



Copyright Undertaking

This thesis is protected by copyright, with all rights reserved.

By reading and using the thesis, the reader understands and agrees to the following terms:

1. The reader will abide by the rules and legal ordinances governing copyright regarding the use of the thesis.
2. The reader will use the thesis for the purpose of research or private study only and not for distribution or further reproduction or any other purpose.
3. The reader agrees to indemnify and hold the University harmless from and against any loss, damage, cost, liability or expenses arising from copyright infringement or unauthorized usage.

IMPORTANT

If you have reasons to believe that any materials in this thesis are deemed not suitable to be distributed in this form, or a copyright owner having difficulty with the material being included in our database, please contact lbsys@polyu.edu.hk providing details. The Library will look into your claim and consider taking remedial action upon receipt of the written requests.

**THE RESEARCH ON THE ECONOMIC EFFECTS OF
MANDATED ICFR DISCLOSURE IN CHINA:
FROM INSIDERS' PERSPECTIVE**

CAO JIAN

PhD

The Hong Kong Polytechnic University

This programme is jointly offered by

The Hong Kong Polytechnic University and Sun Yat-sen University

2018

The Hong Kong Polytechnic University

School of Accounting and Finance

Sun Yat-sen University

School of Business

**The Research on the Economic Effects of Mandated ICFR
Disclosure in China: From Insiders' Perspective**

CAO JIAN

A Thesis Submitted in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy

June 2018

Certificate of Originality

I hereby declare that this thesis is my own work and that, to the best of my knowledge and belief, it reproduces no material previously published or written, nor material that has been accepted for the award of any other degree or diploma, except where due acknowledgement has been made in the text.

CAO Jian

(Signed)

(Name of Student)

Abstract

Using a survey of corporate insiders from 1,167 Chinese listed firms, this thesis examines the direct effects of compliance with mandated ICFR disclosure. I find that corporate insiders of Chinese listed firms overwhelmingly perceive that compliance with ICFR disclosure rules has large positive effects on the quality of financial reports, firm performance, and confidence of capital market participants. Indeed, while the costs of compliance are notably large and remarkably similar to those emerging from U.S.-based evidence, the mean reported total cost for the first year of EICS compliance is arguably high (at 6.43 million RMB); a large majority of respondents perceive that the benefits far outweigh the costs, especially among firms with longer experience.

The results of additional tests show that the benefits of EICS compliance reported in the survey map into real observable benefits of ICFR disclosure. In particular, firms that report higher benefits of compliance also tend to be recognized as having higher ICFR quality and to enjoy a lower cost of capital. The results of my tests, however, show that the effects of ICFR disclosure rules depend crucially on the extent to which firms are susceptible to market forces. In particular, first, I find that the effects of EICS compliance are larger and map into real observable benefits predominantly among firms with low government equity ownership. Second, I find that firms from provinces with less developed local market institutions tend to report higher benefits that are also more tightly linked with real observable effects of ICFR disclosure.

Further analysis indicates that the insiders' attitude towards the importance of internal control would crucially determine the resource allocation behavior the firm will choose, and ultimately induce the corresponding compliance effects. This

evidence may provide regulatory implications that it is very crucial for regulators to advocate the importance of internal control and stimulate managers to raise their inherent awareness of such control, so that they would design proper rule systems and pay more attention to internal control, which will in turn induce good internal control implementation.

Overall, I conclude that corporate insiders ascribe to ICFR disclosure rules important benefits that are unique to China's institutional environment and may extend to other emerging markets that are considering similar regulation. The findings of my thesis support the idea that the effectiveness of mandated ICFR disclosure depends crucially on the broader market and institutional environment in which firms operate.

Keywords: Internal Controls over Financial Reporting, Economic Effects, Regulation, China, Insiders

Acknowledgement

First and foremost, I would like to express my sincere gratitude to my chief supervisor, Prof. C. S. Agnes Cheng, for her constant encouragement, great support, and inspiring guidance provided during my Ph.D. study at The Hong Kong Polytechnic University, which are immensely valuable to both my personal and professional life. I could not have imagined having a better advisor and mentor for my Ph.D. study.

I am also grateful to Prof. Bin Lin, who is my chief supervisor at Sun Yat-sen University and my co-supervisor at PolyU, for his long-standing support of this joint Ph.D. programme. He also provided me with insightful suggestions about my future research study.

In addition, I would like to thank Prof. Wilson Tong, Prof. Nancy Su, Dr. Steven Wei and other faculty members I met in the School. They inspired me to devote myself to research and gave me invaluable encouragement over my study and research.

I would also like to thank my Ph.D. fellows (Jiajia Fu, Chenxing Meng, Ciwei Dong, etc.) and friends (Gary Chin, Jason Yao, Jessie Chen, Yuxiang Zhong, Zhengyun Jiang, Cheng Zeng, etc.) at PolyU, who have made my doctoral study memorable and fruitful.

Finally, I would like to extend my deepest appreciation to my family for their encouragement, patience, understanding, consideration, and endless love.

Table of Contents

Certificate of Originality	i
Abstract	ii
Acknowledgement	iv
List of Tables	vii
List of Appendices	viii
Chapter 1 Overview	1
1.1 Introduction.....	1
1.2 Research Question and Main Findings.....	2
1.3 Contributions.....	7
1.4 Organization of the Thesis	9
Chapter 2 Institutional Background	10
2.1 Internal Control Regulations in U. S.....	10
2.2 Internal Control Norms in China.....	15
2.3 Summary	20
Chapter 3 Literature Review	22
3.1 Reports of Internal Control Implementation	22
3.1.1 IMA’s Report on Section 302/404 and IC-IF (1992)	22
3.1.2 SEC’s Report on Section 404 Compliance.....	23
3.1.3 Deloitte’s Reports on Internal Control of China’s Listed Firms	24
3.2 Studies Based on Empirical Data	25
3.2.1 Determinants of Internal Control Effectiveness	25
3.2.2 The Economic Consequences of Internal Control Effectiveness.....	30
3.3 Summary	38
Chapter 4 Research Design and Empirical Results	40
4.1 Survey Method and Data.....	40
4.1.1 Survey Design and Launch	40
4.1.2 Survey Response Rates	42
4.2 Descriptive Statistics for the Reported Effects of EICS Compliance.....	43
4.2.1 Benefits	43
4.2.2 Costs.....	44
4.2.3 Net benefit.....	46
4.2.4 Correlation between Reported Effects.....	46
4.3 Determinants of the Perceived Effects of EICS Compliance	47
4.3.1 Explanatory Variables.....	49
4.3.2 Correlation Analysis	52
4.3.3 Multiple Regression Analysis of Perceived Benefits	53
4.3.4 Multiple Regression Analysis of Compliance Costs and Benefits Net of Costs	54

4.4 Do the Perceived Effects of EICS Compliance Map into Real Observable Benefits?	58
4.5 Do the Effects of Mandated ICFR Disclosure Depend on Local Market Institutions?	62
4.6 Further Analysis	64
4.6.1 Attitude towards Internal Control and Department Establishment.....	65
4.6.2 Attitude towards Internal Control and Rules and Regulations Establishment.....	67
4.6.3 Attitude towards Internal Control, Rules and Regulations Establishment and ICFR Quality.....	70
4.7 Summary	72
Chapter 5 Conclusion and Future Research Opportunities	74
5.1 Conclusion	74
5.2 Research Opportunities	76
Tables.....	77
Appendices.....	102
References.....	125

List of Tables

Table 4.1 Survey Participation by Industry and Individual Respondent's Title and Tenure	77
Table 4.2 Survey Responses on the Costs, Benefits, and Net Benefit of EICS Compliance.....	78
Table 4.3 Correlation Coefficients between Survey Responses on the Costs, Benefits, and Net Benefit of EICS Compliance.....	80
Table 4.4 Firm Characteristics: Sample Means and Sample Correlations	81
Table 4.5 Determinants of Perceived Benefits of EICS Compliance.....	84
Table 4.6 Determinants of Reported Costs of EICS Compliance	86
Table 4.7 Determinants of Perceived Benefits Net of Costs of EICS Compliance.....	88
Table 4.8 Relation between ICFR Quality and Perceived Benefits of EICS Compliance	90
Table 4.9 Relation between Cost of Capital and Perceived Benefits of EICS Compliance	92
Table 4.10 Perceived Benefits of EICS Compliance Conditional on Province Marketization	94
Table 4.11 Relation between Attitude towards Internal Control and Department Establishment.	95
Table 4.12 Relation between Attitude towards Internal Control and Personnel Internal Control Performance Appraisal.....	97
Table 4.13 Relation between Attitude towards Internal Control and Rules and Regulations Establishment	98
Table 4.14 Sobel Test - Attitude towards Internal Control, Rules and Regulations Establishment, and ICFR Quality	100

List of Appendices

Appendix A The Key Events of Section 302 and 404 Implementation.....	102
Appendix B Internal Control Norms in China	104
Appendix C Comparison of Surveys Conducted by IMA and SEC in the U. S.....	112
Appendix D Reports Conducted by Deloitte in China	114
Appendix E Variable Definitions	119
Appendix F Firm-Level Mean Response to 19 Benefit Questions.....	120
Appendix G Checklist for DIB Internal Control Disclosure Index	121

Chapter 1 Overview

1.1 Introduction

Reliable and transparent disclosure should alleviate information asymmetries and agency conflicts between insiders and outsiders, which may lead to superior market outcomes.¹ Regulation can facilitate these objectives, especially when market discipline fails (e.g., Zingales 2009).² Mandatory disclosure, however, imposes direct and indirect costs that might not be worth its benefits (e.g., Leuz and Wysocki 2016). These concerns are particularly pressing when regulation is a response to public sentiment that leads the government to overreact. Among others, Hart (2009) suggests that the U.S. Sarbanes-Oxley Act (SOX) of 2002, enacted in the wake of a wave of corporate scandals, provides such an example.

Section 404, in particular, has been at the center of the debate about the value of SOX. This section requires firms to report on the effectiveness of their internal controls over financial reporting (ICFR) – 404(a) – and to have an independent audit of the firm's assessment – 404(b). Although these requirements purportedly aim to increase the reliability of financial reports, several researchers and practitioners have argued that they impose disproportionate compliance costs without real benefits. Using survey data, Alexander et al. (2013) show that, while corporate insiders ascribe some material benefits to Section 404, they do not believe that those benefits outweigh the corresponding compliance costs, especially among smaller firms.

Despite concerns about Section 404 in the U.S., several countries followed

¹ Several studies report strong relations between disclosure quality and market outcomes, such as the cost of capital (Francis et al. 2005; Chen et al. 2009), foreign investment and international portfolio flows (Gelos and Wei 2005), market liquidity (Eleswarapu et al. 2004), and ownership structure (Guedhami et al. 2006).

² Cross-country evidence indicates that disclosure and securities regulation are associated with a lower cost of capital (e.g., Hail and Leuz 2006) and greater financial development and economic growth (e.g., La Porta et al. 1997, 1998, 2006).

suit.³ In particular, Chinese authorities issued the Enterprise Internal Control Standard (EICS), closely resembling Section 404, in June 2008. The staggered implementation of the new requirements began in July 2009 and, by the end of 2014, all Main Board-listed firms were required to comply. While there is a plethora of studies examining U.S.-listed firms' experience with SOX, there is no evidence that speaks directly to the effects of similar rules outside the U.S.

Given the difference in legal institution and market between U.S. and China, such as a poorer legal environment and stronger government intervention, the U.S.-based inference may not be extended to the world's largest emerging market. In this thesis, I mainly address the issues about the effects of mandated ICFR disclosure rules on the basis of survey data from the insiders of Chinese listed firms, aiming to provide incremental empirical evidence for the economic consequences of mandated ICFR disclosure rules outside the U.S., and to promote the establishment and supervision of firms' internal control systems for relevant regulators.

1.2 Research Question and Main Findings

This thesis investigates the direct economic consequences of EICS on compliant firms in China. To conduct the analysis, I use a comprehensive survey of corporate insiders on the economic consequences of EICS compliance. The survey, administered by the China Securities Regulatory Commission (CSRC) during the Fall of 2014, elicited responses from managers of 2,173 unique Chinese listed companies, including more than 80% of the firms (1,167) complying with EICS at

³ For example, Canada, Japan, and France introduced rules closely resembling Section 404; Australia, Germany, and the United Kingdom introduced 'comply or explain' rules, while Mexico and Brazil maintained a regime of voluntary compliance.

that time.⁴ The survey included detailed questions about the costs of compliance, as well as its perceived benefits and benefits net of costs. I analyze the survey data to address several important questions: Do insiders ascribe benefits to EICS compliance? Do the benefits outweigh the costs? Do the effects of compliance vary systematically across respondent firms? Do the perceived benefits map into measurable real benefits? Do the reported benefits and their relation with measurable real benefits depend on the degree to which the firms are susceptible to market forces? Last but not least, do the insiders' attitudes towards the importance of internal control influence the effects of mandated ICFR disclosure after controlling for respondent firm characteristics?

The survey responses reflect a range of experiences with EICS. Nearly half of the respondent firms were compliant with EICS at the time of the survey, but the others were not. While the questions focused predominantly on the most recently completed fiscal year (2013), the survey also asked respondents to report compliance costs and perceived net benefits for the preceding two years (2011 and 2012) as well as expected costs for 2014. Hence, similar to Alexander et al. (2013), I exploit variation within and across firms to assess the impact of compliance experience on the effects of ICFR disclosure rules.

