model fitness tests, including the tests for skewness, kurtosis, multicollinearity, and heteroscedasticity of explanatory and control variables.

Table 9.5. Panel A., B., and C. illustrate the results respectively. In particular, the skewness and kurtosis statistics of independent and control variables are provided in Panel A. The skewness statistics fall in the range of 0.07 and 0.452 (ignoring minus sings) with the relevant standard error of 0.238. The kurtosis statistics are between 0.098 and 0.844 (ignoring the minus sings) and the standard error of the kurtosis is 0.472. All the skewness and kurtosis are no greater than twice their standard error, thus the distributions of those variables are not significantly different from normal.

Table 9.5.: Tests for skewness, kurtosis, multicollinearity, and heteroscedasticity

Panel A.: Tests of skewness and kurtosis

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXCOM</td>
<td>0.452</td>
<td>0.773</td>
</tr>
<tr>
<td>INDBOARD</td>
<td>-0.242</td>
<td>-0.574</td>
</tr>
<tr>
<td>AUDCOM</td>
<td>0.423</td>
<td>-0.693</td>
</tr>
<tr>
<td>AUDITOR</td>
<td>0.252</td>
<td>0.581</td>
</tr>
<tr>
<td>INSTITUTE</td>
<td>0.438</td>
<td>0.712</td>
</tr>
<tr>
<td>TOP1</td>
<td>0.169</td>
<td>0.441</td>
</tr>
<tr>
<td>STATE</td>
<td>-0.383</td>
<td>-0.644</td>
</tr>
<tr>
<td>Ln SIZE</td>
<td>0.408</td>
<td>0.492</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>0.383</td>
<td>0.844</td>
</tr>
<tr>
<td>Ln_SALE</td>
<td>-0.260</td>
<td>0.098</td>
</tr>
<tr>
<td>ST PT</td>
<td>0.051</td>
<td>0.276</td>
</tr>
<tr>
<td>ISSUING</td>
<td>0.070</td>
<td>-0.769</td>
</tr>
</tbody>
</table>
Panel B. of Table 9.5. reports the correlation matrix between independent and control variables, which demonstrates the Pearson’s correlations and Variance Inflation Factors (or VIF). Overall, the results show that the risk of bias due to strong correlations among covariates is minimal as all VIFs are less than two, thus giving little cause for concern about the problem of multicollinearity.

In particular, it is revealed that executives of the privately controlled firms tend to earn more than their colleagues in the State-controlled firms. As executives of the State-controlled firms may simultaneously hold certain positions in the government agencies, they thus concern more about their political career rather than salaries or bonuses could be received from the companies (Liu and Lu, 2007). And, the more the executives being paid the higher the chance that companies being punished by the market (labelled as either ST or PT). This reflects that some executives focus more on how well they will be paid instead of the real performance of firms. And, larger private firms with less dominant from the biggest shareholder, high institutional ownership, and active debt-financing strategy tend to have large number of independent directors served and an audit committee established on their board. Further, the large and profitable State-controlled firms with less active debt-financing strategy are more likely to employ one of the Big 4 auditor and attract investments from institutional shareholders. In addition, institutions are also more like to invest in the firms with less chance to be labelled as either ST or PT and issue additional shares (or seasoned equity offers). Furthermore, the State-owned firms are normally large and profitable. And, they use less debt-financing and issue few additional shares.

Heteroscedasticity is tested by performing the White’s test. White’s test is asymptotically distributed as a $\chi^2$ with degrees of freedom equal to the number of slope coefficients, excluding the constant, in the test regression (21 coefficients in the following regressions). Regarding Panel C., since the $Obs*R-squared$ obtained from the Eviews 5.0 of six corresponding regressions based on two models in calculating F:M are all less than 5% critical $\chi^2$ value of 32.6705, we cannot statistically reject the null hypothesis of no heteroscedasticity. Thus, heteroscedasticity should not be an issue in this thesis.
Table 9.5: Tests for skewness, kurtosis, multicollinearity, and heteroscedasticity (continued)

**Panel B.:** Correlation matrix and variation inflation factors

<table>
<thead>
<tr>
<th>Variables</th>
<th>EXCOM</th>
<th>INDBOARD</th>
<th>AUDCOM</th>
<th>AUDITOR</th>
<th>INSTITUTE</th>
<th>TOP1</th>
<th>STATE</th>
<th>Ln_SIZE</th>
<th>LEVERAGE</th>
<th>Ln_SALE</th>
<th>ST_PT</th>
<th>ISSUING</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXCOM</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.004</td>
</tr>
<tr>
<td>INDBOARD</td>
<td>0.015</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.360</td>
</tr>
<tr>
<td>AUDCOM</td>
<td>0.032</td>
<td>0.408**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.211</td>
</tr>
<tr>
<td>AUDITOR</td>
<td>-0.004</td>
<td>0.044*</td>
<td>0.033</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.072</td>
</tr>
<tr>
<td>INSTITUTE</td>
<td>-0.003</td>
<td>0.147**</td>
<td>0.107**</td>
<td>0.027</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.134</td>
</tr>
<tr>
<td>TOP1</td>
<td>-0.013</td>
<td>-0.137**</td>
<td>-0.044*</td>
<td>0.024</td>
<td>0.120**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.211</td>
</tr>
<tr>
<td>STATE</td>
<td>-0.045*</td>
<td>-0.114**</td>
<td>-0.043*</td>
<td>0.084**</td>
<td>0.074*</td>
<td>0.298**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.393</td>
</tr>
<tr>
<td>Ln_SIZE</td>
<td>0.005</td>
<td>0.199**</td>
<td>0.121**</td>
<td>0.242**</td>
<td>0.249**</td>
<td>0.233**</td>
<td>0.165**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.381</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>-0.001</td>
<td>0.098**</td>
<td>0.047*</td>
<td>-0.042*</td>
<td>-0.046*</td>
<td>-0.146**</td>
<td>-0.134**</td>
<td>-0.080**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1.149</td>
</tr>
<tr>
<td>Ln_SALE</td>
<td>0.008</td>
<td>-0.018</td>
<td>0.033</td>
<td>0.046*</td>
<td>0.110**</td>
<td>0.116**</td>
<td>0.067*</td>
<td>0.137**</td>
<td>-0.189**</td>
<td>1</td>
<td></td>
<td></td>
<td>1.078</td>
</tr>
<tr>
<td>ST_PT</td>
<td>0.048*</td>
<td>0.004</td>
<td>-0.020</td>
<td>-0.033</td>
<td>-0.101**</td>
<td>-0.123**</td>
<td>-0.100**</td>
<td>-0.286**</td>
<td>0.297**</td>
<td>-0.164**</td>
<td>1</td>
<td></td>
<td>1.228</td>
</tr>
<tr>
<td>ISSUING</td>
<td>0.017</td>
<td>-0.089**</td>
<td>-0.020</td>
<td>0.001</td>
<td>0.186**</td>
<td>-0.068**</td>
<td>-0.025</td>
<td>0.001</td>
<td>-0.003</td>
<td>0.008</td>
<td>-0.012</td>
<td>1</td>
<td>1.109</td>
</tr>
</tbody>
</table>

The triangle of the table reports the Pearson’s correlation.

* ** Denote significance (2-tailed) at 0.05 and 0.01 level, respectively.

**Panel C.:** Testing for heteroscedasticity: White’s test

<table>
<thead>
<tr>
<th></th>
<th>ABS_MJones_DAs</th>
<th>Positive_MJones_DAs</th>
<th>Negative_MJones_DAs</th>
<th>ABS_L&amp;R_DAs</th>
<th>Positive_L&amp;R_DAs</th>
<th>Negative_L&amp;R_DAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs*R-squared (F-statistics)</td>
<td>30.701 (2.141; 0.352)</td>
<td>17.424 (1.442; 0.878)</td>
<td>21.682 (2.004; 0.770)</td>
<td>26.910 (2.358; 0.578)</td>
<td>26.034 (2.253; 0.540)</td>
<td>32.592 (2.480; 0.301)</td>
</tr>
<tr>
<td>χ² (0.95; 21)</td>
<td>32.6705</td>
<td>32.6705</td>
<td>32.6705</td>
<td>32.6705</td>
<td>32.6705</td>
<td>32.6705</td>
</tr>
</tbody>
</table>

Where:
ABS_MJones_DAs, Positive_MJones_DAs, and Negative_MJones_DAs represent the absolute, positive and negative value of discretionary accruals calculated using the Modified Jones Model respectively;
ABS_L&R_DAs, Positive_L&R_DAs, and Negative_L&R_DAs represent the absolute, positive and negative value of discretionary accruals calculated using the L&R Model respectively;
Obs*R-squared is computed as the number of observations times the R² from the test regressions;
χ² (0.95; 21) is the chi-square distribution with 5% critical value and 21 degrees of freedom which equal to the number of slope coefficients, excluding the constant, in the test regressions.
9.4.2.2. Multivariate Regression Results

This section examines the trend in EM activities by firms and the impacts of the mechanisms with regard to corporate governance enforced by the 2002 Code on EM practices. Table 9.6. represents the results by running OLS regression models (the justification of the choice of model estimation method is provided in Chapter 8). In particular, Panel A of Table 9.6. reports the results when absolute value of DAs are calculated using the Modified Jones Model, \( \text{ABS\_DAs} \), and when DAs are split into positive and negative DAs. Panel B reports the results when DAs are obtained through the L&R Model. The estimated coefficients, \( t \)-statistics, \( R^2 \), adjusted \( R^2 \) and \( F \)-value from the regressions of DAs calculated through these two models on corporate governance variables and variables to control firms' characteristics are provided.

For regressions of both models in measuring DAs, more generally, they are highly significant. The adjusted \( R^2 \)s illustrated in Panel A are between 10.4\% and 12.0\% and the \( F \)-value arranges from 10.663 to 12.75 are highly significant. For regressions of DAs obtained using the L&R Model, the adjusted \( R^2 \)s are between 10.5\% and 12.4\% and the \( F \)-value falls in the range of 12.960 to 38.380 and are highly significant. These adjusted \( R^2 \)s obtained in the current thesis are fairly comparable with those in the similar studies, for example Warfield et al.'s (1995) adjusted \( R^2 \): 8.34\%-12.48\%, Liu and Lu's (2007) adjusted \( R^2 \): 2.83\%, Ding et al.'s (2007) adjusted \( R^2 \): 3.8\%-12.3\%, or Lo et al., (2010)'s adjusted \( R^2 \): 5.8\%-6.6\%.

The Trend in EM Activities (H1)

In consistence with the findings obtained previously, the results here also document a decreasing trend in level of EM in Chinese listed companies, especially in the post-Code period. For instance, in Panel A of Table 9.6., while the positive correlation (0.001) between variable \( \text{TIME} \) and negative DAs calculated using the Modified Jones Model is insignificant, the coefficients under \( \text{ABS\_DAs} \) (-0.003) and \( \text{Positive\_DAs} \) (-0.004) are negative and significant at 0.10 level. For the dummy variable \( \text{CODE} \), it is negatively related to the absolute value of DAs (-0.041), and significant at 0.01 level. Similar results are obtained by splitting DAs into positive and negative values. While the correlation between \( \text{CODE} \) and \( \text{Positive\_DAs} \) is -0.067 and significant at 0.05 level, \( \text{CODE} \) is positively correlated (0.038) with \( \text{Negative\_DAs} \) at 0.05 significant level. As the decreasing trend in EM proved by the results of dummy variable \( \text{TIME} \), the results
suggest that, controlling for corporate governance and firm’s characteristics variables, the period after promulgation of the Code is characterised by lower accrual-based EM and this decrease primarily resulted from a decrease in income-increasing EM as the magnitude of CODE coefficient under Positive DAs is the highest, 0.067.