Overall, the evidence is consistent with a causal link between mandated ICFR disclosure and improvements in the quality of the firms' information environment. Specifically, 81.7% of respondent firms ascribe some benefits to EICS compliance. Respondents from a majority of firms cite a positive impact on the quality of disclosure (88.8%), firm performance (81.5%), achievement of EICS' objectives (87.4%), and market participants' confidence (68.9%). Aggregating the responses of

⁴ The complete survey data with matching obfuscated firm characteristics are available upon request.

survey participants from the same firm yields a similar picture. These figures are notably larger than those in Alexander et al. (2013) for similar questions in the U.S.-based survey.

Notwithstanding the perceived benefits of compliance, the mean reported total cost for the first year of EICS compliance is arguably high, at 6.43 million RMB. This figure is remarkably similar to the one emerging from the U.S.-based evidence. Also similar to the findings in Alexander et al. (2013), there is some evidence that compliance costs decrease in the second year of compliance due to some start-up costs. However, I also find that the costs marginally increase again in the third year of compliance. This uptick in compliance costs is mostly due to increased investments in information technology and human resources devoted to EICS compliance by firms that started adopting EICS when it was first implemented. Overall, it appears that the resources required by Chinese firms for compliance with the requirements of EICS are comparable with those by U.S. firms for Section 404 compliance.

When asked for an assessment of the EICS compliance benefits net of costs (net benefits, henceforth), insiders from Chinese firms tend to paint a notably more positive picture than those from U.S. firms. In particular, the mean assessment of the net benefits for the first year of EICS compliance is mildly negative, with only 40% of firms reporting positive net benefits. Nonetheless, this proportion is about four times larger than the one reported for U.S. firms in Alexander et al. (2013). Moreover, the differences in the perceived net benefits of mandated ICFR disclosure between China and the U.S. become more striking as compliance experience increases. Specifically, 71% (90%) of firms in China report positive net benefits for the second

(third) year of compliance with EICS on average. This stands in stark contrast with the U.S.-based evidence, where the mean perceived net benefits of compliance improve only mildly but remain negative as firms gain compliance experience.

Overall, my first set of results suggests that Chinese listed firms largely recognize benefits from EICS compliance and, despite its costs, perceive its net benefits to be positive – at least after the first year. When compared to the U.S. evidence, the findings support the idea that the effects of mandatory disclosure rules depend on the broader market and legal environment where those rules are implemented (e.g., Leuz and Wysocki 2016; Christensen et al. 2016).

I next examine whether the reported effects of EICS compliance vary systematically across respondent firms, with a particular focus on the contrast between state-owned enterprises (SOEs) and non-SOEs. The evidence from these tests shows that government ownership has a notable influence on the systematic variation in the reported effects of EICS compliance. First, I find that the perceived benefits of EICS compliance are greater among firms that are larger, more mature, and less complex. While these findings are in line with those for U.S. firms, they hold among non-SOEs only. In contrast, no factor systematically explains benefits of EICS compliance among SOEs. Second, I find that larger and cross-listed firms invest more resources in EICS compliance, independent of government ownership status. For SOEs, the costs are higher among firms that are younger, with a dual-class structure, and less reporting failures (i.e., restatements or internal control deficiencies). For non-SOEs, the costs are lower among firms that are less complex and have at least two years of compliance experience. Once again, while the evidence for SOEs largely aligns with the U.S. evidence, the patterns I find among

non-SOEs are more unique. Third, I find that there is a strong positive relation between the net effects of EICS and the firm's compliance experience. While this pattern holds among both SOEs and non-SOEs, the net benefits of non-SOEs decrease with the complexity of firm operations and ownership structure.

The evidence from additional tests shows that the perceived benefits of EICS compliance are related to measurable real benefits. Specifically, I find that greater benefits reported in the survey are systematically related to higher quality of firm internal controls and a lower cost of capital. In line with the cross-country evidence in Hail and Leuz (2006), these results suggest that mandated disclosure of firm ICFR can indeed improve the reliability of the financial reports and, consequently, facilitate access to capital markets.

However, my results also show that the real benefits of mandated ICFR disclosure depend crucially on the nature of firm ownership. Specifically, while the relations between survey-based measures of EICS benefits and real benefits are strong (and significant) among non-SOEs, I find that this is not the case among firms with large government ownership. In line with my earlier results, this evidence indicates that the susceptibility of firm ownership structure to market forces influences the potential real benefits of mandated ICFR disclosure. In my context, it seems that political considerations peculiar to SOEs hamper the value of rules that purportedly aim to improve the reliability of their disclosures.

Following Wang et al. (2008), I exploit cross-province variation in local market development to further assess the effect that market-based incentives have on the consequences of EICS compliance. This supplemental evidence further supports the tenet that the effects of mandatory disclosure depend on the strength of

market-based incentives. Namely, I find that the perceived benefits of EICS compliance are significantly higher when the firm is located in a province with less developed market institutions. Moreover, consistent with this result, I find that a relation between the reported compliance benefits and measurable real benefits only holds in provinces with a low degree of marketization. These results line up consistently with the differences in the effects of mandated ICFR disclosure between the U.S. and China emerging from my earlier tests. In particular, the evidence indicates that there is substitution between mandatory disclosure and market-based incentives, whereby disclosure rules produce larger positive effects when market forces are weaker.

The results of further analysis, my last set of tests, indicate that the attitude towards the importance of internal control would crucially determine the resource allocation behavior the firm will choose, and ultimately induce the corresponding compliance effects. This evidence provides regulatory implications that it is very crucial for regulators to advocate the importance of internal control and stimulate managers to raise their inherent awareness of such control, so that they would design proper rule systems and pay more attention to internal control, which will in turn induce a good internal control implementation.

1.3 Contributions

The survey data that I analyze have some unique desirable features. First, the response rate (80%) and the number of respondent companies are very high compared to prior survey studies, covering almost all Chinese listed firms that comply with EICS. Second, the survey respondents comprise different levels of management from senior

executives, such as the Chairman, CEO, Board Secretary, and CFO, to lower-level managers, such as Internal Auditor, IT Director, and IC Director. This extensive coverage should provide a more comprehensive picture of corporate insiders' views on the effects of EICS compliance. Nevertheless, there are admittedly some shortcomings that may affect the data. In particular, the responses may be affected by the respondents' personal bias or the fact that a regulator administered the survey. However, it is not obvious *ex ante* that these considerations would affect my cross-sectional tests.

Overall, this study contributes to the literature on disclosure regulation in general and the economic consequences of mandated ICFR disclosure in particular. The evidence yields several unique insights. First, while there is a plethora of studies examining U.S.-listed firms' experience with SOX, there is no evidence that speaks directly to the effects of similar rules outside the U.S. Given the differences in market and legal institutions between the U.S. and China, U.S.-based inferences may not extend to the world's largest emerging market. The evidence in Christensen et al. (2016) for the effects of European Union directives on securities regulation across member countries suggests that this is important even when institutional differences are not dramatic. Therefore, the evidence may prove useful to regulatory institutions in emerging markets that are interested in the cost-benefit trade-off of introducing ICFR disclosure rules.

Second, within China, there is substantial variation in the degree of marketization across provinces (Fan and Wang 2003; Wang et al. 2008). I exploit the unique opportunity provided by this setting to assess how firms' experience with ICFR disclosure rules varies with market-based incentives, holding the country's institutions

constant.

Finally, along the same lines, I exploit the preponderance of SOEs among Chinese listed companies to assess whether the susceptibility of firm ownership structure to market forces influences the value of ICFR disclosure rules.

1.4 Organization of the Thesis

The remainder of the thesis is structured into four chapters as follows. Chapter 2 introduces institutional backgrounds of internal control regulations in the U.S. and China. Chapter 3 presents the literature review about internal control effectiveness. Chapter 4 presents the thorough analysis of economic consequences of mandated ICFR in China. Chapter 5 concludes the findings and recommends future research opportunities.

Chapter 2 Institutional Background

This chapter introduces the institutional background of internal control regulations in the U.S. and China. Section 2.1 introduces seminal internal control regulations in the U.S. Section 2.2 reviews internal control norms in China. Section 2.3 summarizes the findings of this chapter.

2.1 Internal Control Regulations in the U.S.

The U.S. has the most developed and diversified financial markets in the world, and has also promulgated and implemented the most stringent internal control disclosure regulations.

The Committee of Sponsoring Organizations of the Treadway Commission (COSO) released *Internal Control-Integrated Framework (IC-IF)* in September, 1992. According to the report of *IC-IF (1992)*, “Internal Control is broadly defined as a process, effected by an entity’s board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories: Effectiveness and efficiency of operations; Reliability of financial reporting; Compliance with applicable laws and regulations”. As defined in *IC-IF (1992)*, Internal Control consists of five interrelated components: Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring.

On June 30, 2002, the U.S. government signed SOX into law to protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws, and for other purposes. SOX is the most seminal

internal control disclosure regulation. Issuers registered with the U.S. Securities and Exchange Commission (SEC) are required to disclose internal control information in respect of disclosure controls and procedures and internal control over financial reporting according to SOX.

Section 302 (Corporate Responsibility for Financial Reports) of SOX is the most relevant provision to disclosure controls and procedures. The Commission shall, by rule, require, for each company filing periodic reports under section 13(a) or 15(d) of the Securities Exchange Act of 1934, that the principal executive officer or officers and the principal financial officer or officers, or persons performing similar functions, certify in each annual or quarterly report filed or submitted under either such section of such Act that:

1. the signing officer has reviewed the report;
2. based on the officer's knowledge, the report does not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements made, in light of the circumstances under which such statements were made, not misleading; and
3. based on such officer's knowledge, the financial statements, and other financial information included in the report, fairly present in all material respects the financial condition and results of operations of the issuer as of, and for, the periods presented in the report.

The signing officers:

1. are responsible for establishing and maintaining internal controls;
2. have designed such internal controls to ensure that material information relating to the issuer and its consolidated subsidiaries is made known to such officers

by others within those entities, particularly during the period in which the periodic reports are being prepared;

3. have evaluated the effectiveness of the issuer's internal controls as of a date within 90 days prior to the report; and

4. have presented in the report their conclusions about the effectiveness of their internal controls based on their evaluation as of that date.

Section 302 took effect on August 29, 2002, and no substantive changes have been made since its implementation. It is noteworthy that this section has no effect on foreign reincorporations.

Section 404 (Management Assessment of Internal Controls) of SOX is the most relevant provision to internal control over financial reporting disclosure, which contains two parts, 404(a) and 404(b). Section 404(a) indicates that the Commission shall prescribe rules requiring each annual report required by section 13(a) or 15(d) of the Securities Exchange Act of 1934 to contain an internal control report, which shall:

1. state the responsibility of management for establishing and maintaining an adequate internal control structure and procedures for financial reporting; and

2. contain an assessment, as of the end of the most recent fiscal year of the issuer, of the effectiveness of the internal control structure and procedures of the issuer for financial reporting.

Section 404(b) indicates that with respect to the internal control assessment required by Section 404(a), each registered public accounting firm that prepares or issues the audit report for the issuer shall attest to, and report on, the assessment made by the management of the issuer. An attestation made under this subsection

shall be made in accordance with standards for attestation engagements issued or adopted by the Public Company Accounting Oversight Board (PCAOB). Any such attestation shall not be the subject of a separate engagement.

Due to the consideration of cost-benefit tradeoff, especially for smaller firms, the SEC was concerned that smaller firms were overregulated; thus it postponed the implementation date several times. Appendix A illustrates the key events of Sections 302 and 404 implementation.

The PCAOB released *Auditing Standard No.2* to standardize internal control audit issues of external auditors in June 2004.

The COSO issued *Internal Control over Financial Reporting--Guidance for Smaller Public Companies* to settle specific issues related to internal control establishment in smaller public companies in June 2006. This guidance provided solutions for smaller public companies to use IC-IF (1992) to design and implement internal controls over financial reporting in accordance with the cost-effectiveness principles, and incorporated the main views and illustrative tools on internal controls over financial reporting.

The PCAOB released *Auditing Standard No. 5*, in the replacement of Auditing Standard No. 2, to further specify integrated audit issues in June 2007.

In the twenty years since the inception of the original *IC-IF (1992)*, business and operating environments have changed dramatically, becoming increasingly complex, technologically driven and global. In May 2013, COSO presented the updated *IC-IF* to enable organizations to effectively and efficiently develop and maintain systems of internal control that can enhance the likelihood of achieving the entity's objectives and adapt to changes in the business and operating environments.

Compared to *IC-IF (1992)*, *IC-IF (2013)* still adopts the original definition and five components of internal control, but notably, it sets out 17 principles representing the fundamental concepts associated with components applied to each category of objective (Operations, Reporting, and Compliance), as well as to objectives and sub-objectives within a category.

Notably, Section 404(b) requires issuers to mandatorily provide the auditor's attestation report on internal control, which increases issuers' compliance cost burden, and some firms, especially smaller firms, lobby against the requirement. Empirical studies have found that quite a number of smaller firms delist or turn to other securities markets in order to avoid internal control audit, which adversely affects the development of U.S. securities markets. Thus, the U.S. Congress enacted the Dodd-Frank Wall Street Reform and Consumer Protection Act in 2010, and Section 989G "Exemption for Nonaccelerated Filers" states that "Section 404(b) shall not apply with respect to any audit report prepared for an issuer that is neither a 'large accelerated filer' nor an 'accelerated filer'".⁵

Because of the global economic downturn and the high unemployment rate in the U.S., President Obama signed the legislation (Jumpstart Our Business Startups (JOBS) Act) into law in order to create a good capital environment for small and medium enterprises and promote their development. Among other things, the JOBS Act creates a transitional "on-ramp" for a new category of issuer, emerging growth

⁵ An accelerated filer is an issuer that:

1. has a public float of at least \$75 million as of the last business day of the most recently completed second fiscal quarter;
2. as of such fiscal year-end has been subject to the reporting requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 for at least 12 calendar months;
3. has filed at least one annual report under the Exchange Act; and
4. is not eligible to file abbreviated reports on forms 10-KSB and 10-QSB.

companies,⁶ to encourage them to pursue initial public offerings (IPOs). Emerging growth companies are exempted from providing the auditor's attestation report on internal control.