**The Executive Compensation (H2a & H2b)**

The theoretical view on the effectives of executive compensation proposed by AT is contradictory to the argument originated from TCE. While AT argues that managers are more likely to make operating and investing decisions that can maximise shareholder wealth by tying their compensation strategy to performance, TCE states that remuneration strategy as an ex ante alignment may not be an effective mechanism to prevent opportunistic discretion given the written contracts are never complete and managers are given to be opportunism.

However, to my best knowledge, there is no published study to empirically investigate the impact of executive compensation on EM practices in China’s listed companies. In line with AT, it is conjectured that due to the lack of stock options utilised in China, tying executive compensation to performance advanced from the one that was totally separated from the performance in the 1980s may become a mechanism to align the interests of managers with those of the shareholders, thus may encourage them to act on behalf of shareholders and limit their opportunistically discretionary behaviour.

The results of testing the relationship between executive compensation and EM practices in Chinese listed companies over time are represented in row 3 (EXCOM) and 4 (EXCOM*CODE) of Panel A. Table 9.6. However, none of the relationship under different categories of DAs is either statistically or economically significant, as the coefficients are near to zero (0.000). This doesn’t support the conjecture that tying executive compensation to firm performance in China may be regarded as an alignment mechanism as argued by AT. One possible explanation is that executives of Chinese listed companies, especially those transferred from the State-owned Enterprises, usually hold certain positions in the government agencies other than directorships in the listed companies. They thus concern more about their political career rather than the salaries or bonuses could be received from the companies (Liu and Lu, 2007). All in all, the
results obtained from the multivariate regressions don’t support hypotheses 2a and 2b. And implicitly, the results also indicate that the performance-based executive compensation in China may not be considered as the incentive to engage in DAs as proposed by TCE and empirical studies based on the Western experiences (e.g., Baker et al., 2003; Cohen et al., 2008; Gao and Shrieves, 2002).

**The Independence of the Board (H3a & H3b)**

Both TCE and AT have mentioned the role of the board in monitoring managerial discretion. And, for the board composition, both theories argue corporate boards should include outside members, that is, members who are not internal managers, and hold a majority of seats. The outside board members act as arbiters in disagreements among internal managers and carry out tasks that involve severe problems between internal managers and residual claimants, for instance, setting executive compensation or searching for replacements for top managers (Fama and Jensen, 1983b; Jensen, 2004, 2005; Williamson, 1984a).

With regard to the results, the proportion of independent non-executive directors on the board (\( \text{INDBOARD} \)) is found to be negatively related to \( \text{ABS DAs} \) (-0.055) and \( \text{Positive DAs} \) (-0.053) respectively, and is positively related to \( \text{Negative DAs} \) (0.052). All correlations are significant at 0.10 level. It reflects that the independent non-executive directors do mitigate the opportunistically discretionary behaviours through effective monitoring in Chinese listed companies across the study period. The results extend the Chen et al., (2006)'s study by stating that in addition to effectively detecting overstatement errors and accounting frauds, the independent directors constrain firms from engaging accrual-based EM practices. Consistent with the results of Peasnell et al., (2000) on examining effectiveness of independent non-executives after promulgation of the UK Cadbury Report in 1992, the findings of the current thesis illustrate that, in the post-Code period, the effect between independent directors and DAs increases significantly. In particular, \( \text{INDBOARD} \times \text{CODE} \) is negatively correlated with \( \text{ABS DAs} \) (-0.098), \( \text{Positive DAs} \) (-0.077), and positively related with \( \text{Negative DAs} \) (0.117) at 0.05 significant level.

By taking all together, consistent with the prior literature (e.g., Beasley, 1996; Dechow et al., 1996; Klein, 2002; Peasnell et al., 2000; 2005; Xie et al., 2003), the
results of the current thesis suggest that independent non-executive directors decrease the incentives to manipulate reported earnings through effective monitoring the listed companies. And, this effect is primarily resulted from the promulgation and enforcement of the 2002 Code, as it further strengthens the independence of the non-executives on the board in Chinese listed companies. Therefore, hypotheses 3a and 3b are supported by the results.

The Internal and External Audit (H4a & H4b; H5a & H5b)

Theoretically, the importance of internal and external audit on monitoring activities is highlighted by both TCE and AT. In particular, TCE argues that while some managers play “end games” (undisclosed strategic decisions to cut and run before corrective measures can be taken), others may disclose information selectively or distort data. Additional checks against such concealment and distortion provided by independent audit committees and accredited accounting firms are thus required to be created (Williamson, 1984). In the similar vein, AT proposes that an independent audit committee should be an outstanding function in monitoring activities. In principle, external auditors could act as a checking point to make sure the financial information published is comprehensive, punctual, and accurate (Jensen, 2000).

Regarding the creation of audit committee (AUDCOM) on the board, the results demonstrate a negative and statistically significant correlation between AUDCOM and positive DAs (Positive DAs) across the study period with coefficient of -0.040 and significant level at 0.05. And, this effect increases significantly in the post-Code period as the coefficient on AUDCOM*CODE reaches -0.045 with significant level of 1%. This suggests that audit committees could provide diligent oversight to ensure management is not compromising shareholder interests (e.g., Archambeault and DeZoort, 2001; Defond and Jiambalvo, 1991; Kunitake, 1983), and this effect is significantly increased in the post-Code period suggesting audit committee as monitoring mechanism is strengthened by enforcing the 2002 Code. Chen and Zhang (2010a) argue that audit committees effectively promote convergence of Chinese accounting practices with IFRS practices by mitigating opportunistically managerial discretion in applying different accounting standards. The results for Positive DAs of the current thesis further extend their argument by stating that audit committees can also
constrain opportunistic discretion in using income-increasing DAs to manipulate reported earnings in China.

The coefficient on AUDCOM is negative for ABS DAs (-0.011) and positive for Negative DAs (0.008) but statistically insignificant. While the coefficients for both ABS DAs (0.014) and Negative DAs (-0.011) turn into adverse direction in the post-Code period, however, none is statistically significant. One possible explanation is that, since income-decreasing choices to store up positive earnings for future periods (Degeorge et al., 1999; Healy, 1985) are relatively hidden comparing with aggressive income-increasing DAs, lack of qualified accounting professionals on the audit committees coupled with ineffective financial infrastructures (e.g., monitoring system, ethic education or training, legal infrastructure and enforcement) in China (Ball et al., 2000; Chen, 2005; Chen et al., 2002; Chen and Zhang, 2010a; La Porta et al., 2000b; Leuz et al., 2003) mainly contribute to their failures in detecting and mitigating income-decreasing accruals used by listed companies.

All in all, although audit committees mitigate positive DAs of Chinese listed companies, especially in the post-Code period, it does not provide sufficient monitoring on the income-decreasing DAs due to lack of quality accounting professionals. Eventually, the findings could partially support the hypotheses 4a and 4b.

In contrast to the prior literature on supporting the notion that audit firms have more resources, expertises and incentives to mitigate FM (e.g., Becker et al., 1998; Francis et al., 1999; Gore et al., 2001; Krishnan, 2003; Van Tendeloo and Vanstraelen, 2005, 2008), the results reported in row 9 (AUDITOR) don’t show any significant correlation with EM for the entire period, and this association does not change significantly in the post-Code period either (AUDITOR*COIDE). This reflects that replacing a Chinese local CPA firm with an international reputable audit firm (the Big 4) to audit financial statements does not contribute to the reduction in EM in China. Thus, taking the notion of ineffective financial infrastructures in China, it is argued that the quality of audit performed by the same auditor, even if the international reputable ones such as the Big 4, may be different from it appears in a well-developed institutional system. Accordingly, the results don’t support hypotheses 5a and 5b.
The Institutional Investors (H6a & H6b)

It is generally believed that due to the greater accessibility to firm information coupled with concentrated voting power, institutional investor could make managers to focus more on corporate performance and less on opportunistic and/or self-serving behaviour through constant monitor, discipline and influence of managers (e.g., Bainbridge, 2005; Brav et al., 2008; Jensen, 2000; Williamson, 2007). And, TCE and AT mention that being active is the core in constraining opportunistically managerial discretion. This is to be backed up by direct engagement in the firms where appropriate (Jensen, 2000; Williamson, 2007).

The role of institutional investors (INSTITUTE) on mitigating EM practices over time in China is examined in row 11 and 12 respectively (H6a & H6b). For the positive DAs, there is negative (-0.109) and statistically significant (significant level of 0.01) correlation with shares held by institutional investors in listed companies across time. This effect between Positive DAs and INSTITUTE is strengthened significantly in the post-Code suggesting the monitoring power of institutional investors is enhanced by the Code. The coefficient between Positive DAs and INSTITUTE*CODE is -0.137 and significant at 1% level. The results between positive DAs and institutional ownership support the argument proposed earlier that due to the greater accessibility to firm information coupled with concentrated voting power, institutional investor could make managers to focus more on corporate performance and less on opportunistic and/or self-serving behaviour through constantly monitor, discipline and influence of managers.

However, it is also stated that in order to secure the value of ultimate beneficiaries (stakeholders) through constant monitoring the performance of companies, institutional investors are required to be active. One of the conditions which may lead them to be active in monitoring activities is large blocks of shares held in the firms (e.g., Bainbridge, 2005; Chen and Zhang, 2010b; Gillan and Starks, 2000). Comparing with the developed market, such as around 55% of US equities are owned by institutional shareholders, and institutional ownership is around 41% in UK, the average shareholding of institutional investors in China is just around 6% by the end of 2006. Due to such smaller shareholding, institutional investors may not be effective in monitoring managerial discretion as they are in the Western countries (Gillan and Starks, 2000). The results of ABS_DAs and Negative_DAs provide evidence for the above
argument, as their correlations with shareholding of institutional investors are statistically insignificant either in the entire period or the post-Code period. One possible explanation is that as a large amount of resources are required to detect and effectively reduce the income-decreasing DAs of firms which are more hidden, institutional investors who only hold a fraction of shares in Chinese listed companies are not willingly to invest in such monitoring resources. The results also suggest the inefficiency of Chinese stock market and the incompleteness of Chinese institutional environment. The institutional investors may find themselves in a disadvantageous position in the Chinese stock markets and concern about their welfare being expropriated by other controlling shareholders. They keep low shareholding and typically hold their shares for a short term which consequently constrain their motivations in monitoring activities. Thus, the findings provide evidence to partially support hypotheses 6a and 6b.

The Characteristics of the Largest Shareholder (H7; H8)

Other than the conflict of interests between managers and shareholders pinpointed by Jensen and Meckling’s work in 1976 and Williamson’s work in 1984 respectively, recent developments in corporate governance have highlighted another form of conflict of interests—action being taken by the controlling shareholders for their own benefit, at the expense of minority shareholders (La Porta et al., 1997; 1999; 2000a,b; Velury and Jenkins, 2006). As argued by Shleifer and Vishny (1997, p.758), “large investors may represent their own interests, which need not coincide with the interests of other investors in the firm.” Comparing with the conflict of interests between management and shareholders, the essential effect of both scenarios is the same: insiders, through their control of the firm, pursue their private benefits at the costs of outsiders (Ding et al., 2007). In order to mitigate the expropriation of minority shareholders’ interests by controlling shareholders, prior literature focuses on the role played by a strong and efficient investor protection system (Claessens et al., 2000; 2002; La Porta et al., 1998; 1999; Leuz et al., 2003; Leuz and Oberholzer-Gee, 2006; Shen and Chih, 2007).

The influences of largest shareholders on EM in Chinese listed companies over time are investigated in row 13 to 16 Panel A. Table 9.6., including their ownership concentration (TOP1) and type (STATE). In particular, coefficient on TOP1 of the entire period is positive for ABS_DAs (0.015) and Positive_DAs (0.046), and negative for
Negative DAs (-0.006), while the correlation with Positive DAs is significant at 5%. And, by categorising controlling shareholders based on different types of ownership (or State vs. private), the results in row 15 (STATE) demonstrate that State-dominated listed companies exhibit positive correlation with ABS DAs (0.014) at 0.05 significant level for the entire period. Consistent with the findings reported by Ding et al. (2007), the controlling shareholders in general manipulate reported earnings through DAs over time. And, by comparing DAs of the State-controlled firms with those used by the privately-owned companies, the State-controlled firms significantly engages in more DAs over the study period.

In regard to the impact of the controlling shareholders on FM in the post-Code period compared with that in the pre-Code period, coefficient on TOPI * CODE is 0.030 for ABS DAs, 0.050 and -0.033 for Positive DAs and Negative DAs respectively. And, all correlations are significant at the level arranged from 0.01 to 0.10. The results of the biggest shareholders’ type (STATE*CODE) provide the similar evidence. In particular, while STATE*CODE is positively correlated with Positive DAs (0.023) at 10% significant level, it is negatively related to Negative DAs (-0.023) at 5% significant level. And, there is a significantly positive correlation between ABS DAs and STATE*CODE (0.021) at 5% level. As the effect of engaging in FM activities by listed companies with controlling shareholders, and especially who are ultimately controlled by the government is significantly increased in the post-Code period, it is argued that, in practice, the promulgation of 2002 Code on controlling shareholders and State domination doesn’t constrain their opportunistic behaviour through expropriating minority shareholders’ interests. Therefore, such inefficiency of 2002 Code illustrates the investor protection in Chinese stock market is not enhanced after the Code, and it is relatively limited on mitigating EM practices. Overall, the results of characteristics of the largest shareholders extend the argument of Ding et al. (2007) by not only stating the controlling shareholders and State-owned firms use DAs to manipulate earnings more, but also proving the weak legal protection system in China is the primary reason. Correspondingly, the findings don’t support either hypothesis 7 or hypothesis 8.

The results of control variables are also interesting. First of all, highly leveraged firms (LEVERAGE) are positively correlated with ABS DAs (0.012) at 1% significant level, indicating that they manipulate reported earnings to avoid potential loss from
disclosing financial problem (e.g., Defond and Jiambalvo, 1994; Richardson, 2000; Sweeney, 1994). Truthful revelation of financial statements by firms in short-term financial difficulty may lead to an increase in financing costs as well as the loss of key employees. Further, the findings reveal that highly-leveraged firms are more likely to engage in both income-increasing and income-decreasing choices to manipulate reported earnings. Secondly, the coefficient on firms’ profitability (\(Ln\ Sales\)) is negative for \(ABS\_DAs\) and \(Positive\_DAs\), and positive for \(Negative\_DAs\). All correlations are significant arranged from 0.01 to 0.10 level. These indicate that poorly performing firms tend to have higher levels of EM not only through applying different accounting standards as argued by Chen and Zhang (2010a), but also DAs. And finally, firms in financial difficulty (\(ST\_PT\)) also manage their earnings, but downward through \(Negative\_DAs\) (-0.043 with 1% significant level). Before their rights issue (\(ISSUING\)), firms tend to maximize their earnings through operating accruals, as coefficients for \(ABS\_DAs\) (0.006) and \(Positive\_DAs\) (0.009) are positive and significant at 0.10 level. These results are consistent with findings in the extant literature (e.g., Chen and Yuan, 2006; Ding et al., 2007, Srinidhi et al., 2004), confirming that Chinese firms do manage earnings to meet the market and regulatory requirements.

Panel B of Table 9.6. reports OLS regression results of DAs using the I&R Model on corporate governance and control variables. Overall, the results are nearly symmetric to those illustrated in Panel A in which DAs are measured by the Modified Jones Model. This indicates that these two models should be viewed as complementary rather than contradictory or one form can supersede the other. It also proves that the results obtained are robustness. In particular, the coefficient on \(TIME\) is negative for \(ABS\_DAs\) and \(Positive\_DAs\), while positive for \(Negative\_DAs\). And, the former two are significant at 0.10 level. For the coefficient on \(CODE\), it is negative (for \(ABS\_DAs\) and \(Positive\_DAs\)) and positive (for \(Negative\_DAs\), and statistically significant at the level arranged from 5% to 10%. \(INDBOARD\) is found to be negatively correlated with \(ABS\_DAs\) and \(Positive\_DAs\), and positively related with \(Negative\_DAs\) for the entire period. And the correlations are significant at 0.05 and 0.10 level correspondingly. This effect is significantly increased in the post-Code period as the coefficients on \(INDBOARD*CODE\) reach -0.158, -0.070, and 0.063 accordingly. And, all are statistically significant. The negative correlation between \(AUD\_COM\) and \(Positive\_DAs\) increased significantly in the post-Code, as coefficient on \(AUD\_COM*CODE\) reaches
-0.016 at 0.05 significant level. Institutional shareholding is negatively and significantly correlated with usage of positive DAs over time. In post-Code period, the correlation remains significant at 1% but the coefficient reaches -0.100. Controlling shareholders (TOPI) and State-dominated firms (STATE) are found to manipulate earnings over time. Their significant correlations in the Post-Code period indicate the inefficiency of investor protection in China’s stock market.

Control variables of Ln Size, LEVERAGE, Ln Sales, ST PT and ISSUING are significantly correlated with DAs. Among them, firm size (Ln Size) is negatively and significantly correlated with ABS DAs and Positive DAs, which indicates that as bigger firms are often required to disclose their financial information, thus have less probability to manage earnings (e.g., Lee and Choi, 2002; Van Tendeloo and Vanstraelen, 2005).
Table 9.6.: Discretionary accruals and corporate governance mechanisms: multivariate regression analysis

Panel A: Discretionary accrual calculated from the Modified Jones Model

\[ \text{EM}_{\text{Modified Jones Model}} = \beta_0 + \beta_1 \cdot \text{TIME} + \beta_2 \cdot \text{CODE} + \beta_3 \cdot \text{EXCOM} + \beta_4 \cdot \text{EXCOM} \cdot \text{CODE} + \beta_5 \cdot \text{INDBOARD} + \beta_6 \cdot \text{INDBOARD} \cdot \text{CODE} + \beta_7 \cdot \text{AUDCOM} + \beta_8 \cdot \text{AUDCOM} \cdot \text{CODE} + \beta_9 \cdot \text{AUDCOM} \cdot \text{AUDITOR} + \beta_{10} \cdot \text{AUDITOR} \cdot \text{CODE} + \beta_{11} \cdot \text{INSTITUTE} + \beta_{12} \cdot \text{INSTITUTE} \cdot \text{CODE} + \beta_{13} \cdot \text{TOP1} + \beta_{14} \cdot \text{TOP1} \cdot \text{CODE} + \beta_{15} \cdot \text{STATE} + \beta_{16} \cdot \text{STATE} \cdot \text{CODE} + \beta_{17} \cdot \text{Ln}_\text{Size} + \beta_{18} \cdot \text{LEVERAGE} + \beta_{19} \cdot \text{Ln}_\text{Sales} + \beta_{20} \cdot \text{ST}_\text{PT} + \beta_{21} \cdot \text{ISSUING} + e \]

<table>
<thead>
<tr>
<th>Variables</th>
<th>\text{ABS_DAs}</th>
<th>Coefficient (t-stat)</th>
<th>Positive_DAs</th>
<th>Coefficient (t-stat)</th>
<th>Negative_DAs</th>
<th>Coefficient (t-stat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIME</td>
<td>-0.003*</td>
<td>(-1.739)</td>
<td>-0.004*</td>
<td>(-1.649)</td>
<td>0.001</td>
<td>(0.602)</td>
</tr>
<tr>
<td>CODE</td>
<td>-0.041***</td>
<td>(-2.737)</td>
<td>-0.067**</td>
<td>(-2.472)</td>
<td>0.038**</td>
<td>(1.990)</td>
</tr>
<tr>
<td>EXCOM</td>
<td>0.000</td>
<td>(0.646)</td>
<td>0.000</td>
<td>(0.453)</td>
<td>0.000</td>
<td>(1.248)</td>
</tr>
<tr>
<td>EXCOM_CODE</td>
<td>0.000</td>
<td>(-0.796)</td>
<td>0.000</td>
<td>(-0.994)</td>
<td>0.000</td>
<td>(-1.316)</td>
</tr>
<tr>
<td>INDBOARD</td>
<td>-0.055*</td>
<td>(-1.836)</td>
<td>-0.053*</td>
<td>(-1.761)</td>
<td>0.052*</td>
<td>(1.848)</td>
</tr>
<tr>
<td>INDBOARD_CODE</td>
<td>-0.098**</td>
<td>(-2.006)</td>
<td>-0.077**</td>
<td>(-1.996)</td>
<td>0.117**</td>
<td>(1.960)</td>
</tr>
<tr>
<td>AUDCOM</td>
<td>0.014</td>
<td>(0.393)</td>
<td>-0.045***</td>
<td>(-2.724)</td>
<td>-0.011</td>
<td>(-0.554)</td>
</tr>
<tr>
<td>AUDCOM_CODE</td>
<td>0.004</td>
<td>(0.308)</td>
<td>0.007</td>
<td>(0.357)</td>
<td>-0.004</td>
<td>(-0.227)</td>
</tr>
<tr>
<td>AUDITOR</td>
<td>0.000</td>
<td>(0.939)</td>
<td>0.000</td>
<td>(0.817)</td>
<td>-0.003</td>
<td>(-0.190)</td>
</tr>
<tr>
<td>AUDITOR_CODE</td>
<td>0.026</td>
<td>(0.901)</td>
<td>-0.109***</td>
<td>(-2.637)</td>
<td>0.021</td>
<td>(0.348)</td>
</tr>
<tr>
<td>INSTITUTE</td>
<td>-0.044</td>
<td>(-0.650)</td>
<td>-0.137***</td>
<td>(-2.725)</td>
<td>-0.037</td>
<td>(-0.546)</td>
</tr>
<tr>
<td>INSTITUTE_CODE</td>
<td>0.015</td>
<td>(1.508)</td>
<td>0.046***</td>
<td>(2.082)</td>
<td>-0.006</td>
<td>(-0.296)</td>
</tr>
<tr>
<td>TOP1</td>
<td>0.030***</td>
<td>(2.802)</td>
<td>0.050***</td>
<td>(2.578)</td>
<td>-0.033*</td>
<td>(1.742)</td>
</tr>
<tr>
<td>STATE</td>
<td>0.014**</td>
<td>(1.972)</td>
<td>0.013</td>
<td>(0.936)</td>
<td>0.010</td>
<td>(0.889)</td>
</tr>
<tr>
<td>STATE_CODE</td>
<td>0.021**</td>
<td>(2.324)</td>
<td>0.023*</td>
<td>(1.675)</td>
<td>-0.023**</td>
<td>(1.989)</td>
</tr>
<tr>
<td>Ln_Size</td>
<td>-0.001</td>
<td>(-0.197)</td>
<td>0.000</td>
<td>(-0.042)</td>
<td>0.002</td>
<td>(0.280)</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>0.022***</td>
<td>(6.492)</td>
<td>0.017**</td>
<td>(2.192)</td>
<td>-0.021***</td>
<td>(-5.736)</td>
</tr>
<tr>
<td>Ln_Sales</td>
<td>-0.047***</td>
<td>(-8.991)</td>
<td>-0.035*</td>
<td>(-1.904)</td>
<td>0.049***</td>
<td>(8.175)</td>
</tr>
<tr>
<td>ST_PT</td>
<td>0.029***</td>
<td>(4.151)</td>
<td>-0.003</td>
<td>(-0.255)</td>
<td>-0.043***</td>
<td>(-5.031)</td>
</tr>
<tr>
<td>ISSUING</td>
<td>0.006*</td>
<td>(1.661)</td>
<td>0.009*</td>
<td>(1.691)</td>
<td>-0.001</td>
<td>(-0.294)</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.154***</td>
<td>(3.422)</td>
<td>0.104</td>
<td>(1.439)</td>
<td>-0.154***</td>
<td>(-3.036)</td>
</tr>
</tbody>
</table>