Appendix A summarizes the key events of Sections 302 and 404 implementation in the U.S.

2.2 Internal Control Norms in China

Internal control started late in China. In the 20th century, China's economy was still not fully liberalized because there were no coherent reform programs, no commitment to private ownership, and no changes in the political systems. The market risk was not fully released then. Thus, internal control and its importance to addressing operating risk and safeguarding assets did not attract sufficient attention. Internal control was nearly equivalent to accounting control at that time.

On October 31, 1999, the National People's Congress (NPC) standing meeting promulgated *Accounting Law of People's Republic of China* to standardize accounting practices, ensure the authenticity and integrity of accounting data, and strengthen economic and financial management. All firms were required to establish and improve their internal accounting supervision systems in respect of responsibility and authority of relevant personnel, mutual supervision of decision-making and execution, and regular internal audit on accounting data.

In order to promote the construction of internal accounting control, strengthen internal accounting supervision and maintain the socialist market economic order, the Ministry of Finance (MOF) issued *Internal Accounting Control Standard (Trial)* on

⁶ Emerging growth companies are firms with revenue less than \$1 billion in the recent fiscal year.

June 22, 2001, requiring firms to establish and perfect controls for segregation of incompatible duties, authorization, accounting, budgeting, property preservation system, risk management, internal reporting, electronic information technology, etc. Later on, MOF also released corresponding standards for specific business operations, such as monetary capital, procurement and payment, sales and collection, cost and expense, etc.

With the fading of old-economy system and the development of market economy in China, strengthening internal governance and risk management has become increasingly important for Chinese enterprises. For example, in year 2004, China Aviation Oil (Singapore) Corp was revealed to have a huge \$550 million trading loss, which directly drove China's biggest jet-fuel trader to the brink of bankruptcy. The jet-fuel trader is "an example of poor risk management," said Robert Pickel, Chief Executive Officer of the International Swaps and Derivatives Association.⁷

In June 2008, China's five official departments jointly issued the *EICS*, which closely resembles IC-IF (1992) and Section 404.⁸ Under the provisions of *EICS*, internal control is a process, effected by an entity's board of directors, board of supervisors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories: legal compliance, security of assets, reliability and integrity of financial reports, improvement in operating efficiency and effect, and facilitating achievement of firm strategy. Similar to Section 404, it required firms which implemented this norm

⁷ http://www.chinadaily.com.cn/china/2006-03/22/content_548960.htm.

⁸ Five official departments are: MOF, China Securities Regulatory Commission (CSRC), National Audit Office of People's Republic of China (NAO), China Banking Regulatory Commission (CBRC) and China Insurance Regulatory Commission (CIRC).

should assess internal control effectiveness, disclose annual self-assessment reports, and employ accounting firms with qualification of securities and futures business to audit internal control effectiveness.

Two years later, the five official departments issued a series of supporting guidelines on internal control, including application guidance, evaluation guidance and audit guidance. These guidelines further refined and detailed internal control issues, such as firms' internal control design, implementation, evaluation and audit practice. Contrary to the previous documents, these two regulations are backed by clear enforcement power, and the Chinese internal control system has been well established since then.

To ensure the transitional implementation of internal control system, the five official departments formulated the implementation schedule while issuing these supporting guidelines: "Firms listed in domestic and overseas markets simultaneously are required to implement from January 1, 2011; later, the implementation is expanded to Main Board firms listed in the Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE) from January 1, 2012; on this basis, firms listed in the Small and Medium Enterprise market (SME) and Growth Enterprise Market (GEM) are selected to implement in due time; non-listed large and medium-sized enterprises are encouraged to implement in advance".

The CSRC released *Notice of Experimental Units That Implement Enterprise Internal Control Standard* to select some experimental units to implement the internal control standard system in advance on February 14, 2011. In addition to the 68 firms listed in domestic and overseas markets simultaneously that were required to implement EICS in 2011, the CSRC also selected 216 listed firms to be

experimental units to participate in EICS implementation. These units were required to do a good job in the establishment, self-assessment and audit of internal control over financial reporting in their parent companies and important subsidiaries in accordance with the requirements of internal control standard system.

The MOF released *The Explanations (No.1) to Enterprise Internal Control Standard Implementation* and *The Explanations (No.2) to Enterprise Internal Control Standard Implementation* respectively to provide explanations to the problems reflected in the implementation of Enterprise Internal Control Standard and supporting guidelines in 2012.

The MOF and CSRC jointly issued *Notice to Implement Enterprise Internal Control Standard by Categories and Batches* to postpone the implementation of internal control standard system for Main Board listed firms on August 14, 2012. According to the notice:

1. the central-owned and local government-owned enterprises are required to implement the internal control standard system in 2012, disclose the internal control self-assessment report issued by the board of directors, and provide the auditor's report on internal control over financial reporting;

2. the non-state-owned Main Board listed enterprises with market value above 5 billion RMB (CSRC computation criteria) on December 31, 2011 and average net income above 30 million RMB over the period from 2009 to 2011 are required to disclose the internal control self-assessment report issued by the board of directors and provide the auditor's report on internal control over financial reporting accompanying with the annual report of 2013;

3. other Main Board listed firms are required to disclose the internal control

self-assessment report issued by the board of directors and provide the auditor's report on internal control over financial reporting accompanying with the annual report of 2014; and

4. exceptional cases:

(1) Main Board listed firms that cannot establish an internal control system in due time because of undergoing bankruptcy reorganization, back-door listing, or material assets reorganization transactions, in principle, should disclose the internal control self-assessment report and provide the auditor's report on internal control over financial reporting accompanying with the annual report of next fiscal year after the transaction has finished and not earlier than the disclosure time nodes as mentioned above in 1 to 3; and

(2) a newly Main Board listed firm should establish its internal control standard system when it initially goes public, and disclose the internal control self-assessment report and provide the auditor's report on internal controls over financial reporting accompanying with the annual report of next fiscal year, not earlier than the disclosure time nodes as mentioned above in 1 to 3.

Owing to the different characteristics of various industries, the corresponding department released specific guidelines for certain industries; for example, MOF released guidelines for the petrochemical industry in December 2013, CBRC released guidelines for commercial banks in September 2014, and MOF released guidelines for the electric power industry in December 2014, in order to guide the establishment of internal control systems in these industries.

In addition to the overall internal control disclosure regulations, combining the relevant circumstances of listed firms, SSE and SZSE stipulated more specific

requirements on internal control information disclosure in 2006 (please refer to Appendix B for more information).

The CSRC and MOF released *The Guidelines for Compilation and Filing of Information Disclosure Rules for Companies Issuing Public Securities (No. 21) - General Provisions of Annual Internal Control Evaluation Reports* to standardize the disclosure of internal control information for companies that issue securities to the public, and stipulated the elements (contents) that should be included in the annual internal control evaluation report in January 2014.

The MOF released *Internal Control Standards for Smaller Enterprises (Trial)* on June 29, 2017, requiring smaller firms (SME Classification Standards) that had not implemented EICS to implement accordingly. Notably, the objectives of internal control in smaller firms are to comply with applicable laws and regulations, safeguard assets, and ensure the reliability of financial reporting.

Appendix B summarizes relevant internal control norms in China.

2.3 Summary

This chapter introduces the institutional backgrounds of internal control regulations in the U.S. and China. The U.S. implemented the most stringent internal control disclosure regulation, SOX, in history in 2002 in the wake of a wave of corporate scandals, such as the cases of Enron and WorldCom. As the importance of internal control was gradually realized, China started to promote the establishment of internal control in listed firms to improve their risk management ability, and released a series of norms based on *IC-IF (1992)* and SOX, such as EICS and supporting

guidelines, which constituted the internal control system of China's listed firms. Considering the cost burden of mandated ICFR on firms, the implementation of Section 404(b) and EICS was postponed several times.

Compared with *IC-IF (1992)*, the objectives of internal control in China are much broader; they extend to ensure security of assets and facilitate achievement of firm strategy in addition to legal compliance and assuring the reliability of financial reports and operating effect and efficiency. It is worth noting that one of the objectives of internal control as mentioned in *IC-IF (1992), Financial Reports*, is updated to *Reports Objective* in *IC-IF (2013)*, which expands the role of internal control in guaranteeing the reliability of non-financial information so as to better protect investors' interests.

Chapter 3 Literature Review

After the passage of SOX in 2002, there is an emerging boom of studies that investigate issues of internal control effectiveness. This chapter reviews some key studies related to internal control. Section 3.1 summarizes reports of internal control implementation which use survey data. Section 3.2 reviews studies that use empirical data. Section 3.3 summarizes the findings of this chapter.

3.1 Reports of Internal Control Implementation

In this part, we will first introduce the report on Section 302/404 and IC-IF (1992) conducted by the Institute of Management Accountants (IMA) and SEC's report on Section 404 compliance in the U.S., and then introduce Deloitte's reports on internal control of China's listed firms.

3.1.1 IMA's Report on Section 302/404 and IC-IF (1992)

The PCAOB Auditing Standard No. 2 accepts and recommends the application of *IC-IF (1992)* in its provisions 13 and 14. Although SOX does not mandate that the *IC-IF (1992)* be used as guidance on assessing internal control effectiveness, managers generally adopt an internal control framework such as that described in COSO. It is worth investigating whether *IC-IF (1992)* can be efficiently relied on when management and external auditors assess the effectiveness of internal control. The IMA conducted a survey to investigate management assessment on internal control and the application of *IC-IF (1992)* in 2005.

The purposes of this survey were to investigate the main principal and

incentives of costs of Section 302/404 compliance, the problems encountered when management and external auditors use a risk-oriented evaluation method, the problems *IC-IF (1992)* has on SOX implementation, and the shortcomings of expertise of SOX implementation teams and consultants. The SEC-registered members, who work mainly on accounting and auditing fields (internal auditors and managers), were invited to respond on the Web survey on a voluntary basis.⁹ Overall, 21,916 questionnaires were distributed, and 2,098 questionnaires were collected with a response rate of 10.01%.

The results reveal that there is a limitation on the practicability of *IC-IF (1992)* when it is used in SOX implementation, and it is very hard for management to make a fair and consistent evaluation of internal control effectiveness if they just rely on *IC-IF (1992)*. The adoption of a risk-oriented evaluation method proposed by SEC and PCAOB is not so satisfactory, and most firms do not adopt such method to be the only framework for internal control evaluation.

3.1.2 SEC's Report on Section 404 Compliance

Section 404(a) requires management to assess and report on the effectiveness of ICFR. Section 404(b) requires that an independent auditor attests to management's assessment of the effectiveness of those internal controls. This report was requested by the SEC to help inform any decision to improve the efficiency and effectiveness of Section 404 implementation. The analysis examines whether, and to what extent, costs of implementation of Section 404 have declined after reforms undertaken by

⁹ www.surveymonkey.com

the SEC and PCAOB in 2007.¹⁰ Because those reforms were intended to improve both the efficiency and effectiveness of implementation, the report analyzes both the costs and the benefits of Section 404 implementation.

All companies with Section 404 compliance experience were invited to respond to the Web survey on a voluntary basis. The survey was launched in December 2008 and remained open through January 2009 to executives of companies with relevant compliance experience (8,215 firms). Overall, 2,091 firms responded (response rate 35%).

The analysis of the survey data reveals that, in sum, Section 404 compliance would bring some benefits, but on average, compliance cost outweighs corresponding benefits, especially in smaller firms. The costs of Section 404 compliance decreased following the SEC's reforms introduced in 2007 and were expected to decrease further according to respondents' estimates for the fiscal year in progress at the time of the survey. Moreover, the survey participants perceived the reforms to be a significant catalyst for these changes. This evidence may prove useful for understanding the effects of the 2007 reforms as well as guiding any subsequent regulatory efforts. See Appendix C for more detailed information.

3.1.3 Deloitte's Reports on Internal Control of China's Listed Firms

Considering the importance of internal control, Deloitte conducted a series of

¹⁰ Reforms refer to *Management Guidance* and PCAOB's *Auditing Standard No. 5*. The *Management Guidance* described a top-down, risk-based approach to satisfy the requirements of Section 404. It was intended to reduce the costs of Section 404(a) compliance first by "allowing management to focus on the controls that are needed to adequately address the risk of a material misstatement of its financial statements" and second by allowing management "to align the nature and extent of its evaluation procedures (such as evidence gathering, documentation effort and testing the controls) to those areas of financial reporting that pose the highest risks to reliable financial reporting". The PCAOB AS5 established a new standard for the independent audit of ICFR required under Section 404(b).

surveys on internal control implementation status of China's listed firms since 2007 to better understand problems existing in the internal control implementation process, and to seek the way of using internal control to make further improvement and enhancement at the operational level.

The responded firms are representative in terms of industry, region and size, covering various industries, such as consumption and transportation, energy and transportation, financial services, manufacturing and real estate. The specific respondents are composed of board secretaries, CFOs, heads of internal control establishment departments, and heads of internal control evaluation departments. The survey content mainly focuses on internal control establishment and internal control evaluation of China's listed firms.