\[ R^2 = 0.127 \quad \text{Adjusted } R^2 = 0.109 \quad F\text{-value (Pr}>F\text{)} = 12.755 (<0.0001) \]

* ** *** Denote significance (2-tailed) at 0.100, 0.050 and 0.010 level, respectively.
Table 9.6.: Discretionary accruals and corporate governance mechanisms: multivariate regression analysis (continued)

Panel B: Discretionary accrual calculated from the L&R Model

\[ EM_{L&R\ Model} = \beta_0 + \beta_1 \times \text{TIME} + \beta_2 \times \text{CODE} + \beta_3 \times \text{EXCOM} + \beta_4 \times \text{EXCOM} \times \text{CODE} + \beta_5 \times \text{INDBOARD} \]
\[ + \beta_6 \times \text{INDBOARD} \times \text{CODE} + \beta_7 \times \text{AUDCOM} + \beta_8 \times \text{AUDCOM} \times \text{CODE} + \beta_9 \times \text{AUDCOM} \times \text{CODE} \]
\[ + \beta_{10} \times \text{AUDITOR} + \beta_{11} \times \text{AUDITOR} \times \text{CODE} + \beta_{12} \times \text{INSTITUTE} + \beta_{13} \times \text{INSTITUTE} \times \text{CODE} \]
\[ + \beta_{14} \times \text{TOP1} + \beta_{15} \times \text{TOP1} \times \text{CODE} + \beta_{16} \times \text{STATE} + \beta_{17} \times \text{STATE} \times \text{CODE} + \beta_{18} \times \text{Ln}_\text{Size} \]
\[ + \beta_{19} \times \text{LEVERAGE} + \beta_{20} \times \text{Ln}_\text{Sales} + \beta_{21} \times \text{ST}_\text{PT} + \beta_{22} \times \text{ISSUING} + \epsilon \]

<table>
<thead>
<tr>
<th>Variables</th>
<th>\textit{ABS_DAs} Coefficient (t-stat)</th>
<th>\textit{Positive_DAs} Coefficient (t-stat)</th>
<th>\textit{Negative_DAs} Coefficient (t-stat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{TIME}</td>
<td>-0.002* (-1.683)</td>
<td>-0.001* (-1.702)</td>
<td>0.001 (0.678)</td>
</tr>
<tr>
<td>\textit{CODE}</td>
<td>-0.035** (-2.078)</td>
<td>-0.040* (-1.808)</td>
<td>0.033* (1.757)</td>
</tr>
<tr>
<td>\textit{EXCOM}</td>
<td>0.000 (0.173)</td>
<td>0.000 (0.073)</td>
<td>0.000 (0.292)</td>
</tr>
<tr>
<td>\textit{EXCOM} \times \text{CODE}</td>
<td>0.000 (-0.174)</td>
<td>0.000 (-0.321)</td>
<td>0.000 (-1.291)</td>
</tr>
<tr>
<td>\textit{INDBOARD}</td>
<td>-0.049** (-2.249)</td>
<td>-0.046* (-1.765)</td>
<td>0.039* (1.682)</td>
</tr>
<tr>
<td>\textit{INDBOARD} \times \text{CODE}</td>
<td>-0.158*** (-3.209)</td>
<td>-0.070** (-1.985)</td>
<td>0.063* (1.753)</td>
</tr>
<tr>
<td>\textit{AUDCOM}</td>
<td>0.005 (0.281)</td>
<td>0.012* (-1.844)</td>
<td>0.006 (0.296)</td>
</tr>
<tr>
<td>\textit{AUDCOM} \times \text{CODE}</td>
<td>-0.003 (-0.162)</td>
<td>-0.016** (-1.992)</td>
<td>0.007 (0.225)</td>
</tr>
<tr>
<td>\textit{AUDITOR}</td>
<td>0.004 (0.334)</td>
<td>0.005 (0.718)</td>
<td>0.004 (0.204)</td>
</tr>
<tr>
<td>\textit{AUDITOR} \times \text{CODE}</td>
<td>0.007 (0.511)</td>
<td>0.015 (-1.498)</td>
<td>0.004 (0.216)</td>
</tr>
<tr>
<td>\textit{INSTITUTE}</td>
<td>0.061 (1.244)</td>
<td>-0.083*** (-3.669)</td>
<td>0.007 (0.742)</td>
</tr>
<tr>
<td>\textit{INSTITUTE} \times \text{CODE}</td>
<td>0.037 (0.716)</td>
<td>-0.100*** (-2.501)</td>
<td>0.000 (-0.023)</td>
</tr>
<tr>
<td>\textit{TOP1}</td>
<td>0.008 (0.482)</td>
<td>0.016 (1.380)</td>
<td>-0.009 (-0.360)</td>
</tr>
<tr>
<td>\textit{TOP1} \times \text{CODE}</td>
<td>0.026* (1.799)</td>
<td>0.023* (1.837)</td>
<td>0.015 (0.059)</td>
</tr>
<tr>
<td>\textit{STATE}</td>
<td>0.009 (0.928)</td>
<td>0.012** (2.085)</td>
<td>-0.022* (-1.742)</td>
</tr>
<tr>
<td>\textit{STATE} \times \text{CODE}</td>
<td>0.022** (2.000)</td>
<td>0.012* (1.681)</td>
<td>-0.045*** (2.834)</td>
</tr>
<tr>
<td>\textit{Ln}_\text{Size}</td>
<td>-0.020*** (-4.288)</td>
<td>-0.012*** (-3.465)</td>
<td>-0.000 (-0.015)</td>
</tr>
<tr>
<td>\textit{LEVERAGE}</td>
<td>0.023*** (6.590)</td>
<td>0.018** (2.258)</td>
<td>-0.021*** (5.296)</td>
</tr>
<tr>
<td>\textit{Ln}_\text{Sales}</td>
<td>-0.113*** (-11.700)</td>
<td>-0.073** (-2.329)</td>
<td>0.071*** (12.138)</td>
</tr>
<tr>
<td>\textit{ST}_\text{PT}</td>
<td>-0.001 (-0.160)</td>
<td>0.003 (0.578)</td>
<td>-0.012* (-1.646)</td>
</tr>
<tr>
<td>\textit{ISSUING}</td>
<td>0.017*** (4.575)</td>
<td>0.002 (0.911)</td>
<td>-0.011** (-2.023)</td>
</tr>
<tr>
<td>\textit{Intercept}</td>
<td>0.067 (1.599)</td>
<td>0.151*** (4.920)</td>
<td>-0.146*** (2.492)</td>
</tr>
</tbody>
</table>

\[ R^2 \quad 0.124 \quad 0.105 \quad 0.119 \]
\[ \text{Adjusted } R^2 \quad 0.118 \quad 0.103 \quad 0.106 \]
\[ F\text{-value (Pr}>F) \quad 38.380 (<0.0001) \quad 12.960 (<0.0001) \quad 15.0170 (<0.0001) \]

* ** *** Denote significance (2-tailed) at 0.100, 0.050 and 0.010 level, respectively.
9.4.3. Robustness Tests

SUSPECT firm Analysis

One concern in the above analysis is whether the proxies used are capturing FM activities of Chinese listed firms, or whether these trends illustrated represent some other phenomenon. To provide construct validity for the proxies, additional tests are provided using “suspect firms” (SUSPECT) that are likely to have managed earnings based on the benchmarks that firms are likely to have incentives to meet (Burgstahler and Dichev, 1997; Cohen et al., 2008; Peasnell et al., 2000; Roychowdhury, 2006). In the prior research, Burgstahler and Dichev (1997), Peasnell et al. (2000) examine two earnings targets. Specifically, they are the targets of avoiding reporting losses and earnings declines. Another possible target is meeting analysts’ earnings forecasts. Degeorge et al., (1999) find that while managers appear to manipulate reported earnings upwards to meet analysts’ forecasts, EM practices to avoid losses and earnings declines proves predominant. Therefore, based on the analysis of Burgstahler and Dichev (1997), the following tests use avoidance of losses and earnings declines as the benchmarks.

Using this subsample, the main objective is to empirically examine whether FM strategies (i.e., the values of DAs measured by either the Modified Jones Model or L&R Model, DAs) used by Chinese listed firms to meet the benchmarks have changed in the post-Code period as compared to the pre-Code period.

First, as in Cohen et al., (2008), Roychowdhury (2006), this thesis identifies firm-year observations with net income before extraordinary items scaled by total assets that lies in the interval [0, 0.005) (these are labelled as SUSPECT firm-years). Since it is likely that these firms during these years manage their earnings to report income marginally above zero (Peasnell et al., 2000). Next, a second measure of SUSPECT firm-years is calculated as the change in net income before extraordinary items from the previous year scaled by total assets lies in the interval [0, 0.005). This latter definition is consistent with evidence in prior research that firms are more likely to manage earnings in order to meet prior years’ earnings numbers (e.g., Degeorge et al., 1999; Graham et al., 2005; Peasnell et al., 2000). The results for these two measures are reported in Table 9.7. Panel A and B respectively. While Panel A provides the results by comparing mean DAs of ‘SUSPECT” firms that manage earnings to “just” avoid reporting losses in the pre-Code period with that in the Post-Code period, Panel B demonstrates the FM
activities of the firms which are suspected to have the objective of meeting or beating last year’s net income.

Overall, the findings propose several arguments that are consistent with those obtained from the main models. Firstly, income-decreasing DAs are used by both ‘SUSPECT’ subgroups which arrange from -0.034 to -0.013 in both before and after the Code. This supports the argument proposed earlier that rampant use of income-increasing DAs to meet target earnings may easily attract attention from regulators or other exterior institutions which eventually lead to additional monitoring mechanisms being imposed on firms. As stated by Peasnell et al., (2000), it may be either infeasible or prohibitively costly to manage earnings upwards to meet target earnings. Thus, this suggests a preference of Chinese listed companies to adopt a ‘big bath’ strategy through income decreasing choices to store up positive earnings for future periods (Degeorge et al., 1999; Healy, 1985) as these choices are relatively hidden from other stakeholders.

Secondly, a decreasing trend in EM practices in both ‘SUSPECT’ sub-groups is reported. Based on the Modified Jones Model, the magnitude of negative DAs of firms that ‘just’ avoid reporting losses decreases to 0.016 by the end of 2006 comparing with 0.034 in the pre-Code period. The difference is statistically significant at 0.05 level. And similar results are documented for other sub-periods. The magnitude of negative DAs of firms which have the objective of meeting or beating last year’s net income reduces significantly (at 0.05 level) to 0.013 by the end of 2006 from 0.030 in the pre-Code period. While the magnitude is 0.020 and 0.021 in post-Code period (A) and (B) respectively, only the magnitude of 0.014 in the post-Code period (C) is significantly different from that in the pre-Code period at 0.10 level. These results indicate that EM activities decrease significantly across time. And, the period after promulgation of the Code is characterised by lower accrual-based EM practices in listed firms. Thirdly, the results reported using the L&R Model are consistent with those obtained from the Modified Jones Model suggesting two models should be viewed as complementary rather than contradictory or one form can supersede the other.

By putting all together, this analysis provides greater confidence in early results and strengthens the argument generated for EM practices in Chinese listed companies.
Table 9.7: Robustness test of earnings management activities of SUSPECT Firms in the pre- and post-Code periods

Panel A:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DAS_{Modified Jones Model}</strong></td>
<td>-0.034</td>
<td>-0.016</td>
<td>-0.018***</td>
<td>-0.017**</td>
<td>-0.014</td>
<td>-0.020**</td>
<td>-0.019</td>
<td>-0.015*</td>
<td></td>
</tr>
<tr>
<td><strong>DAS_{L&amp;R Model}</strong></td>
<td>-0.036</td>
<td>-0.021</td>
<td>-0.015*</td>
<td>-0.022</td>
<td>-0.014</td>
<td>-0.020*</td>
<td>-0.022</td>
<td>-0.014</td>
<td></td>
</tr>
</tbody>
</table>

Panel B:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DAS_{Modified Jones Model}</strong></td>
<td>-0.030</td>
<td>-0.013</td>
<td>-0.017***</td>
<td>-0.018</td>
<td>-0.013*</td>
<td>-0.015</td>
<td>0.015*</td>
<td>-0.020</td>
<td>-0.010</td>
</tr>
<tr>
<td><strong>DAS_{L&amp;R Model}</strong></td>
<td>-0.033</td>
<td>-0.012</td>
<td>-0.021**</td>
<td>-0.020</td>
<td>-0.013</td>
<td>-0.021</td>
<td>-0.012</td>
<td>-0.014</td>
<td>-0.019*</td>
</tr>
</tbody>
</table>

*** *** Denote significance (2-tailed) at 0.100, 0.050 and 0.010 level, respectively.

Panel A: Firm-years “Just” avoiding reporting a loss are defined as firm-year observations where net income before extraordinary items scaled by total assets lies in the interval (0, 0.005);

Panel B: Firm-years that “Meet-or-Beat” last year’s net income are defined as firm-year observations where the change in net income before extraordinary items scaled by total assets lies in the interval (0, 0.005);

DAS_{Modified Jones Model} = discretionary accruals computed using the Modified Jones Model;

DAS_{L&R Model} = discretionary accruals computed using the L&R Model.
Split Share Reform Effect

Another concern in the empirical results provided is the possible effect of a program of converting non-tradable shares into A shares in China (known as the split share reform) that was carried out by the State-owned Assets Supervision and Administration Commission at the beginning of 2005. Shang Fulin, the chief administrator of the CSR&C said on December 27, 2005, the reform on non-tradable shares introduced aims at eliminating trading right difference between non-tradable and tradable shares, not floating all non-tradable shares at the stock market. As the post-Code period includes 2005 and 2006, a sensitivity test by excluding these two years is provided to control the possible effect of such programme.

The OLS regression results are provided in Table 9.8. The adjusted Rs are comparative with those reported in the main models. They arrange from 0.077 to 0.136, and 0.076 to 0.111 in Panel A and B respectively. All F-values are highly significant. Overall, the results are consistent with those of main models suggesting the robustness of findings obtained. In particular, the coefficient on TIME is negative for ABS_DAs and Positive_DAs, while positive for Negative_DAs. And, the former two are significant at 0.01 and 0.10 level respectively. For the coefficient on dummy variable CODE, it is positive (for ABS_DAs and Positive_DAs) and negative (for Negative_DAs), and statistically significant at the level arranged from 1% to 5%. INDBOARD is found to be negatively correlated with ABS_DAs and Positive_DAs, and positively related with Negative_DAs for the entire period in both the Modified Jones and I& R Models, and the significant level arranges from 0.10 to 0.01. And such effect increases significantly in the post-Code period. The negative correlation between AUDCOM and Positive_DAs increased significantly in the post-Code. Institutional shareholding is negatively and significantly correlated with usage of positive DAs. Controlling shareholders (TOP1) and State-dominated firms (STATE) are found to manipulate earnings over time. Their significant correlations in the Post-Code period indicate the inefficiency of investor protection in China’s stock market.

And finally, this thesis also repeats all analyses by defining the post-Code period as the years 2003 through 2006. The results (not tabulated here) are nearly symmetric with those obtained from the main models.
**Table 9.8.: Robustness test using 2002 to 2004 as post-Code period**

**Panel A: Discretionary accrual calculated from the Modified Jones Model**

The Modified Jones Model is given by:

\[
EM_{Modified\ Jones\ Model} = \beta_0 + \beta_1 \times TIME + \beta_2 \times CODE + \beta_3 \times EXCOM + \beta_4 \times EXCOM \times CODE + \beta_5 \times INDBOARD + \beta_6 \times INDBOARD \times CODE + \beta_7 \times AUDCOM + \beta_8 \times AUDCOM \times CODE + \beta_9 \times AUDCOM \times CODE + \beta_{10} \times AUDITOR + \beta_{11} \times AUDITOR \times CODE + \beta_{12} \times INSTITUTE + \beta_{13} \times INSTITUTE \times CODE + \beta_{14} \times TOP1 + \beta_{15} \times TOP1 \times CODE + \beta_{16} \times STATE + \beta_{17} \times STATE \times CODE + \beta_{18} \times Ln_{Size} + \beta_{19} \times LEVERAGE + \beta_{20} \times Ln\_Sales + \beta_{21} \times ST\_PT + \beta_{22} \times ISSUING + \epsilon
\]

<table>
<thead>
<tr>
<th>Variables</th>
<th>ABS_DAs Coefficient (t-stat)</th>
<th>Positive_DAs Coefficient (t-stat)</th>
<th>Negative_DAs Coefficient (t-stat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIME</td>
<td>-0.088* (-1.795)</td>
<td>-0.015*** (-2.455)</td>
<td>0.004 (0.881)</td>
</tr>
<tr>
<td>CODE</td>
<td>-0.043** (-2.324)</td>
<td>-0.048*** (-2.820)</td>
<td>0.041** (1.981)</td>
</tr>
<tr>
<td>EXCOM</td>
<td>0.000 (0.566)</td>
<td>0.000 (0.376)</td>
<td>0.000 (1.257)</td>
</tr>
<tr>
<td>EXCOM*CODE</td>
<td>0.000 (0.533)</td>
<td>0.000 (-0.165)</td>
<td>0.000 (-1.200)</td>
</tr>
<tr>
<td>INDBOARD</td>
<td>-0.067* (-1.753)</td>
<td>0.058** (-1.941)</td>
<td>0.067* (1.681)</td>
</tr>
<tr>
<td>INDBOARD*CODE</td>
<td>-0.069** (-1.874)</td>
<td>-0.101** (-2.156)</td>
<td>0.080** (1.926)</td>
</tr>
<tr>
<td>AUDCOM</td>
<td>-0.013 (-0.835)</td>
<td>-0.046** (-2.115)</td>
<td>0.004 (0.234)</td>
</tr>
<tr>
<td>AUDCOM*CODE</td>
<td>0.014 (0.821)</td>
<td>-0.047** (-1.958)</td>
<td>-0.001 (-0.059)</td>
</tr>
<tr>
<td>AUDITOR</td>
<td>0.006 (0.484)</td>
<td>0.008 (0.499)</td>
<td>-0.012 (-0.876)</td>
</tr>
<tr>
<td>AUDITOR*CODE</td>
<td>-0.016 (-0.943)</td>
<td>-0.004 (-0.191)</td>
<td>0.007 (0.392)</td>
</tr>
<tr>
<td>INSTITUTE</td>
<td>0.036 (0.717)</td>
<td>-0.108*** (-3.137)</td>
<td>0.022 (0.399)</td>
</tr>
<tr>
<td>INSTITUTE*CODE</td>
<td>-0.033 (-0.560)</td>
<td>-0.119*** (-2.926)</td>
<td>-0.020 (-0.288)</td>
</tr>
<tr>
<td>TOP1</td>
<td>0.011 (0.625)</td>
<td>0.049** (2.138)</td>
<td>-0.012 (-0.642)</td>
</tr>
<tr>
<td>TOP1*CODE</td>
<td>0.054** (2.145)</td>
<td>0.062* (1.716)</td>
<td>-0.024* (1.884)</td>
</tr>
<tr>
<td>STATE</td>
<td>0.012* (1.688)</td>
<td>-0.011 (-0.945)</td>
<td>0.010 (0.996)</td>
</tr>
<tr>
<td>STATE*CODE</td>
<td>0.025** (1.958)</td>
<td>0.022* (1.718)</td>
<td>-0.023* (1.884)</td>
</tr>
<tr>
<td>Ln_Size</td>
<td>-0.004 (-0.447)</td>
<td>-0.002 (-0.176)</td>
<td>0.017*** (2.626)</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>0.046*** (9.632)</td>
<td>0.051*** (2.930)</td>
<td>-0.049*** (5.633)</td>
</tr>
<tr>
<td>Ln_Sales</td>
<td>-0.012* (-2.140)</td>
<td>-0.021* (-1.613)</td>
<td>0.037*** (5.146)</td>
</tr>
<tr>
<td>ST_PT</td>
<td>0.036*** (3.858)</td>
<td>-0.011 (-0.678)</td>
<td>-0.017** (1.803)</td>
</tr>
<tr>
<td>ISSUING</td>
<td>0.003 (0.588)</td>
<td>0.012* (1.770)</td>
<td>0.000 (0.086)</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.153*** (2.789)</td>
<td>0.084 (1.015)</td>
<td>-0.174*** (-4.746)</td>
</tr>
</tbody>
</table>

| $R^2$              | 0.088                         | 0.168                             | 0.125                            |
| Adjusted $R^2$     | 0.077                         | 0.136                             | 0.108                            |

| F-value (Pr>F)     | 8.095 (<0.0001)               | 10.311 (<0.0001)                  | 11.767 (<0.0001)                 |