Appendix D illustrates reports on internal control of China's listed firms conducted by Deloitte.

3.2 Studies Based on Empirical Data

This section will summarize high-quality internal control literature from two aspects: determinants and economic consequences of internal control effectiveness.

3.2.1 Determinants of Internal Control Effectiveness

Existing studies have found that there are two major sets of factors affecting internal control effectiveness. One set is internal factors of enterprises, and the other one is external factors from the operating environment. The internal factors mainly include fundamental firm-level characteristics, such as firm size, growth, complexity (Doyle et al. 2007; Ashbaugh-Skaife et al. 2007), board of directors, audit committee,

executive management capability (Krishnan 2005; Naiker and Sharma 2009; Hoitash et al. 2009; Li et al. 2010; Johnstone et al. 2011), corporate governance structure (Goh 2009), management's incentives (Earley et al. 2008; Wolfe et al. 2009), the financial condition of the company (Rice and Weber 2012), management optimism (Bedard and Graham 2011), etc. External factors consist of institutional factors such as the investor protection environment, internal control policy reform (Piotroski and Srinivasan 2008; Hochberg et al. 2009; Cohen et al. 2010; Lu et al. 2011; Gong et al. 2013), supervision by external auditors (Hogan and Wilkins 2008; Kinney and Shepardson 2011), constraints of creditors (Costello and Wittenberg-Moerman 2011; Kim et al. 2011; Dhaliwal et al. 2011), the emergence of new internal control monitoring technology (Masli et al. 2010), etc.

3.2.1.1 Internal factors

In respect of fundamental characteristics of companies, Doyle et al. (2007) and Ashbaugh-Skaife et al. (2007) are nowadays the most seminal papers which investigate the factors affecting the disclosure of internal control weaknesses. Doyle et al. (2007) and Ashbaugh-Skaife et al. (2007) examine the association between organizational complexity, firm size, organizational reform, internal control input and accounting risk and the disclosure of internal control weaknesses. Both papers believe that companies with longer listed years and better financial situation are less likely to disclose internal control weaknesses, while companies with higher organizational complexity and a greater degree of organizational change are more likely to disclose internal control weaknesses.

Besides Doyle et al. (2007) and Ashbaugh-Skaife et al. (2007), a lot of studies

also focus on the impact of professional skills such as executives and audit committees on internal control effectiveness. Li et al. (2010) investigate the influence of a CFO's professional qualifications on the disclosure of internal control defects. They point out that the higher the CFO's professional qualifications are, the less likely the company is to have internal control defects. Krishnan (2005), Hoitash et al. (2009) and Naiker and Sharma (2009) point out that the more independent and professional the audit committee is, the less likely the company is to disclose internal control defects. Lisic et al. (2016) further argue that this effect also depends on the power of the CEO. When the CEO's power is too strong, it may weaken the role of the audit committee and provide conditions for the CEO to grab corporate interests. Lin et al. (2011) study the impact of internal audit quality on the disclosure of internal control defects, and find that the higher internal audit quality is, the less likely the company is to disclose internal control defects.

In respect of corporate governance, Balsam et al. (2014) investigate the association between CEO equity incentive and the disclosure of internal control defects. They point out that the higher the level of equity incentive is, the lower the probability of disclosure of internal control defects.

In addition to the above mentioned factors, management's incentives and governance mechanism also affect the identification process of internal control defects, thus affecting the internal control disclosure behavior of listed companies. Ashbaugh-Skaife et al. (2007) examine the influence of four factors, namely, external auditor governance, regulatory intervention, investor intervention and litigation risk, on the identification and disclosure motivation of internal control defects from the perspective of managers' motivation. They point out that companies which hire large

auditor firms, concentrate on institutional stockholders and restate their financial statements are more likely to disclose internal control defects. Rice and Weberberg (2012) agree with Ashbaugh-Skaife et al. (2007), holding the belief that hiring the big 4 auditors and reporting restatements in previous years would increase the probability of disclosure of internal control defects. Meanwhile, Rice and Weber (2012) further expand Ashbaugh-Skaife et al. (2007), and they find that managers are more motivated to hide defects in internal controls when the company needs funds. Earley et al. (2008) and Wolfe et al. (2009) discuss the impact of management's incentives on the identification of external auditors and the evaluation of internal control defects in detail by means of an experimental design.

Earley et al. (2008) use an experimental design to explore the general issues when auditors are considered as "second movers". They investigate the impact of the classification of internal control defects severity by management on auditors' initial assessment of internal control defects in financial reports. Participants were in-charge auditors from big 4 public accounting firms who had attended training courses on internal control of the company and had certain experience in terms of Section 404. The authors conducted two experiments. The first experiment tests whether the auditor has shown "knowledge deviation" in respect of internal control defects severity in financial reports, and whether the potential impact of management on the auditor's judgment is due to the intentional cognitive bias of management's classification or to unconscious cognition. The second experiment examines the potential modified impact of restructuring the assessment task of internal control defects. The research shows that when the classification of internal control defects in financial reporting by management is lighter or beneficial to management, auditors

are more likely to be affected by the classification of defects, thus making it clear that the role of the "first movers" of management has influenced the auditor's judgment.

Because the assessments and conclusions of internal control issues are subjective, management may attempt to persuade auditors to reduce the severity of observed control bias assessments. Therefore, Wolfe et al. (2009) analyze how 106 senior audit managers assess IT or manual control deviations that may imply significant defects after they receive management's "acknowledged" (the management acknowledges the existence of internal control defects) or "denied" (the management denies the existence of internal control defects) persuasion strategies. The participants were senior audit managers from big 4 accounting firms who attended an international training conference. Four participants who did not respond adequately to the project were excluded, resulting in 106 samples. The research experiment required the senior audit managers to read a case material and evaluate the two internal control deviations. They find that the importance in assessing defects is reduced for IT control bias, and auditors are more likely to accept a full explanation of management's recognition rather than a denial by the management. For the deviation of manual control, there is no difference between the results of admission and denial.

3.2.1.2 External factors

Gong et al. (2013) examine the impact of investor protection and ownership structure on internal control defects disclosure by using cross-listed samples in the U.S. securities market. The authors use the CONTROL_WEDGE variable to

measure whether the manager is a major shareholder and his control rights exceed his cash flow rights. Empirical results show that there is a significant positive correlation between CONTROL_WEDGE and internal control defects when multinational listed companies are located in countries where investor protection is weak. But when multinational listed companies are located in strong investor-protected countries, the positive correlation is not significant. Masli et al. (2010) study the effect of using internal control monitoring technology on the probability of internal control defects disclosure, and find that the risk of internal control defects can be reduced after the implementation of internal control supervision technology, which results in a lower probability of internal control defects disclosure.

3.2.2 The Economic Consequences of Internal Control Effectiveness

Plenty of empirical studies investigate the economic consequences of internal control effectiveness, but the conclusions are mixed. Some scholars have found that internal control has a positive effect. They find that improvement in internal control can increase accounting information quality (Ashbaugh-Skaife et al. 2008), accounting conservatism (Goh and Li 2011), the overall level of audit quality (DeFond and Lennox 2011), the level of corporate governance (Cohen et al. 2010), the information content of internal transactions (Brochet 2010), etc. While some scholars have found that internal control has a negative effect on the company. They find that SOX can increase enterprises' cost burden (Zhang 2007; Engel et al. 2007; Leuz et al. 2008; Gao et al. 2009; Gordon and Wilford 2012). However, some scholars believe that these studies may have neglected some important control variables. In fact, the impact of SOX on corporate costs is not obvious (Leuz 2007;

Hayes 2009).

To evaluate the economic consequences of internal control is a complex problem. Different studies examine this issue from different perspectives. Related research mainly focuses on the impact of internal controls on the quality of financial reports and audit. Other studies investigate the issue from angles of corporate governance, operational efficiency, investment decisions, debt costs, equity costs and market responses.

3.2.2.1 Internal control and financial reporting quality

The literature on this subject mainly studies the impact of internal control on financial reporting quality in respect of accounting conservatism and accrual quality.

Goh and Li (2011) investigate the relationship between internal control and conditional conservatism (e.g., timeliness of loss recognition) in terms of internal control and accounting conservatism, and point out that there is a positive correlation between internal control quality and conservatism. Altamuro and Beatty (2010) examine the impact of internal control provisions in the Federal Deposit Insurance Corporation Improvement Act (FDICIA) on financial reports, and find that the mandatory internal control clause of FDICIA improves the validity of reserve for loan losses, the persistence of earnings and the stability of cash flow of restricted companies, in turn reducing benchmark-beating and accounting conservatism.

In respect of internal control and accrual quality, Doyle et al. (2007) and Ashbaugh-Skaife et al. (2008) find that the accrual quality of companies which report internal control defects is lower. Lu et al. (2011) use the data of internal control disclosure in Canada and further prove the negative net effect of internal control

defects on accrual quality as a whole under the Canadian system, and this whole negative effect is made up of two effects. One is the negative direct effect of internal control defects on accrual quality, and the other is a small positive and indirect effect of internal control defects on accrual quality through auditors' efforts. Carter et al. (2009) demonstrate that the implementation of SOX and some related reforms promoted the reduction of earnings management. Cook et al. (2008) find that SOX has changed the tendency of management to manage earnings through effective tax rates from the perspective of tax planning. Cohen et al. (2008) point out that, after the enactment of SOX, companies shift from accrual-based earnings management to real activity earnings management. Compared with the situation before the enactment of SOX, companies that have reached a certain earnings standard after SOX are more likely to manage earnings through real activities rather than through accrued items.

3.2.2.2 Internal control and audit

Effective internal control can prevent and discover material misstatements of financial reports effectively and then provide reasonable assurance for their reliability. Therefore, internal control is an important issue in auditing. The influence of internal control on external auditors consists of two main parts: audit quality and audit fees.

In respect of audit quality, Ashbaugh-Skaife et al. (2008) find that those firms disclosing their internal control weakness and then receiving unqualified Section 404 audit opinions have less abnormal accruals. In comparison, the firms which are identified as having internal control weakness and then receive adverse Section 404 opinions exhibit no significant change in their abnormal accruals. It indicates that the auditors' assessments of internal control contribute to issuing audit opinions

consistent with firms' earnings, which will exert beneficial effect on audit quality. The above research corroborates the beneficial effect of internal control on auditing. In contrast, however, the result of Patterson and Smith (2007) indicates that the implementation of SOX increases the risk and cost of audit. They study the impact of SOX on the strength of auditors and internal control. With the proposed strategy model, auditors can use resources for internal control tests and substantive procedural tests while management can choose internal control strength and the amount of fraud. The result shows that internal control tests serve as a valuable tool for auditors when internal control can provide information about the possibility of fraud. SOX can induce stronger internal control systems and thus results in less fraud, but it may not induce internal control tests at a higher level, which in turn increases audit risk and cost.

In respect of audit fees, through model analysis, Hogan and Wilkins (2008) believe that the audit fees of companies disclosing internal control weakness are significantly higher. Kinney and Shepardson (2011) show that audit fees of companies implementing Section 404(b) in 2004 are nearly doubled over previous year and then maintain at a high level in the following years, while the companies exempted from complying with Section 404(b) have annual growth of about 10% in audit fees.

3.2.2.3 Internal control and corporate governance

The current papers on internal control and corporate governance are mainly based on the agency theory, and conducted from the perspective of CFO and audit committee.

Li et al. (2010) point out that the companies receiving internal control adverse opinions (Section 404) have a higher CFO turnover rate and prefer to hire a new CFO. Wang (2010) finds that after the implementation of SOX, the CFOs in the companies with poor internal control are paid less and the forced CFO turnover rate is higher. Hoitash et al. (2012) show that CFOs' annual salaries (bonus, equity compensation and total compensation) are negatively correlated with the change in internal control material weakness disclosure.

Johnstone et al. (2011) comprehensively discuss the influence of internal control on corporate governance from angles of the board of directors, audit committee and senior executives. The results show that there is a significantly positive correlation between internal control material weakness and subsequent changes in members of the board of directors, audit committee and executives. Further analysis reveals that the correction of internal control material weakness is significantly positively correlated with improvements in the characteristics of the board of directors, audit committee and executives.

3.2.2.4 Internal control and operational efficiency

Some studies examine the effect of internal control on operational efficiency from the practical business perspective. Cheng et al. (2017) point out that operational efficiency, derived from frontier analysis, is significantly lower among firms with material weaknesses relative to firms without such weaknesses. These findings inform the debate over the costs and benefits of the internal control reporting requirements under SOX.

3.2.2.5 Internal control and investment decisions

One of the objectives of internal control is to reduce financial reporting misstatement risk and ensure reliable financial information. Whether the disclosure of internal control weakness will affect investors' perception of the firm's financial misstatement risk, which will be finally reflected on the investment decision-making behavior, remains to be an open question to be tested. Therefore, some scholars explore the impact of internal control on investors' risk perception from different perspectives, such as internal control implementation (Wu and Tuttle 2014), details of internal control information disclosure (Rose 2010), and internal control auditing opinions (Asare and Wright 2012). This part of literature provides a new perspective to internal control study by analyzing psychological behavior of common investors.

By carrying out laboratory experiments on 97 and 53 non-professional investors separately, Rose et al. (2010) investigate whether investors will adjust their assessment of investment risk according to the disclosure, the pervasiveness and the detailed explanations of material weakness. Their study reveals that investors will adjust their assessment of investment risk according to material weakness disclosure. When the material weakness disclosure includes specific and detailed discussion of pervasiveness of control weakness, investors will increase investment risk assessment for the non-pervasive weakness and decrease investment risk assessment for pervasive weakness.

Asare and Wright (2012) use the method of experiment to study whether the inconsistency between adverse ICFR audit opinions and standard unqualified audit reports will affect investors' confidence in financial reporting and investment decisions. The study shows that the level of consistency between these two audit

reports would affect users' confidence, and compared with account-specific material weakness, the entity-level material weakness has a deeper influence on consumers' confidence, thereby affecting their investment judgment.

3.2.2.6 Internal control and cost of debt

Kim et al. (2011) compare the difference of covenants in bank loan contracts between the companies that disclose internal control weakness and those do not. They find that companies with internal control weakness have higher loan interest rates, stricter non-price terms and less lenders of each loan agreement than those without internal control weakness. Companies with entity-level weakness bear higher interest rates than those with account-level control weakness. By examining the impact of at least one material weakness in the companies' first-time declaration of Section 404 reports on changes in the cost of debt, Dhaliwal et al. (2011) point out that material weakness disclosure will increase the interest rate of the company's publicly traded bond. Costello and Wittenberg-Moerman (2011) find that lenders will reduce financial covenants in contracts for loan of money and the use of financial-ratio-based performance pricing provisions, increase the price and mortgage protection accordingly, and increase the use of credit-rating-based performance pricing provisions when the companies announce material weakness. In addition, by comparing whether the foreign companies (non-U.S. companies) choose to issue bonds in the U.S. public bond market before and after the implementation of SOX to examine the economic consequences of SOX, Gao (2011) points out that after SOX, foreign companies reduce bond issuance in the U.S. public bond market.

3.2.2.7 Internal control and cost of equity and market reaction

Ogneva et al. (2007) find that firms with internal control weakness have higher cost of equity compared with firms without by using univariate analysis. However, there is no direct association between internal control weakness and cost of equity after controlling for company characteristics and analyst prediction errors. While, by using difference-in-differences analysis, Ashbaugh-Skaife et al. (2009) point out that the change in auditors' internal control effectiveness assessment (including modified internal control weakness) will cause volatility of cost of equity with 50-150 basis points, which reveals that internal control reports have a significant impact on cost of equity.

In respect of market reaction, some studies demonstrate that the implementation of SOX increases firms' burden and leads to a negative market reaction (Zhang 2007; Brochet 2010), and the disclosure of internal control weakness causes negative market reaction (Beneish et al. 2008; Hammersley et al. 2008). Zhang (2007) investigates market reaction to relevant legislative events of SOX, and finds that the market reaction before and after the SOX critical events are significantly negative, which indicates that the related costs outweighs corresponding benefits. In addition, Brochet (2010) finds that abnormal returns and trading volumes around filings of insider stock purchases are significantly greater after SOX than before. Beneish et al. (2008) show that the firms disclosing internal control information under Section 302 have negative abnormal returns (-1.8%), but internal control weakness has no significant impact on stock prices, analysts' forecasts and cost of capital when firms disclose internal control weakness under Section 404. Hammersley et al. (2008) examine market reaction to management assessment of

internal control effectiveness under Section 302, and results reveal that internal control weakness disclosure and material weakness have a negative market reaction, and the information content of internal control weakness disclosure depends on the severity of internal control weakness. Asare and Wright (2012) demonstrate that company-level material weakness has a greater impact on users' confidence in financial reporting than account-level material weakness.

Some other studies find that SOX's benefits to investors are greater than the firm's compliance costs, which leads to a positive market reaction, and internal control weakness disclosure has no significant impact on stock prices (Beneish et al. 2008). Jain and Rezaee (2006) point out that market reaction is positive (negative) before and after the events of increasing (decreasing) probability of SOX implementation, which indicates that SOX's benefits to investors exceed its compliance costs. Burks (2011) shows that the initial price reaction to restatement announcements becomes significantly less negative after SOX, and post-SOX drifts are statistically less negative than pre-SOX drifts, suggesting that price efficiency actually improves after SOX.

3.3 Summary

Since the passage of SOX, internal control has become one of the most productive fields in top journals. This chapter reviews reports of internal control implementation based on survey data and high-quality literature using empirical data.

Firstly, this chapter makes a review of reports on internal control implementation in the U.S. and China based on survey data, which mainly focus on the internal control implementation status and problems encountered. From

investigations conducted by SEC, IMA and Deloitte, we find that generally the effect of internal control implementation improves, while there are still many problems, such as insufficient attention from executives and lack of persons in charge, and there is a gap between the expected effect and actual effect of internal control implementation.

Secondly, we review the studies based on empirical data in terms of determinants and economic consequences of internal control effectiveness. Existing literature has found that firms' internal factors and external factors have significant effects on internal control effectiveness. Internal factors mainly include fundamental firm-level characteristics (such as firm size, growth and complexity), professional expertise of executives and audit committee, corporate governance and executives' motivation. External factors consist of investor protection environment, reform of internal control policy, supervision of external auditors, lenders' constraints and new internal control monitoring technology. The studies investigate economic consequences of internal control effectiveness from the perspectives of financial reporting quality, auditing, corporate governance, operational efficiency, cost of debt, investment decision-making, cost of equity and market reaction. Overall, although there are plenty of studies that examine the effect of SOX in the context of U.S.-listed firms, there is still a debate about the costs and benefits of SOX, and especially there is no evidence that speaks directly to the effect of similar rules outside the U.S. How is the implementation of similar rules (EICS) in the world's largest emerging market? It is still a question worth further exploration in depth.

Chapter 4 Research Design and Empirical Results

4.1 Survey Method and Data

4.1.1 Survey Design and Launch

The main data are from a survey on internal controls sponsored by the CSRC and administered in the Fall of 2014. In 2012, the CSRC tasked the China Association for Public Companies, SSE, SZSE, Shenzhen DIB Enterprise Risk Management Technology Co. Ltd (hereinafter DIB), and the Internal Control Research Center for Enterprises and Nonprofit Organizations of Sun Yat-sen University with designing and administering the survey. Over the course of nearly two years, representatives from these organizations designed the survey, building on EICS provisions and similar surveys about internal controls previously conducted by the SEC and IMA as shown in Chapter 3.

Prior to the official launch, the survey design team selected six companies listed on the Main Board (MB), and six on the Small and Medium Enterprise (SME) and Growth Enterprise (GEM) Markets to test a beta version of the questionnaires. This trial revealed that the survey was too long and repetitive among different respondents targeted in the same firm. Mainly for this reason, the team decided not to repeat some of the questions asked to different target individuals, leading to a lower response rate for some of the survey questions.

The final survey comprised more than 100 questions on the participant firms' experiences with EICS compliance. In this thesis, I focus on the subset of questions about the benefits, costs, and net benefits of compliance with EICS. The survey questions about the benefits have no time dimension. Instead, the questions about the

costs cover four years from 2011 to 2014 (expected), and those about net benefits cover three years from 2011 to 2013.

The official survey was launched on September 5, 2014, and targeted all firms with A or B shares listed on SSE and SZSE. Multiple individuals from 2,564 unique firms were invited to participate, including 1,458 firms compliant with EICS at the time of the survey.¹¹ The questionnaires were sent to individual Board Secretary via official platforms of SSE and SZSE, and then distributed to specific targeted individuals in each firm. Each Main Board-listed firm received seven questionnaires to be completed by the Chairman, CEO, Board Secretary, CFO, Internal Auditor, IT Director, and IC Director. Each SME and GEM firm received six questionnaires to be completed by the Chairman, CEO, Board Secretary, CFO, Internal Auditor, and IT Director. Targeted individuals were instructed to return their responses by September 15, 2014, later extended to October 31, 2014. To guarantee that the specific questionnaire was filled in by the corresponding targeted individual, the respondents were required to sign his/her name and title on the corresponding questionnaire and were responsible for their answers. For firms listed in SZSE, the response status (e.g., fill the questionnaire or not) would be recorded in their integrity files.

The survey responses were then merged with firm-level variables obtained from common financial and accounting databases for Chinese listed firms—Wind, CSMAR and DIB. In order to facilitate use of the survey responses by researchers outside the Committee, firm identifiers were dropped, and the financial and

¹¹ See the relevant internal control norms as shown in Chapter 2. According to the requirement of *Notice to Implement Enterprise Internal Control Standard by Categories and Batches*, all Main Board-listed firms, excluding exceptional cases, were required to comply with EICS by the end of 2014.

accounting data obfuscated—using decile or centile rankings—to preserve the anonymity of the respondent firms.¹²

4.1.2 Survey Response Rates

Although the survey targeted all listed Chinese firms, I focus on the subset of EICS compliant firms for the purpose of my study, because only firms that complies with EICS have the corresponding benefits, costs and net benefits. At the time of the survey, 1,458 firms were fulfilling compliance with EICS. At least one individual from 1,167 unique companies responded, resulting in a total of 7,038 individual-level responses. This corresponds to an overall response rate of 80% among firms required to comply with EICS. If an individual has a dual position, I only retain the individual's highest rank.¹³ When the same question was asked across different individuals from the same firm, I average their responses to reflect the firm-level attitude.

[Insert Table 4.1 here]

Panel A of Table 4.1 reports the number of targeted EICS compliant firms and the response rates by industry – based on the CSRC classification. Manufacturing is the most represented, with a response rate of 80% among 767 targeted firms. The lowest response rates are found in Education, Health, and Social Work (50%) and Culture, Sports, and Entertainment (57%). Firms in Scientific Research and Technical Services, Agriculture, Forestry, Animal, and Fishery, Hotels and Catering

¹² The complete list of the survey questions and an expanded discussion of their design and administration are available upon request.

¹³ For example, if the respondent has a dual title, such as the Chairman and CEO (Internal Auditor and IC Director), I retain the Chairman's (Internal Auditor's) responses for the overlapping questions.

Services, and Finance responded at a rate upwards of 85%. Panel B of Table 4.1 reports the distribution of individual respondents by their title and tenure. Almost half of the individuals (48.55%) have tenure of more than five years with the current firm and nearly two-thirds (64%) have tenure of at least four years.

4.2 Descriptive Statistics for the Reported Effects of EICS Compliance

Survey participants answered a series of questions on the benefits, costs, and net benefit of EICS compliance. While questions about the benefits and net benefits require a subjective assessment measured on an ordinal scale, the reported costs are based on the out-of-pocket expenses borne by the firm measured in RMB. Table 4.2 reports the summary statistics for the corresponding survey responses.

[Insert Table 4.2 here]

4.2.1 Benefits

Respondents answered 19 separate questions about the effects of compliance, which are combined into four groups. Responses to each question are coded on a three-point ordinal scale. Specifically, “negative or no positive impact” responses are coded as -1, “little positive impact” as 0, and “large positive impact” as +1, respectively. Because higher values reflect more positive effects, I refer to these responses as perceived benefits. Panel A of Table 4.2 reports the sample summary statistics for each group of survey questions.¹⁴

Large fractions of respondents report a positive impact of EICS compliance

¹⁴ The summary statistics for the responses to the underlying 19 questions are reported in Appendix F.

on the quality of firm disclosure (88.75%), firm performance (81.54%), achievement of EICS objectives (87.44%), and confidence of capital market participants (68.94%). Thus, while most insiders perceive that EICS compliance benefits the financial reporting process and performance of the firm, a large fraction of respondents (31.06%) perceives no positive effect on investors' confidence. Overall, 81.67% of the respondents report some positive impact of EICS compliance.

When compared to Alexander et al. (2013), it appears that insiders of Chinese listed companies are more inclined to ascribe benefits to mandated ICFR disclosure than their U.S. counterparts. This evidence is important because it suggests caution when one extends U.S.-based inferences about the effects of disclosure regulation to other institutional settings. This is especially true when considering the effects of such regulation in environments with less developed market institutions, as is typically the case in emerging markets.

4.2.2 Costs

Respondents provided information on three types of compliance costs: (1) annual fees paid to outside consultants to help comply with EICS; (2) salaries of internal control staff devoted to EICS compliance; and (3) fees paid for internal control information technology, including software and hardware. The survey asked participants to provide actual figures for the years from 2011 to 2013 and estimates for the year in progress, 2014. I complement this information with EICS-related audit fees from the DIB database and add these four components together to obtain total compliance costs. Some respondents did not provide estimates for all cost categories,

which restricts my sample for this portion of the analysis.¹⁵

As shown in Panel B of Table 4.2, in the first year of compliance, the mean (median) total cost is 6.43 (2.71) million RMB. The mean (median) reported total cost in the second year of compliance increases to 8.48 (3.87) million RMB. The mean (median) reported total cost in the third or fourth year is 11.37 (5.41) million RMB. Thus, the total costs of EICS compliance appear to increase with compliance experience. When I restrict my attention to firms with at least three years of experience, I observe a similar increasing pattern in compliance costs. Thus, the increasing pattern is not entirely due to the fact that firms with a longer compliance history are also larger. It is apparent from the breakdown of the costs that the increase in compliance costs is largely due to IT expenses, which are by far the largest proportion (70-80%) of the total cost. The pattern in Panel B is likely driven by the Chinese government's "Internet Plus" strategy, which aims to promote investments in IT.