* *** *** Denote significance (2-tailed) at 0.100, 0.050 and 0.010 level, respectively.
### Table 9.8.: Robustness test using 2002 to 2004 as post-Code period (continued)

#### Panel B: Discretionary accrual calculated from the L&R Model

The LGR Model is defined as:

\[
\text{EM}_{LGR} = \beta_0 + \beta_1 \times \text{TIME} + \beta_2 \times \text{CODE} + \beta_3 \times \text{EXCOM} + \beta_4 \times \text{EXCOM} \times \text{CODE} + \beta_5 \times \text{INDBOARD} + \beta_6 \times \text{AUDCOM} + \beta_7 \times \text{AUDCOM} \times \text{CODE} + \beta_8 \times \text{AUDCOM} \times \text{CODE} + \beta_{10} \times \text{INSTITUTE} + \beta_{11} \times \text{INSTITUTE} \times \text{CODE} + \beta_{14} \times \text{TOP1} + \beta_{15} \times \text{TOP1} \times \text{CODE} + \beta_{16} \times \text{STATE} + \beta_{17} \times \text{STATE} \times \text{CODE} + \beta_{18} \times \text{Ln}_\text{Size} + \beta_{19} \times \text{LEVERAGE} + \beta_{20} \times \text{Ln}_\text{Sales} + \beta_{21} \times \text{ST}_\text{PT} + \beta_{22} \times \text{ISSUING} + \epsilon
\]

<table>
<thead>
<tr>
<th>Variables</th>
<th>ABS_DAs</th>
<th>Positive_DAs</th>
<th>Negative_DAs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient (t-stat)</td>
<td>Coefficient (t-stat)</td>
<td>Coefficient (t-stat)</td>
</tr>
<tr>
<td>TIME</td>
<td>-0.004* (-1.758)</td>
<td>-0.007* (-1.831)</td>
<td>0.001 (0.166)</td>
</tr>
<tr>
<td>CODE</td>
<td>-0.044*** (-3.431)</td>
<td>-0.041*** (-4.710)</td>
<td>0.044** (2.119)</td>
</tr>
<tr>
<td>EXCOM</td>
<td>0.000 (-0.596)</td>
<td>0.000 (0.468)</td>
<td>0.000 (0.375)</td>
</tr>
<tr>
<td>EXCOM*CODE</td>
<td>-0.042*** (-2.004)</td>
<td>-0.036*** (-1.989)</td>
<td>0.020* (1.751)</td>
</tr>
<tr>
<td>INDBOARD</td>
<td>-0.066*** (-3.998)</td>
<td>-0.064*** (-3.436)</td>
<td>0.026** (1.903)</td>
</tr>
<tr>
<td>AUDCOM</td>
<td>-0.008 (-0.806)</td>
<td>-0.011* (-1.863)</td>
<td>0.006 (1.003)</td>
</tr>
<tr>
<td>AUDCOM*CODE</td>
<td>0.009 (0.920)</td>
<td>0.017* (-1.757)</td>
<td>0.006 (1.094)</td>
</tr>
<tr>
<td>AUDITOR</td>
<td>0.001 (0.096)</td>
<td>0.013 (1.492)</td>
<td>0.004 (-0.354)</td>
</tr>
<tr>
<td>AUDITOR*CODE</td>
<td>-0.003 (-0.698)</td>
<td>-0.018 (-1.395)</td>
<td>0.003 (0.151)</td>
</tr>
<tr>
<td>INSTITUTE</td>
<td>0.018 (0.604)</td>
<td>-0.105** (2.095)</td>
<td>0.022 (0.511)</td>
</tr>
<tr>
<td>INSTITUTE*CODE</td>
<td>-0.035 (-1.002)</td>
<td>-0.129*** (-2.623)</td>
<td>0.006 (0.111)</td>
</tr>
<tr>
<td>TOP1</td>
<td>0.000 (0.004)</td>
<td>0.005 (0.386)</td>
<td>-0.010 (-0.619)</td>
</tr>
<tr>
<td>TOP1*CODE</td>
<td>0.026** (1.997)</td>
<td>0.021* (1.751)</td>
<td>-0.018* (-1.908)</td>
</tr>
<tr>
<td>STATE</td>
<td>0.001 (0.124)</td>
<td>0.011* (1.698)</td>
<td>0.009 (0.974)</td>
</tr>
<tr>
<td>STATE*CODE</td>
<td>0.030* (1.839)</td>
<td>0.016* (1.671)</td>
<td>-0.012** (1.955)</td>
</tr>
<tr>
<td>Ln_Size</td>
<td>-0.005 (-1.408)</td>
<td>-0.009* (-1.811)</td>
<td>0.000 (0.005)</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>0.014*** (4.956)</td>
<td>-0.005 (-0.765)</td>
<td>-0.019** (2.056)</td>
</tr>
<tr>
<td>Ln_Sales</td>
<td>-0.039*** (-8.078)</td>
<td>-0.009 (-0.630)</td>
<td>0.044*** (7.319)</td>
</tr>
<tr>
<td>ST_PT</td>
<td>-0.001 (-0.155)</td>
<td>0.009 (1.070)</td>
<td>-0.016** (1.856)</td>
</tr>
<tr>
<td>ISSUING</td>
<td>0.006* (2.091)</td>
<td>0.001 (0.338)</td>
<td>-0.006* (1.732)</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.137*** (4.218)</td>
<td>0.144*** (3.120)</td>
<td>-0.101** (1.941)</td>
</tr>
<tr>
<td>R²</td>
<td>0.087</td>
<td>0.122</td>
<td>0.134</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.076</td>
<td>0.097</td>
<td>0.111</td>
</tr>
<tr>
<td>F-value (Pr&gt;F)</td>
<td>10.030 (&lt;0.0001)</td>
<td>12.869 (&lt;0.0001)</td>
<td>10.053 (&lt;0.0001)</td>
</tr>
</tbody>
</table>

Denote significance (2-tailed) at 0.100, 0.050 and 0.010 level, respectively.
9.5. Summary

To start with, this Chapter has provided the descriptive statistics of the explanatory and the control variables. By comparing the statistics in the pre-Code period with that in the post-Code period, the changes of a specific variable over time are well represented. The mean coefficient estimates of parameters calculated using the Modified Jones Model and L&R Model has also been demonstrated.

For hypotheses testing, current thesis runs univariate statistical tests to examine the time-trend in EM metrics across the study period. In addition, a graphic analysis of EM trend across time is also provided. Based on both statistical and graphic results, it is argued that the magnitude of DAs of Chinese listed companies decreases across the study period. And, the reduction is more pronounced in the period after the promulgation of the Code in 2002. Therefore, hypothesis 1 is supported. In addition, by further analysing the magnitude of mean and median between earnings-increasing (Positive DAs) and earnings-decreasing (Negative DAs) discretionary accruals, it is demonstrated that Chinese listed companies engage in larger earnings-decreasing discretionary accruals are followed by smaller positive reversals.

The impacts of the major mechanisms regarding corporate governance enforced by the Code on EM practices in Chinese listed companies are investigated by running the multivariate OLS regression tests. The governance mechanisms arrange from the executive compensation to the characteristics of the controlling shareholders. In particular, the correlation between the natural logarithm value of cash compensation for the top three highest paid executives and DAs is neither statistically nor economically significant. This doesn’t support the conjecture that tying executive compensation to firm performance in China may be regarded as an alignment mechanism as argued by AT. Thus, the results obtained from the multivariate regressions don’t support hypotheses 2a and 2b. And implicitly, the results also indicate that the performance-based executive compensation in China may not be considered as the incentive to engage in DAs as proposed by TCE and empirical studies based on the Western experiences.
The proportion of independent non-executive directors on the board is reported to be adversely and significantly related to the use of DAs, and such effect is increased significantly in the post-Code period. This suggests that these independent non-executives decrease the Chinese listed firms’ incentives to manipulate reported earnings through effective monitoring. And, this effect is primarily resulted from the promulgation and enforcement of the 2002 Code. The results provide supporting evidence of hypotheses 3a and 3b.

Although the establishment of audit committees and shareholding of institutional investors are negatively and significantly related with positive DAs, and such effect is increased significantly in the post-Code period, they don’t provide sufficient monitoring on income-decreasing choices. This reflects that lack of quality accounting professionals on audit committees coupled with ineffective financial infrastructures and smaller shareholding of institutional investors are the primary reasons for constraining the effectiveness of these two governance mechanisms in China. The results could partially support hypotheses 4a and 4b; 5a and 5b.

The results do not show any significant relationship between use of an international reputable auditor and DAs in Chinese listed companies. This reflects that replacing a Chinese local CPA firm with an international reputable audit firm to audit financial statements does not contribute to the reduction in EM in China. The results don’t support hypotheses 6a and 6b.

The findings of characteristics (ownership concentration and type) of the largest shareholders in listed companies reveal that the biggest shareholders in China engage in DAs over time, and as this effect is significantly increased in the post-Code period, it is argued that, in practice, the promulgation of 2002 Code on controlling shareholders doesn’t constrain their expropriation of minority shareholders’ interests. In addition, as the State dominant firms engage in EM practices significantly over time, this reflects the inefficiency of 2002 Code on constraining opportunism behaviour of the firms which are ultimately controlled by the government, thus further illustrates investor legal protection in Chinese stock market is relatively limited. The hypotheses 7 and 8 are not supported by the findings.
The results obtained using the L&R model are consistent to those measured by the Modified Jones Model. This indicates that these two models should be viewed as complementary rather than contradictory or one form can supersede the other. It also proves that the results obtained are robustness.

At the end of the Chapter, ‘SUSPECT’ firms are identified by sub-grouping the sample based on the benchmarks of avoiding losses and earnings declines. And, another sensitivity test is conducted by excluding 2005 and 2006 from the post-Code period in order to control the effect of split share reform. Overall, the results of both additional tests are consistent with those of main models suggesting the robustness of findings obtained.
Chapter 10: Conclusion
10.1. Introduction

This chapter concludes the thesis. It starts with summarising the main findings reported in the last chapter. Based on these findings, it illustrates the main contributions of this thesis. Followed by the major contributions, it highlights both the theoretical and managerial implications. And finally, this chapter mentions the limitations and suggestions for future research.

10.2. Main Findings of the Current Thesis

This thesis examines the trend in accrual-based earnings management (or EM) practices and the impacts of the major mechanisms of corporate governance (CG) arranged from the executive compensation to the characteristics of controlling shareholders on such practices in two contrasting governance regimes (pre- and post-Code periods). Overall, the findings show that several major CG mechanisms enforced by China’s 2002 Code significantly contribute to the reduction of EM practices in China’s listed companies. It is indicated that good CG system constrains firms from engaging in opportunistic discretion.