Overall, the resources required for EICS compliance are comparable with those required of U.S. firms for Section 404 compliance (Alexander et al. 2013). However, the breakdown of the total cost is notably different. In the U.S., Section 404(b) audit fees represent the lion share of the costs, whereas in China IT expenses dominate. This difference is noteworthy for at least a couple of reasons. First, different from Section 404(b), EICS allows compliant firms to retain different accounting firms for the standard audit of their financial reports and the audit of the

¹⁵ To estimate the total cost of compliance, I require non-missing values for all three categories. Given that EICS-related audit fees need not be disclosed, I proceed as follows when the data are missing in the DIB database: (1) if the firm disclosed EICS-related audit fees in at least one year, I use the mean of disclosed fees in place of missing values; (2) if the firm never disclosed EICS-related audit fees, missing values are set to the predicted values from the regression of observed costs on total assets, their square, and the years of compliance experience.

management assessment of ICFR. This in turn allows firms to shop around for lower ICFR audit fees and auditors specializing in supplying standard audits of financial reports or ICFR audits. Second, to the extent that IT-related costs are one-time investments, it is plausible that the total costs of EICS compliance would decrease substantially moving forward.

4.2.3 Net benefit

Respondents from firms listed on the Main Board were asked to provide an assessment of the benefits of EICS compliance net of its costs for each of the first three compliance years. As shown in Panel C of Table 4.2, 37.47% of these firms report positive net benefits for the first year of compliance, 71.36% for the second year, and 90.54% for the third year. Among firms with at least three years of experience (and responding to all three questions), the proportion of firms reporting positive net benefits is similar to the full sample. Thus, while the reported net benefits are somewhat negative for the first year of compliance, they are substantially higher and positive as the compliance experience increases.

4.2.4 Correlation between Reported Effects

Table 4.3 reports the correlation coefficients between the reported cost, benefits, and net benefit of EICS compliance. I find that there is a positive correlation (Pearson 0.21-0.28; Spearman 0.21-0.29) between the perceived benefits and net benefits. This suggests that the cross-sectional variation in net benefits reflects the variation in perceived benefits of compliance. Perhaps more interestingly, there is also a positive correlation (Pearson 0.06-0.10; Spearman 0.05-0.14) between

compliance costs and perceived net benefits. This in turn indicates that the marginal dollar spent on EICS compliance is associated with increasing marginal benefits, and the benefits net of costs also increase with the marginal dollar spent.

[Insert Table 4.3 here]

Overall, the results in Tables 4.2 and 4.3 stand in contrast with the U.S.-based evidence in Alexander et al. (2013). Compliant firms in China are more likely to ascribe positive effects to mandated ICFR disclosure and the fraction of firms reporting positive net benefits in the first compliance year is about four times larger. Moreover, while U.S. firms report mildly higher net benefits of compliance after the first year, Chinese firms perceive the net benefits to be largely positive after the first year, despite having comparable total costs of compliance. This evidence suggests that the effects of mandated ICFR disclosure depend on the broader market and legal environment where those rules are implemented (e.g., Leuz and Wysocki 2016; Christensen et al. 2016).

4.3 Determinants of the Perceived Effects of EICS Compliance

In this section, I examine whether the effects of EICS compliance vary systematically with three sets of factors that should affect the costs and benefits of mandated ICFR disclosure, as suggested in prior research. The first set reflects the firm's operational complexity, the second its governance structure, and the third the quality of its financial reporting and ICFR systems. In addition, where feasible, I also examine whether the reported effects of compliance vary with the firm's EICS compliance experience. Thus, the perceived benefits model takes the following form:

$$\begin{aligned}
Benefits_i = & \alpha_0 + \sum_j \alpha_{1j} Complexity_{ij} + \sum_k \alpha_{1k} Governace_{ik} + \\
& + \sum_m \alpha_{1m} MatWeakness_{im} + \sum_n \alpha_{1n} Controls_{in} + \varepsilon_i,
\end{aligned} \tag{4-1}$$

While the cost and net benefits models are specified as follows:

$$\begin{aligned}
Effect_{it} = & \alpha_0 + \sum_p \alpha_{1p} Experience_{ipt} + \sum_j \alpha_{1j} Complexity_{ijt} + \\
& \sum_k \alpha_{1k} Governace_{ikt} + \sum_m \alpha_{1m} MatWeakness_{imt} + \sum_n \alpha_{1n} Controls_{in} + \varepsilon_i.
\end{aligned} \tag{4-2}$$

In equations (4-1) and (4-2), *Complexity*, *Governance*, and *MatWeakness* are vectors of firm characteristics that reflect the complexity, governance, and ICFR quality of firm *i*; in equation (4-2), *Experience* is the set of dummies that identify different compliance years for the same firm; *Controls* includes all other firm characteristics; and I also control for year and industry fixed effects where feasible.

An ideal analysis would examine the benefits, costs, and net benefit of compliance for the same group of respondents. However, as previously noted, the net benefit questions were only asked for firms listed on the Main Board. Moreover, not all firms responded to all of the questions about net benefits and costs for all of the years of compliance. Therefore, the three samples corresponding to the cost, benefits, and net benefits samples do not overlap perfectly. The full set includes 1,167 respondents. Data limitations from other sources outside of the survey further restrict my samples. Ultimately, the sample for which I can estimate the compliance benefits models includes 1,008 firms, while those for the cost and net benefits models include 757 and 593 unique firms, respectively.

4.3.1 Explanatory Variables

4.3.1.1 Firm complexity

Firm complexity is a likely determinant of mandated ICFR disclosure's effectiveness. The costs of compliance should increase with firm complexity, but so should the benefits. This is especially the case for outside investors, who can rely more comfortably on the firm's financial reports, if mandated ICFR disclosure improves the quality of the firm's financial reporting and reduces information asymmetries.

I use five measures to test this conjecture. The first is firm age (*Firmage*) (Doyle et al. 2007). The second is firm size, measured as the market value of equity (*MVE*) (Rice and Weber 2012). The next three measures complexity of the firm's operations: *R&D*, defined as research and development expenses divided by total assets (and is equal to zero when no such expenses are reported); *Multisegment*, defined as an indicator variable equal to one when the firm reports multiple business lines (e.g., Ashbaugh-Skaife et al. 2009; Doyle et al. 2007b; Zhang 2007); *Crosslist*, defined as an indicator variable equal to one when the firm is cross-listed on foreign exchanges (e.g., Gong et al. 2012). *Firmage*, *MVE*, and *R&D* are converted to decile rankings.

4.3.1.2 Firm governance

The firm's corporate governance also likely affects the effectiveness of mandated ICFR disclosure. Hochberg et al. (2009), for example, show that strong governance and lower agency conflicts are associated with fewer expected benefits

of compliance from SOX compliance. Moreover, poorly governed firms or firms with higher agency costs might also face greater compliance costs that would further reduce the net benefit of compliance (Jain and Rezaee 2006).

I use three measures to assess how the reported compliance effects vary with firm governance. The first is *Dual*, an indicator variable equal to one when the same person serves as both the CEO and Chairman (e.g., Goh 2011). The second, *InstOwn*, is the firm's aggregate institutional ownership measured at the end of the prior fiscal year and converted to centile rankings. The last measure, *OwnBalance*, is the difference between ownership of the largest shareholder and the next nine (i.e., second to tenth) largest shareholders and converted to centile rankings.

Moreover, I use the government ultimate ownership to discriminate whether the firm ownership is subject to capital market forces, *SOE* versus *Non-SOE*. In particular, across the multivariate tests, I aim to assess whether the nature of the firm ownership affects the relation between the reported effects of EICS compliance and the factors suggested by theory. On the one hand, the relations between firm characteristics and effects of mandated ICFR disclosure may be more prominent among non-SOEs, where the firm's ultimate owner would be more concerned with market valuations. On the other hand, the government's ultimate ownership of the entity may amplify the effects of ICFR disclosure for other investors, if SOEs pose greater information asymmetries.

4.3.1.3 Material weaknesses and compliance experience

The third set of explanatory variables reflects firms' experience with the compliance process and outcomes with respect to ICFR disclosure. Following

Ashbaugh-Skaife et al. (2009), I use two measures for the identification and remediation of internal control deficiencies (ICD). The first, *ICDcurrent*, is an indicator variable equal to one when the firm discloses at least one internal control weakness during its EICS compliance. The second, *ICDremediation*, is an indicator variable equal to one when the firm stops disclosing internal control weaknesses following an earlier ICD disclosure. I also include an indicator variable, *Restatement*, which is equal to one if the company restated the financial report in the corresponding fiscal year.

Finally, to assess whether there are start-up costs and learning experience associated with EICS compliance, I include indicators that reflect the extent of the firm's EICS compliance experience in the costs and net benefits models (4-2). Specifically, I use separate indicators that are equal to one when the firm has complied with EICS for one year (*yrs1*), two or more years (*yrs2*), and three or more years (*yrs3*) as of the reference year of the pertinent survey question.

4.3.1.4 Other Controls

In the multiple regression models, I also control for factors that might reflect systematic bias in the perceptions of the respondents. The first is the firm's past performance, because good post-EICS performance might positively influence perceptions of the impact of EICS compliance. I use the firm's market model monthly alphas from January 2009 to December 2013, *Excessret*, defined as the intercept from the time-series regression of each firm's monthly stock returns in excess of the risk-free rate on the market factor and converted to decile rankings. Second, respondent firms that became public after the passage of EICS might have a

different frame of reference compared to respondents of mature firms. To account for this possibility, I use an indicator variable, *Public08*, which is equal to one for firms that were already listed as of 2008.

4.3.2 Correlation Analysis

Panel A of Table 4.4 reports summary statistics for firm characteristics described above, while Panel B reports the Pearson correlation coefficient matrix.

[Insert Table 4.4 here]

Panel C of Table 4.4 reports the Pearson correlation coefficients between the same firm characteristics and the survey responses. Among the firm-complexity measures, *MVE* displays the largest positive correlations with the perceived benefits as well as the costs of compliance. The net benefits of compliance are also positively correlated with *MVE*. This is consistent with the notion that the perceived benefits increase with firm size at a higher rate than the compliance costs. These results are consistent with the findings reported by Zhang (2007), Iliev (2010), and Alexander et al. (2013) for the effects of SOX compliance on U.S. firms.

Among the governance measures, *InstOwn* is positively correlated with compliance costs and net benefits of compliance. *OwnBalance* is positively correlated with benefits net of cost, but has almost no significant correlations with perceived benefits. The survey responses are also significantly correlated with the observed outcomes of EICS compliance. Compliance costs are lower for firms reporting the presence of ICD (*ICDcurrent*) and financial reporting restatement (*Restatement*). Among the remaining factors, I find that compliance costs are

significantly higher when post-EICS firm performance is higher.

4.3.3 Multiple Regression Analysis of Perceived Benefits

Table 4.5 reports multiple regression estimates for the relation between survey responses on the perceived benefits of EICS compliance and firm characteristics. The dependent variable (*Benefits*) is the average response to the four groups of benefits questions, which can vary between -1 and 1. The explanatory variables comprise all of the characteristics reported in Table 4.4.

[Insert Table 4.5 here]

The estimates in Columns 1 and 2, for the whole sample of compliant firms, show a significant relation between firm size and the perceived benefits of EICS compliance. When *MVE* increases from the 25th to the 75th percentile, there is a 36% increase in the perceived benefits relative to the mean. None of the other factors appears to matter statistically. Therefore, neither firm governance nor the outcomes of ICFR system seem to influence the respondents' perceptions of the potential benefits of EICS compliance.

However, notably important differences emerge between SOEs and non-SOEs when I separate firms according to government ownership in Columns (3-4) versus (5-6), respectively. In particular, among SOEs, none of the factors that I consider systematically explains insiders' perception of EICS compliance benefits. In sharp contrast, among SOEs, multiple factors display a significant relation with the reported benefits. First, the positive association between firm size and EICS compliance benefits is exclusive to SOEs and the economic magnitude of the effect

is more than twice larger compared to the estimates in Columns (1-2). Second, insiders from older firms tend to report larger benefits. These results are consistent with the fact that larger and more established firms have established systems and routines that can make ICFR disclosure more effective. Third, firms that operate in multiple lines of business report lower compliance benefits. This is perhaps due to the fact that the complexity ensuing from diversification reduces the effectiveness of ICFR mandated disclosure. Finally, among the governance and financial reporting characteristics, the only factors systematically related to the reported benefits of ICFR disclosure are the presence of ICD and CEO-Chairman duality. On the one hand, CEO-Chairman duality is associated with lower perceived benefits. On the other hand, the discovery and reporting of it is associated with larger benefits, consistent with the idea that the benefits of mandated ICFR disclosure are more apparent when ICFR produces tangible results.

4.3.4 Multiple Regression Analysis of Compliance Costs and Benefits Net of Costs

I next examine the relation of reported costs and net benefits of compliance with respondent firm characteristics. With this analysis, I aim to assess whether the determinants of the perceived benefits also explain the reported costs and, if so, what their incremental effect is on the perceived net benefits.

Tables 4.6 and 4.7 report estimates of equation (4-2) corresponding to the compliance costs and net benefits models, respectively. In these models, I use the same explanatory variables reported in Table 4.4 measured as of the year prior to the relevant year of compliance referred in the corresponding survey question. In

addition, as explained above, the models include compliance experience indicators to assess the effect of learning. In all models, I cluster standard errors by firm.

[Insert Table 4.6 here]

The evidence in Table 4.6 shows that some of the determinants of the perceived benefits of EICS compliance reported by respondents of non-SOEs also explain the associated compliance costs. Moreover, some firm characteristics of SOEs in fact display a significant association with the reported compliance costs, even though they cannot explain the perceived benefits. In particular, for both SOEs and non-SOEs, the total cost of compliance increases with firm size, the number of business segments (only for non-SOEs), and the firm's international reach. Thus, across the board, it appears that larger and more complex firms spend more resources to comply with the requirement of EICS.

Among the governance factors, I find that CEO-Chairman duality is associated with larger compliance costs, but only among SOEs. Like in the case of the reported benefits, I find that none of the other governance characteristics has a significant association with the reported costs. Furthermore, among the firm reporting and ICFR quality factors, I find that the occurrence of ICDs (only for SOEs) and restatements is associated with lower reported costs of compliance. One interpretation of these findings is that firms spending fewer resources for EICS compliance generally have lower quality reporting and ICFR systems. In turn, this would be associated with higher rates of restatements and ICD.

In Table 4.6, I assess the effect of firms' compliance experience on existing reporting processes. On the one hand, I find evidence of declining costs beyond the

first year of compliance. Thus, consistent with start-up costs, prior experience with EICS appears to subsequently facilitate more efficient compliance. Nonetheless, this effect holds exclusively among non-SOEs. On the other hand, however, older SOEs also report lower compliance costs. This may be due to the fact that older and more established SOEs have substitute reporting systems in place that facilitate their reporting to the dominant controlling shareholder, i.e., government entities.

[Insert Table 4.7 here]

Table 4.7 presents estimates for the net benefits model. The model specifications in this table are identical to those in Table 4.6, with one exception. In particular, it is possible that recent experiences with compliance affect the respondents' recollection of past net benefits and thus affect the corresponding responses. This may introduce bias that affects my inferences if the omitted factors are correlated with other covariates of interest in the model. To address this issue, I control for firm-level perceived benefits of compliance. This factor should absorb unobserved firm-level time-invariant factors that affect the perceived net benefits and depend on the recently observed benefits of compliance.

The results in Table 4.7 show that longer EICS compliance experience is associated with higher perceived net benefits for both SOEs and non-SOEs. Similarly, across the board, the respondents' attitudes with respect to the compliance benefits net of costs are strongly associated with the perceived benefits. This relation, however, does not appear to bias the other coefficients in the net benefit model.

Notwithstanding these similarities, the determinants of the perceived net benefits are notably different across SOEs and non-SOEs. For SOEs, the other

factors that explain the respondents' attitudes on the net benefits of compliance are whether the firm restated its financials while complying with EICS and its stock performance. Specifically, firms that restate earnings tend to report lower perceived benefits of EICS compliance. Instead, firms that experience higher stock returns during the implementation of EICS report higher net benefits. Neither of these two factors explains the views of non-SOEs on the net benefits of compliance. For these firms, the main determinants besides compliance experience are operational complexity of the firm and CEO duality. Namely, firms report lower net benefits when they have multiple business segments or the CEO has a dual role. The findings line up with the fact that these types of firms also report lower benefits and higher costs (in the case of multi-segment firms). It is also worth noting that firm size does not appear to explain the perceived net benefits of EICS compliance. This suggests that the incremental costs of compliance associated increasing size are offset by proportionally higher benefits.

Overall, the evidence in Tables 4.6 and 4.7 consistently indicates that experience increases the firm-level efficiency of EICS compliance. For non-SOEs, the costs decline after the first year of compliance. Moreover, for both SOEs and non-SOEs, the perceived net benefits increase significantly with experience. Apart from experience, firm complexity is another important determinant of the costs and net benefits of compliance for non-SOEs.

4.4 Do the Perceived Effects of EICS Compliance Map into Real Observable Benefits?

The evidence from previous multiple regression tests shows that the effects of compliance vary systematically across firms. This is particularly true among non-SOEs, which suggests that the effects of EICS compliance depend on the extent to which the firm's control is susceptible to the discipline of capital market forces.

In this section, I examine whether the reported benefits of EICS compliance map into real observable benefits that are expected to be associated with mandated ICFR disclosure. One of the main objectives of rules like EICS and Section 404 is to strengthen firms' incentives to maintain effective controls over financial reporting processes. Thus, I begin by examining whether the benefits of EICS compliance reported by insiders line up with DIB's independent assessment of the firm's ICFR quality.

According to EICS, effective internal control systems require internal procedures, risk assessment, control activities, information and communication, and internal monitoring. DIB developed a rating system for listed firms based on these five elements. These five broad categories comprise 87 specific dimensions of a firm's internal control system, which DIB assesses separately.¹⁶ I aggregate DIB's scores of the five broad categories to construct a summary index that measures the overall quality of the firm's internal control system. In this part of analysis, a higher value of the index reflects higher quality of the firm's internal control system.

¹⁶ The ICFR ratings are issued by DIB Risk Management Company. These ratings have been published in *China Securities Daily* each year since 2008 and are widely used in China's academic (Li et al. 2010) and regulatory circles (e.g., CSRC and MOF) to evaluate the internal control quality of listed companies. DIB constructs its ratings based on information from annual reports, quarterly reports, interim statements, corporate governance and internal control evaluation reports, and internal control audit reports of the listed companies. Further information about the detailed dimensions of these ratings can be found in Appendix G.

[Insert Table 4.8 here]

Table 4.8 reports OLS estimates of the relation between the benefits of EICS compliance reported in the survey and the firm's ICFR quality index based on DIB's independent assessment. The evidence in the table shows that there is a positive and statistically significant relation between the ICFR ratings by DIB and the benefits reported by the survey participants. Thus, firms that report greater benefits from EICS compliance are also those that DIB rates higher in terms of internal control quality. When I decompose the benefits index (Columns 2-5), I find that the relation between the overall benefits and DIB's ratings is driven by the perceived effects of EICS compliance on disclosure quality and, perhaps unsurprisingly, by achievement of EICS objectives.

Although the tests in Table 4.8 cannot identify the causal direction of the documented relations, the evidence is informative in that it demonstrates a real link between ICFR mandated disclosure and its quality. Hence, firms with higher ICFR quality benefit more from regulation that mandates its disclosure *and/or* firms that ascribe higher benefits to mandated ICFR disclosure tend to subsequently have better internal controls.

Like in earlier tests, I examine whether the relation between DIB's ratings and reported compliance benefits varies with government ownership in Columns 6 and 7 of Table 4.8. The evidence from these tests indicates that the association between the perceived benefits of EICS compliance and ICFR quality is exclusively driven by the non-SOE subsample. In particular, among non-SOEs, the estimates imply that when the overall benefits increase by one unit (i.e., from no positive to

little positive, or little positive to highly positive effects), the DIB's ratings increase by 6.5. Conversely, I find that for SOEs there is no statistically significant association between the perceived benefits of EICS compliance and the quality of the firm ICFR.

I next examine the proposition that, by improving the reliability of financial reports and thus alleviating information asymmetries between firms and investors, mandated ICFR disclosure can ultimately lead to a lower cost of capital. To conduct these tests, I estimate a firm's cost of capital as the weighted cost of the firm's debt and equity capital. In particular, I use the method in Pittman and Fortin (2004) to calculate the cost of debt and the method in Easton (2003) to calculate the cost of equity. The weights are based on reported debt obligations and market capitalization of equity at the last fiscal year end. Similar to the tests in Table 4.8, I then examine the relation between the reported benefits of EICS compliance and the firm's cost of capital.

[Insert Table 4.9 here]

Table 4.9 reports OLS estimates of the relation between the reported benefits of EICS compliance and the firm's cost of capital. Consistent with the notion that mandated ICFR disclosure can produce real material benefits, the evidence shows that the firm's cost of capital decreases significantly with the reported compliance benefits. For the overall sample, I find that an increase of one unit in the overall benefits is associated with an average decrease of 1.1% in the cost of capital. Interestingly, when I decompose the benefits index, I find that the association with the cost of capital is predominantly due to the respondents' assessment of the effect

of EICS compliance on the quality of firm disclosure. While again it is hard to draw definitive causal inferences from the results in Table 4.9, it shows that the main component of the benefits associated with the firm's cost of capital is the one related to its disclosure quality. Together with the evidence in Table 4.8, the results support the logic that links ICFR disclosure to more effective internal control, which would improve the quality of the firm's financial reporting and ultimately reduce its cost of capital.

As in the previous table, I examine in Columns 6 and 7 of Table 4.9 whether the relation between the compliance benefits and the cost of capital varies between SOEs and non-SOEs, respectively. The evidence from these tests lines up squarely with the earlier results. Namely, I find that the negative association between the EICS compliance benefits and the cost of capital is predominantly found in non-SOEs. The implied effect of EICS compliance benefits is a reduction of 1.5% in the firm's cost of capital for each unit increase in the overall benefit index.

Overall, the evidence in this section demonstrates that the benefits of mandated ICFR disclosure reported by corporate insiders map into measurable potential benefits suggested by theory. In particular, the quality of ICFR is higher and the cost of capital is lower among firms that ascribe higher benefits to EICS compliance. Furthermore, in line with earlier results, the differences between SOEs and non-SOEs underscore the key role played by the susceptibility of firm ownership to market forces. In particular, I find that measurable benefits of EICS compliance are significantly related to those perceived by insiders only among non-SOEs.

4.5 Do the Effects of Mandated ICFR Disclosure Depend on Local Market Institutions?

Christensen et al. (2016) show that the effects of E.U. directives on securities regulation vary with the local institutions of member countries. Fan and Wang (2003) find that the development of local market institutions varies greatly across Chinese provinces. Wang et al. (2008) find that these differences explain auditor selection by Chinese listed firms. Therefore, it is conceivable that the perceived effects of EICS compliance and their relation with observable benefits of improved ICFR could vary with the development of local market institutions.

In this section, I explore whether and how local market development determines the effects of mandated ICFR disclosure. In principle, this should depend on whether such rules and market incentives are complements or substitutes, which is ultimately an empirical question.

To conduct my analysis, like Wang et al. (2008), I rely on the National Economic Research Institute (NERI) Index of Marketization of China's provinces developed in Fan and Wang (2003). This index is based on the appraisal of regional institutions along several dimensions: relationship between the government and the market, development of the non-state sector, development of the factor markets, development of the product markets, development of the intermediary market, and the legal environment.

Table 4.10 reports the results of this analysis. In Column 1, I examine whether the level of province marketization explains the perceived benefits of EICS compliance reported in the survey. In Columns 2-5, I segment provinces by the

degree of marketization to test whether the local market forces affect the relation of the reported effects of compliance with the quality of ICFR and the cost of capital of the firm.

[Insert Table 4.10 here]

The results in Table 4.10 show that the level of development of local market institutions in the firm's province is a strong determinant of the effects of EICS compliance. In particular, in Column 1, I find that the firms located in provinces that have less developed market institutions tend to report greater benefits of EICS compliance. This evidence supports the notion that the reliability of financial reports is most important when local sources of capital are scarce and local market forces provide only limited discipline.

Similarly, when I examine the relation between reported effects of EICS compliance and observable benefits of improved ICFR, I find that the lack of local market institutions greatly strengthens that link. In particular, firms operating in provinces with lower levels of marketization that report higher benefits of compliance tend to have significantly higher quality ICFR and a lower cost of capital. In contrast, I find no significant association between the reported benefits and ICFR quality of cost of capital of firms operating in more developed provinces.

Overall, in line with Christensen et al. (2016), the results show that the effects of disclosure rules vary substantially with other institutional features of the environment in which firms operate. In my context, in particular, the evidence suggests that market-based incentives and the mandates of ICFR disclosure rules are substitutes. Namely, when local markets are less developed, corporate insiders report

larger benefits of EICS compliance and those benefits are more strongly linked with observable real benefits of improved ICFR.

4.6 Further Analysis

The evidence from above regression analysis supports the idea that the effectiveness of mandated ICFR disclosure depends crucially on the broader market and institutional environment in which firms operate. In this section, I further examine whether the inner factor, insiders' attitude towards the importance of internal control, would influence the effects of mandated ICFR disclosure after controlling for respondent firm characteristics.

Since ICFR disclosure is mandatorily promoted to be implemented in listed firms by government forces, different firms would choose specific actions (behavior), which will then induce the corresponding compliance effects. So, what action (behavior) the firms would choose to respond to such a mandatory requirement? Theory of planned behavior (Ajzen 1985) posits that behavioral intentions are the main determinants of behavior, and managers' behavioral intentions are in turn significantly determined by their attitudes toward the behavior given the same perceived social pressure from significant others to engage in the target behavior (say, mandatory compliance). According to the definition of internal control in EICS, "the board of directors takes the ultimate responsibility of internal control effectiveness", thus the attitude of board of directors towards the importance of internal control would crucially determine the resource allocation behavior the firm will choose (e.g., department or rules establishment), and ultimately induce the corresponding

effects.¹⁷

4.6.1 Attitude towards Internal Control and Department Establishment

In practice, firms designate a different department to be in charge of internal control issues, and generally, the internal audit department is the most representative. While the designated department always has its regular tasks to deal with, it may not be able to devote enough time and effort to internal control issues. Setting up a department that is in charge of internal control system establishment and related issues may solve the dilemma to some extent, but whether or not to establish a specialized department probably depends on the attitude of board of directors towards the importance of internal control since resources are scarce in the firm.

Table 4.11 reports the Logistic regression estimates of the relation between the attitude towards the importance of internal control and department establishment in the form of Risk Management Committee and Internal Control Department. The dependent variable *RM_Committee (IC_Department)* is an indicator variable equal to one when the firm has established the Risk Management Committee (Internal Control Department).¹⁸ The independent variable *IC_Attitude* is the attitude of board of directors towards the importance of internal control, which is based on a five-point ordinal scale from no significant importance to significant importance: the higher the value, the higher the importance priority. To alleviate right skewness concerns to some extent, I reconstruct the five-point scale to a three-point scale by combining the

¹⁷ After the collection of questionnaires, I, as the team member, went to eight firms listed in Beijing and Guangdong (e.g., Highsun Group, Origin Water) to do a field survey. From the field survey, I found that the Chairman perceived internal control of different importance, and the internal environments in these firms were also different. For example, the Chairman of Highsun Group (000861) believed that internal control is very important, and allocated lots of resources to design internal control system.