Firstly, by comparing discretionary accruals measured by the Modified Jones Model (Dechow et al., 1995) and the L&R Model (Larcker and Richardson, 2004) respectively after the passage of the Code with those prior to the Code through the univariate statistical tests, this thesis provides robust evidence showing that while the magnitude of discretionary accruals is decreased over time, the reduction is more pronounced after the 2002 Code. In addition, by further analysing the magnitude of mean and median between earnings-increasing (Positive DAs) and earnings-decreasing (Negative DAs) discretionary accruals, it is demonstrated that Chinese listed companies engage in larger earnings-decreasing discretionary accruals are followed by smaller positive reversals. One possible explanation provided is that rampant use of income-increasing discretionary accruals to meet target earnings may easily attract attention from regulators or other exterior institutions which eventually lead to
additional monitoring mechanisms being imposed on firms. Thus, this suggests a preference of listed companies to adopt a 'big bath' strategy through income decreasing choices to store up positive earnings for future periods (Degeorge et al., 1999; Healy, 1985) as these choices are relatively hidden from other stakeholders.

Secondly, the impacts of the main mechanisms regarding CG which are enforced by the 2002 Code on EM practices are investigated by running the multivariate OLS regression tests.

Among these CG dimensions, executive compensation is considered as an alignment mechanism by conjecturing that due to the lack of stock options utilised in China which have been largely blamed as the root cause of EM practices based on the Western experiences, building a more systematic and operational performance-based compensation system advanced from the one that was totally separated from the performance in the 1980s may encourage executives to act on behalf of shareholders and limit their opportunistically discretionary behaviour—EM. However, the correlation between the natural logarithm value of cash compensation for the top three highest paid executives and discretionary accruals is neither statistically nor economically significant. One possible explanation is that executives of Chinese listed companies, especially those transferred from the State-owned Enterprises, usually hold certain positions in the government agencies other than directorships in the listed companies. They thus concern more about their political career rather than the salaries or bonuses could be received from the companies (Liu and Lu, 2007).

The proportion of independent non-executive directors on the board is reported to be negatively and significantly related to the use of discretionary accruals over time, and such effect is significantly increased in the post-Code period. This suggests that the independent non-executives decrease the incentives to manipulate reported earnings through effectively monitoring the listed companies. And, they are discharging their financial reporting responsibilities more effectively after the passage of the Code.
Although the establishment of audit committee on the board and shareholdings held by the institutional investors are negatively and significantly related with positive or income-increasing discretionary accruals, and such effect is increased significantly in the post-Code period, there is no significant correlation between these two CG mechanisms with the income-decreasing discretionary accruals. From the perspective of audit committees, it is argued that, since income-decreasing choices to store up positive earnings for future periods (Degeorge et al., 1999; Healy, 1985) are relatively hidden comparing with aggressive income-increasing discretionary accruals, lack of qualified accounting professionals on the audit committees coupled with ineffective financial infrastructures (e.g., monitoring system, ethic education or training, legal infrastructure and enforcement) in China (Ball et al., 2000; Chen, 2005; Chen et al., 2002; Chen and Zhang, 2010a; La Porta et al., 2000b; Leuz et al., 2003) mainly contribute to their failures in detecting and mitigating income-decreasing choices in the listed companies.

Regarding the institutional investors, as a large amount of resources are required to detect and effectively reduce the income-decreasing discretionary accruals of firms which are more hidden, they only hold a fraction of shares in the listed companies may not be willingly to invest in such monitoring resources. The results also suggest the inefficiency of China’s stock markets and the incompleteness of Chinese institutional environment. The institutional investors may find themselves in a disadvantageous position in the Chinese stock markets and concern about their welfare being expropriated by other controlling shareholders. They keep low shareholding and typically hold their shares for a short term which consequently constrain their motivations in monitoring activities.

The results do not show any significant relationship between use of an international reputable auditor and discretionary accruals. It is argued that without effective institutional supporting systems such as the monitoring system, ethic education or training, legal infrastructure and enforcement (e.g., Ball et al., 2000; Chen, 2005; La Porta et al., 2000b; Leuz et al., 2003), the quality of audit performed by the same
auditor, even if the international reputable ones such as the Big 4, may be different from it appears in a well-developed institutional system.

And finally, the results of the characteristics (ownership concentration and type) of the largest shareholders in China’s listed companies are reported. In particular, controlling shareholders in general manipulate reported earnings through discretionary accruals over time. And, by comparing discretionary accruals of the State-controlled firms with those of the privately-owned companies, the State-controlled firms significantly engages in discretionary accruals over the study period. And, such effect is increased significantly in the post-Code period. Overall, the results indicate that the promulgation of 2002 Code on controlling shareholders and State domination doesn’t constrain their opportunistic behaviours through expropriating minority shareholders’ interests. Such inefficiency of 2002 Code illustrates the investor protection in Chinese stock markets is not enhanced after the Code, and it is relatively limited on mitigating EM practices.

10.3. Contributions of the Current Thesis
Theoretically, while Eisenhardt (1989) and Lambert (2001) argue that Agency Theory (AT) has been one of the most important theoretical paradigms applied in CG during the last 20 years, Marcher and Richman (2006) in a review of Transaction Cost Economics (TCE) and its applications find fewer literature has actually investigated the applications of TCE particularly to empirical issues between CG and EM. This thesis contributes to the literature by applying both AT and TCE to the theoretical framework for CG and EM research in the Chinese setting. Consistent with both AT and TCE, the findings indicate that improvements of CG system can be seen as the efforts to minimise EM practices in China. Among the monitoring mechanisms highlighted by both theories, board independence, audit committee, and institutional investors do play important roles in detecting and mitigating EM practices to certain extent in China’s listed companies, especially in the period after the Code. In contrast to the theories, executive
compensation and statutory auditor seem to be less effective in mitigating EM practices in China’s listed companies. For executive compensation, it may not be regarded as an effective alignment mechanism as proposed by AT, neither be treated as an incentive of engaging in EM practices proposed by TCE.

Empirically, the current thesis adds to the literature by studying the consequences of the resulting changes with regard to CG and EM after the Code. In brief, the findings indicate EM practices decrease significantly after the Code and several CG mechanisms (e.g., independent non-executives, audit committee, institutional investors) enforced by the Code contribute to such effect.

Methodologically, as mentioned earlier, the current thesis uses two models to obtain discretionary accruals: Modified Jones Model and L&R Model. While the former is widely used in the literature (e.g., Cohen et al., 2008; Ding et al., 2007; Leuz et al., 2003; Peasnell et al., 2005; Xie et al., 2003), the latter is introduced to control the misclassification issues in the Modified Jones Model, such as the extreme performance and growth of firms (Dechow et al., 1995; Gordon et al., 2004; McNichols, 2000). This thesis contributes to the accounting research by arguing that these two models should be viewed as complementary rather than contradictory or one form can supersede the other, as the results obtained from both models are nearly symmetric.

10.4. Implications of the Findings

10.4.1. Theoretical Implications

Theoretically, AT examines contract predominately from an ex ante incentive-alignment point of view while TCE is more concerned with crafting ex post governance structures within which the integrity of contract is decided. Despite such a difference, both of them provide similar arguments with regard to EM practices and the monitoring CG mechanisms.
In brief, AT argues that due to the problems of moral hazards and adverse selection that are originated from the separation of decision management and control, managers who do not bear a major share of the wealth effects of their decisions may engage in EM to maximise their own profits and to minimise the bonding and monitoring costs imposed on them by misleading shareholders about the underlying firms’ performance. TCE argues that managers and shareholders are bilaterally dependent according to high level of human specific asset and monetary-based specific asset (to pay the agent for services provided) respectively. In such an asset-specific transaction, due to the issues of uncertainty coupled with opportunism, managers may engage in EM in order to gain private benefits and to minimise the costs related to the premature transaction termination by artificially dressing up their firms' apparent performance. In order to mitigate such opportunistically discretionary behaviours, both theories highlight the role played by monitoring governance. For instance, the board that is composed of a majority of independent non-executives could be regarded as a major control instrument. Both the audit committee composed of outside directors and the accredited auditing firm can mitigate opportunistically discretionary behaviours in information disclosure. And, corporate monitoring conducted by institutional investors can force managers to focus more on corporate performance and less on opportunistic or self-serving behaviours.

The findings of the current thesis indicate that while executive compensation as an incentive alignment mechanism may not be effective as managers concern more about their political career in China, the major monitoring mechanisms (independent non-executives, audit committee, and institutional investors) proposed by both theories do constrain EM practices to certain extent. Thus, one important theoretical implication of the findings is that, as AT and TCE are complementary theories although the former is specialised on structuring the contractual relation between the principal and agent to provide appropriate incentives ex ante and the latter has advantage of focusing on the monitoring and control for agency problem during the contract execution, a theoretical framework by incorporating TCE with AT should be robust in investigating the
relationships between CG and EM in China’s stock markets.

**10.4.2. Managerial Implications**

The findings also provide some insightful implications to investors, stock market regulators and policy makers respectively.

The findings indicate that China’s listed companies engage in EM practices, and more importantly, listed companies seem to adopt a ‘big bath’ strategy through income-decreasing choices which are relatively hidden. Thus, before making the investment decisions, investors need to check firms’ financial statements with great caution. The findings of this thesis put forward some indications which may be helpful to detect EM activities: (1) the fewer the independent non-executives served on the boards coupled with non-existence of audit committee the higher the possibility of the companies to manipulate earnings; (2) the lower the level of institutional shareholding in the companies the higher the possibility of the companies to manipulate earnings; (3) the higher the level of shareholding concentration especially in hands of the State the higher the possibility of the companies to manipulate earnings; (4) poorly-performed and highly-leveraged companies tend to manipulate earnings; and (5) listed companies have the incentive to manipulate earnings in order to avoid being delisted and issue additional shares.

The findings also indicate that the independent non-executives decrease the incentives to manipulate reported earnings through effectively monitoring the listed companies, especially after the promulgation of the 2002 Code. In order to ensure their constant monitoring, the security market regulators need to further enforce more transparent compliance with the Code. And also, they need to consider extending CG Code to enforce the role of independent non-executive directors by clearly stating their tenure, number of positions could be held either inside (as independent non-executives of firms) or outside (as executives of other firms), their payment structure, and so forth.
In addition, the findings indicate that lack of qualified accounting professionals on the audit committee coupled with ineffective financial infrastructures (e.g., monitoring system, legal infrastructure and enforcement) in China constrain it from detecting and mitigating EM practices to certain extent. The Chinese accounting professionals, especially those who serve on the audit committee, need some in-depth training in accounting expertise in order to improve their abilities of providing high quality auditing so that greater oversight can be provided. Such training may need to be specific on EM and especially how to accurately detect and effectively mitigate the income-decreasing choices. Through such training, the auditing function of audit committee can be improved. The regulators also need to strengthen the requirements with regard to audit committee in the CG Code. Such as, it should require the audit committee to be entirely composed of independent non-executives (instead of majority as currently stated). It should require the majority of the non-executives served on the committee to have professional accounting and financial knowledge (instead of at least one as currently stated). And, an establishment of a code of practice particularly to audit committee also promote and enforce its role in CG.

The findings further indicate that international reputable auditors do not outperform their Chinese local CPAs with regard to mitigating EM practices. The security market regulators need to be cautious about their strategy of promoting the participation of the international audit firms (such as the Big 4). This is particularly true when high-profile international firms charge a much higher fee than their Chinese local counterpart, but not necessarily help China improve its monitoring system.

And finally, the findings indicate that investor protection against controlling shareholders’ expropriations through EM at the expense of the minority shareholders in China’s stock markets is still relatively weak. Institutional investors themselves are minority shareholders as their average shareholding is around 6% by the end of 2006, they may find themselves in a disadvantageous position in the Chinese stock markets and concern about their welfare being expropriated by other controlling shareholders.
They keep low shareholding and typically hold their shares for a short term and are less likely to invest in large amount of resources required for positive monitoring as other small and passive shareholders may free ride the resulted benefits. Consequently, the weak investor protection reduces their motivations in mitigating EM practices to certain extent. The policy makers need to consider improving the legal environment so as to make expropriation of minority shareholders more difficult. Indeed, they need to consider legal reforms more radical in nature, and give shareholders explicit rights to either prevent expropriation or seek remedy when it occurs, such as the opportunity to sue the controlling shareholders for oppressive conduct.

10.5. Limitations and Future Research

With regard to the results, the establishment of the audit committee and the shareholdings held by the institutional investors are significantly correlated with income-increasing discretionary accruals. However, the correlations are insignificant when taking the earning-decreasing discretionary accruals into consideration. Although the relevant explanations have been provided, it will still be very interesting if the future research can break-down the earning-decreasing discretionary accruals into different items and examine the impacts of these two mechanisms on each specific item. And as indicated by the results, although the level of executive compensation is reported to be neither statistically nor economically related to EM practices in China, it will be very interesting in the future research to identify the determinants of executive compensation and investigate the impacts of those determinant factors on EM practices.

While the findings provide evidence suggesting that the independent directors on the board do significantly mitigate the level of EM in China, their financial/accounting accounting background may have some impacts. It will be very interesting if the future research can partition firms according to the number of independent directors who have the financial/accounting background on the board (e.g. more vs. few members with
financial/accounting background), and compare the corresponding impacts on EM practices.

Following the similar studies on investigating specific-time effects (Cohen et al., 2008; Peasnell et al., 2000), OLS regression model (the justification of model estimation is provided in Chapter 8) is used by this thesis. However, as the China’s 2002 Code may have some lagged impacts on both EM practices and CG, it will be very interesting if the future research can use the dynamic or lagged regression models to investigate the impacts of the Code.
NOTES:

1 By following most of Williamson’s works, this study also sets the frequency of transactions as recurrent to simplify the description. However, an interesting analysis between occasional and recurrent frequency can also be found in Williamson, 1979, pp.246-247.


3 A trade secret is a formula, practice, process, design, instrument, pattern, or compilation of information which is not generally known or reasonably ascertainable, by which a business can obtain an economic advantage over competitors or customers. In some jurisdictions, such secrets are referred to as “confidential information” or “classified information” (http://en.wikipedia.org/wiki/Trade_secret).

4 This argument is related to the issues of asymmetric information and disclosure, however it is beyond the scope of the current study. More information can be found in Akerlof (1970), Spence (1973), Stiglitz and Rothschild (1976), Boyer and Ortiz-Molina (2008), and etc.

5 By following the argument of Jensen and Meckling (1976) and Jensen (1993, 1994, 2004b), the term monitoring that is used in this paper includes more than just measuring or observing the behaviour of the agent. It includes efforts on the part of the principal to ‘control’ the behaviour of the agent through budget restrictions, compensation policies, operating rules, etc.

6 In their paper of The nature of man, Jensen and Meckling (1994) make a comparison of the REMM model with the other four different models (i.e. the Economic Model, the sociological Model, the Psychological Model, and the Political Model) in demonstrating human behaviours. And, they conclude that the explanatory power of REMM dominates that of all the other models summarised. REMM incorporates the best of each of these models.

7 According to Padilla (2002), risk-averse is necessarily related to the fact that individuals are not evolving in a world of perfect and complete information. And, the literature usually assumes that the principal is risk-neutral while the agent is risk-averse.

8 More examples of physician and patient, insurer and insured, and borrower and lender can be found in Padilla’s work (2004), p.7.

9 Several researchers do provide the comprehensive comparison of these two models of board structure, such as Haassen, G.F. (2002), Mallin (2007), Monks and Minow, (2008), Stiles and Taylor (2001).

10 Although the average number of shares held by institutional investors increases approximately to 6% in 2006 from 2.5% in 1995 (CSRC, 2006), it is still relatively low compared to the shares held by the largest shareholders in listed companies.


The perspectives of EM can be considered from different points of view. For examples, rather than the opportunistic and informative perspectives. Scott (2005) views EM from the contracting and financial reporting perspectives.

According to Fama and Jensen (1983b), the decision process has four steps: initiation, ratification, implementation, and monitoring. Initiation and implementation of decisions are allocated to the agents (decision management). The term decision control includes the ratification and monitoring of decisions (normally done by principals).

Agency costs are defined as the sum of (1) the monitoring expenditures of the principal, (2) the bonding costs by the agent, and (3) the residual loss. Residual loss is the reduction in the value of the firm that obtains when the entrepreneur dilutes his ownership. The shift out of profits and into managerial discretion induced by the dilution of ownership is responsible for this loss. (Fama and Jensen, 1983b, Jensen, 2000).

As argued by Brav et al., (2005), it has been well-known that managers are reluctant to cut dividends. It is mainly consistent with the large negative stock price reactions observed around the announcement of dividend cuts.

For an analysis of these components, see Mallin (2007), pp.143-147; Murphy (1999), pp.9-25.

Using the model of Black and Scholes (1973), option intensity is measured as the change in the value of the executive’s option portfolio from a $1000 change in the value of the firm’s equity. Refer to Denis et al., (2006) pp.476-478 for an analysis on measuring option intensity.

In the late 1970s, Watts and Zimmerman laid the foundations for Positive Accounting Theory which aims to explain and predict accounting practice. Within the Positive Accounting literature, four major hypotheses have been included: the bonus plan hypothesis, the debt equity hypothesis, the income smoothing hypothesis, and the political costs hypothesis. See Kothari (2001) for more details about the Positive Accounting Theory.

Usually, a specific regulation has the impacts on the whole society. For instance, the anti-dumping law imposes countervailing duties on foreign importers can bring important benefits to domestic producers such as the ability to raise prices, production and sales; to improve their financial condition; and to maintain employment. On the other hand, the domestic customers may suffer from such regulations by pay more on the same products than before.

Firms in electronic industry of Taiwan face strong product competition and require professional management teams to be competitive. Typically, the institutional ownership dominates the ownership of board of electronic firms leading to less severe agency problem in electronic firms in Taiwan; thus lower EM (Kao and Chen, 2004, pp.104-105).

The study is based on reported results as of the companies’ annual reports for 2002. Needless to say, a sequence in time does not establish causation. Unfortunately, the authors do not have a control group of companies the have not introduced
independent directors, thus leaving open possibility that the performance of many companies may have suffered simply due to economic conditions.

24 For convenience I use the term Big 4 auditor to identify the large international audit firm networks. Some of the studies I refer to were conducted before the mergers resulted into a reduction to four international audit networks.

25 The six countries include Belgium, Finland, France, Netherlands, Spain, and United Kingdom.

26 An index aggregating shareholder rights which they label as “antidirector rights.” The index is formed by adding one when: (1) the country allows shareholders to mail their proxy vote to the firm; (2) shareholders are not required to deposit their shares prior to General Shareholders Meetings; (3) cumulative voting or proportional representation of minorities in the board of directors is allowed; (4) an oppressed minorities mechanism is in place; (5) the minimum percentage of share capital that entitles a shareholder to call an Extraordinary Shareholders Meeting is less than or equal to 10 percent; or (6) shareholders have pre-emptive rights that can only be waived by a shareholders vote. The index ranges from 0 to 6. Source: La Porta et al., (1998, 1999).

27 Eight countries (cities) are composed of Hong Kong (China), Indonesia, Japan, Korea, Rep. of, Malaysia, Philippines, Singapore, Taiwan, and Thailand.

28 Incentive effect is related to the concept of large shareholders have strong incentives to maximize their firms’ value and are able to collect information and oversee managers, and so can help overcome the conflicts of interest between shareholders and managers. On the other hand, entrenchment effect is more considering with the notion of large investors may represent their own interests, which need not coincide with the interests of other investors in the firm, or with the interests of employees and managers (Claessens et al., 2002).

29 Nine countries (cities) are composed of Hong Kong (China), India, Indonesia, Korea, Rep. of, Malaysia, Philippines, Singapore, Taiwan, and Thailand.


32 For instance, current Chinese securities laws do not allow proportionate legal enforcement. Regulators can only take extreme actions (prison sentences or warnings); they cannot impose moderate penalties (Liu and Lu, 2007, p.885).

33 Four different types of shareholder proposals examined: (1) external corporate control market issues; (2) internal corporate governance issues; (3) compensation-related issues; (4) other miscellaneous; (5) mixed issues.

34 In the study of Ho and Wang (2001), only 1 H-share Chinese company responded to their questionnaires; the rest are either Hong Kong firms or the foreign firms. And, Chen and Zhang (2010a) only study 103 B-share Chinese companies, given the total number of listed firms in China is 1,488 by the end of 2007.

35 According to Chen et al., (1999), as a result of economic reform aimed at rebuilding a market economy, China undertook far-reaching changes to its accounting system in the late 1980s and 1990s. In 1992, there was a nationwide campaign aimed at aligning China’s accounting practices with internationally accepted practices. The slogan of the
campaign was set as “connecting the track with international practices”. For more
details of accounting changes, refer to Chen et al., (1999, p.93). More recently, a
special government policy implemented by the CSRC in 2001 that prohibited a firm’s
management from providing different accounting estimates based on its Chinese
GAAP-based reports and its IFRS-based reports for the same business transactions
and events. For more details of this policy, refer to Chen and Cheng (2007), Chen and
Zhang (2010a).
37 The detailed analyses can be found at the Gujarati (2003) Ch.10—Multicollinearity
(pp. 341-375), Ch.11—Heteroscedasticity (pp. 387-439), Ch.12—Autocorrelation (pp.
441-504), Ch.13—Misspecification (pp. 506-559), and Greene (2003) Ch.9 &
10—Multicollinearity, Ch.11—Heteroscedasticity, Ch.12—Autocorrelation,
Ch.21—Misspecification.
References:


BRC (Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit
Committees) (1999), Report and Recommendations of the Blue Ribbon Committee on
Improving the Effectiveness of Corporate Audit Committee. New York, NY.
economic growth Potential hindered by guanxi?’, Working paper, University of
Manchester.
reporting and its association with abnormal accruals’. Journal of Accounting and
Economics, 37:139-165.
Burgstahler, D. and D., Dichev (1997) ‘Earnings management to avoid earnings
to achieve zero and small positive earnings surprises’. Journal of Business Finance
and Accounting, 33:633-652.
Corporate Governance, Gee Publishing, London.
Law, Business & Finance, 13(1):82-120.
dismissals following ‘New’ going-concern reports’. The Accounting Review.78(1):95-
117.
Charkham, J. (2005) Keeping better company: Corporate governance ten years on. 2nd
Chinese GAAP vs. IAS; Evidence from Shanghai stock exchange”, Accounting
Horizons, 13(2):91-111.


CSRC (2002b) Policy of suspension and/or de-listing loss-making companies from the stock market, can be found at (Chinese version only):


324


326