¹⁸ The scope of risk management is broader than that of internal control.

original responses 1, 2, and 3 into -1 and changing the point 4 to 0 and 5 to 1. All other control variables are identical to those in Table 4.4.

[Insert Table 4.11 here]

The results in Table 4.11 show that the higher the attitude of board of directors towards the importance of internal control, the higher the probability of setting up a specialized department. The estimates in Columns 1 and 2, for risk management committee, show a significant relation between the attitude towards the importance of internal control and the probability of setting up a risk management committee. Firms with higher market value or foreign sales, facing more uncertainty and risk, tend to set up a specialized risk management committee. In Columns 3 and 4, for internal control department, the estimates reveal that the higher the perception of the importance of internal control, the higher the probability of setting up a specialized internal control department. Further, firms that are older, with CEO-Chairman duality and concentrated ownership, tend to establish a specialized internal control department. Taking compliance experience into consideration, I find that firms that are already EICS compliant are more likely to set up a specialized internal control department. The above results are consistent with the notion that, under specific firm characteristics (e.g., firm size, foreign sales, etc.), the attitude towards the importance of internal control really matters whether or not the firm will set up a specialized department to be in charge of internal control establishment and regular issues.

4.6.2 Attitude towards Internal Control and Rules and Regulations Establishment

Internal control is a process needed to be participated in and implemented by managers and other staff members, and an individual's behavior will definitely affect the implementation effects. Thus, the firm may wish to set up a relevant mechanism to motivate participators of internal control to better fulfill their specific roles. In a firm, the rules about managers' (staff's) promotion and salaries, as a motivation mechanism, are the most important components of internal environment and governance. If the board of directors perceives more importance of internal control, it would possibly set up rules and regulations about managers' (and staff's) promotion and salaries linking with internal control effectiveness to promote a better fulfillment.

Table 4.12 reports the multiple regression estimates for the relation between the attitude towards the importance of internal control and personnel internal control performance appraisal. The dependent variable *Manager_promotion* is an indicator variable equal to one when the managers' promotion is related to internal control weakness, and zero otherwise; *Manager_salary* is an indicator variable equal to one when the managers' salaries are related to internal control weakness, and zero otherwise; *Staff_promotion* is an indicator variable equal to one when a staff member's promotion is related to internal control weakness, and zero otherwise; and *Staff_salary* is an indicator variable equal to one when a staff member's salary is related to internal control weakness, and zero otherwise. All other control variables are identical to those in Table 4.4.

[Insert Table 4.12 here]

The results in Table 4.12 show that there is a significant relation between the attitude towards the importance of internal control and personnel internal control performance appraisal. The estimates in Columns 1 and 2 are the results for managers' internal control performance appraisal, and I find that the firms with higher perception of the importance of internal control would be more likely to link managers' promotion and salaries with internal control weakness. Columns 3 and 4 show the results for staff members' internal control performance appraisal, but I only find that a staff member's promotion with internal control weakness is significantly positively related to perception of the importance of internal control; this is perhaps due to the fact that a staff member's salary is relatively less and hard to decrease to maintain the minimum expected utility. The evidence is in line with the notion that a motivation mechanism is a good path to realize expected effects, and firms with higher perception of the importance of internal control are more likely to design a motivation mechanism to motivate participators to better perform in the internal control process.

The most fundamental and crucial task of internal control is to establish complete rules and regulations, which forms the procedure and reference for daily transactions to rely on. These rules and regulations provide risk controls to a reasonable and acceptable level by considering possible events, and are crucial to internal control effects. I next examine whether the attitude towards the importance of internal control would have impact on the rules and regulations establishment.

Table 4.13 reports the multiple regression estimates for the relation between the attitude towards the importance of internal control and rules and regulations establishment in the form of fundamental rules and information communication rules.

Funda_Rules is the mean value of the degree of fundamental rules establishment including rules of transaction authorization and monitoring, regular property verification and daily management, separation of incompatible duties, and comprehensive budget management.¹⁹ *Information_Rules* is the mean value of the degree of information communication rules establishment including rules of gathering internal and external relevant information, rules for communication of internal control-related information, existence of an anti-fraud reporting line, and communication channel of contingency.²⁰ *Rules* is the mean value of the degree of fundamental rules and information communication rules establishment. Responses to each question are coded on a five-point ordinal scale, and I follow the reconstruction method for *Funda_Rules* and *Information_Rules* consistent with *IC_Attitude* mentioned in Table 4.11 to alleviate right skewness concerns to some extent. *Rules* is the mean value of the degree of fundamental rules and information communication rules establishment. All other control variables are identical to those in Table 4.4.

[Insert Table 4.13 here]

The results in Table 4.13 show that there is a significant relation between

¹⁹ For fundamental rules, the team asked the following questions: “Please evaluate whether these following statements are in conformity with the actual situation of your company (1=not at all in conformity, 5=in conformity perfectly)”. The statements consist of the following: 1. has a complete set of approval, authorization, verification, regulation and examination procedures; 2. has a property regularly checking system and daily management system; 3. has a clear transaction authorization system; 4. authorization, implementation and evaluation are separated, and unrelated persons are responsible for incompatible positions; and 5. implements a comprehensive budget management system, and the authority and responsibility of each responsibility unit are defined clearly.

²⁰ For information communication rules, the team asked the following questions: “Please evaluate whether these following statements are in conformity with the actual situation of your company (1=not at all in conformity, 5=in conformity perfectly)”. The statements consist of the following: 1. be able to obtain and identify necessary internal and external information; 2. clearly define the collection of information which is relevant to internal control, make sure the information can be communicated in time, and promote the implementation of internal control; 3. for those risky contingencies, draw up corresponding emergency plans, clearly define responsible persons, formalize handling procedures, make sure the emergencies can be solved properly; and 4. has an anti-fraud hotline, complaint handling procedures, time limits and requirements.

attitude of board of directors towards the importance of internal control and rules and regulations establishment. The results reveal that the firms with higher perception of the importance of internal control pay more attention to establish complete rules and regulations, both fundamental rules and information communication rules, providing the underlying solid environment for internal control. I also find that larger firms and firms with EICS compliance experience tend to have established better rules and regulations.

4.6.3 Attitude towards Internal Control, Rules and Regulations Establishment and ICFR Quality

The evidence from previous multiple regression tests shows that the inner factor, attitude of board of directors towards the importance of internal control, would determine the resource allocation behavior. In this part, following Baron and Kenny (1986), I examine whether rules and regulations establishment, the most crucial foundation of internal control, is a possible mediator through which the attitude of board of directors towards the importance of internal control influences ICFR quality, and construct the following models (4-3), (4-4), and (4-5) to indicate *Path a*, *Path b*, and *Path c*, respectively.

$$ICFR_Quality_i = \alpha_0 + \alpha_1 IC_Attitude_i + \sum_j \alpha_{1j} Complexity_{ij} + \sum_k \alpha_{1k} Governace_{ik} + \sum_m \alpha_{1m} MatWeakness_{im} + \sum_n \alpha_{1n} Controls_{in} + \varepsilon_i, \quad (4-3 \text{ Path } a)$$

$$\begin{aligned}
Rules_i &= \alpha_0 + \alpha_1 IC_Attitude_i + \sum_p \alpha_{1p} Experience_{ipt} + \\
&\sum_j \alpha_{1j} Complexity_{ijt} + \sum_k \alpha_{1k} Governace_{ikt} + \sum_m \alpha_{1m} MatWeakness_{imt} + \\
&\sum_n \alpha_{1n} Controls_{in} + \varepsilon_i.
\end{aligned}$$

(4-4 Path b)

$$\begin{aligned}
ICFR_Quality_i &= \alpha_0 + \alpha_1 Rules_i + \alpha_2 IC_Attitude_i + \sum_j \alpha_{1j} Complexity_{ij} + \\
&\sum_k \alpha_{1k} Governace_{ik} + \sum_m \alpha_{1m} MatWeakness_{im} + \sum_n \alpha_{1n} Controls_{in} + \varepsilon_i,
\end{aligned}$$

(4-5 Path c)

where *ICFR_Quality* is internal control quality and identical to that in Table 4.8, *Rules* and *IC_Attitude* are the same as those in Table 4.13, and all other control variables are identical to those in Table 4.4.

The criteria for defining a mediator as dominant or partial are as follows:

When the coefficients in *Paths a - c* and Sobel test value meet the following criteria, the mediator is a dominant mediator:

1. in *Path a*, α_1 is significant;
2. in *Path b*, α_1 is significant;
3. in *Path c*, α_1 is significant and α_2 is insignificant; and
4. Sobel test value is statistically significant.

When the coefficients in *Paths a - c* and Sobel test value meet the following criteria, the mediator is a partial mediator:

1. in *Path a*, α_1 is significant;
2. in *Path b*, α_1 is significant;
3. in *Path c*, α_1 and α_2 are both significant; and
4. Sobel test value is statistically significant.

[Insert Table 4.14 here]

Table 4.14 reports the results of Sobel test that examines whether rules and regulations establishment is a possible mediator through which the attitude of board of directors towards the importance of internal control influences ICFR quality. Panel A of Table 4.14 reports the regression estimates of *Paths a* to *c*. The results show that the coefficient on *IC_Attitude* is significantly positive in *Path a*, indicating that firms that perceive high importance of internal control tend to subsequently have better internal control; the coefficient on *IC_Attitude* is also significantly positive in *Path b*, revealing that firms that perceive high importance of internal control tend to subsequently have better internal controls; and the coefficient on *Rules* and coefficient on *IC_Attitude* are both significantly positive. Panel B of Table 4.4 reports Sobel test result with a Z value of 2.208, significant at the 5% level. The results meet the criteria for a partial mediator, demonstrating that the attitude of board of directors towards the importance of internal control would influence the effects of EICS compliance partially by establishing rules and regulations in firms. The evidence provides regulatory implications that it is very crucial for regulators to advocate the importance of internal control and stimulate managers to raise their inherent awareness of such control, so that they would design proper rules systems and pay more attention to internal control issues, which will in turn induce good internal control implementation.

4.7 Summary

In this chapter, I analyze the responses of corporate executives to a survey

conducted by the CSRC to assess their experience with EICS compliance from the perspectives of perceived benefits, costs and benefits net of costs.

The evidence indicates that the majority of corporate insiders of Chinese listed firms (81.67%) perceive that compliance with ICFR disclosure rules has some positive effects. The mean total compliance cost in the first year of compliance is 6.43 million RMB, which is comparable to that in the U.S. The reported net benefits are somewhat negative for the first year of compliance, but they are substantially higher and positive as the compliance experience increases. Furthermore, the respondent firm's perceived effects of EICS compliance also vary across different firms with characteristics that would affect internal control effectiveness, as demonstrated in prior literature.

I find that the benefits of EICS compliance reported in the survey map into real observable benefits of ICFR disclosure. In particular, firms that report higher benefits of compliance also tend to be recognized as having higher ICFR quality and to enjoy a lower cost of capital. The effects of EICS compliance are larger and map into real observable benefits predominantly among firms with low government equity ownership. I also find that firms from provinces with less developed local market institutions tend to report higher benefits that are also more tightly linked with real observable effects of ICFR disclosure. Further analysis indicates that the attitude of board of directors towards the importance of internal control would crucially determine the resource allocation behavior the firm will choose, and ultimately induce the corresponding compliance effects.

Chapter 5 Conclusion and Future Research Opportunities

5.1 Conclusion

In this thesis, I analyze the responses of corporate executives to a survey conducted by the CSRC to assess their experience with EICS compliance. Exploiting this unique database, my analysis sheds new light on the effects of ICFR disclosure rules in the largest emerging market.

The evidence indicates that corporate insiders of Chinese listed firms overwhelmingly perceive that compliance with ICFR disclosure rules has large positive effects on the quality of financial reports, firm performance, and confidence of capital market participants. Indeed, while the costs of compliance are notably large, a large majority of respondents perceive that the benefits far outweigh the costs, especially among firms with longer experience. This evidence stands in sharp contrast to results from a similar survey of U.S.-listed firms, which suggests caution when extending inferences across dramatically different environments.

The results of additional tests show that the benefits of EICS compliance reported in the survey map into real observable benefits of ICFR disclosure. In particular, firms that report higher benefits of compliance also tend to be recognized as having higher ICFR quality and to enjoy a lower cost of capital. This evidence supports the idea that mandated ICFR disclosure rules can enhance the quality of reporting and investor confidence, which would ultimately allow firms to access cheaper sources of capital.

The results of my tests, however, also show that the effects of ICFR disclosure rules depend crucially on the extent to which firms are susceptible to

market forces. In particular, first, I find that the effects of EICS compliance are larger and map into real observable benefits predominantly among firms with low government equity ownership, i.e., non-SOEs. This suggests that when firm ownership is more insulated from market discipline, the effectiveness of ICFR disclosure rules is dampened. Second, I find that firms from provinces with less developed local market institutions tend to report higher benefits that are also more tightly linked with real observable effects of ICFR disclosure. This evidence suggests that market-based incentives stemming from the development of local institutions are a substitute for the mandates stemming from ICFR disclosure regulation.

Further analysis indicates that the attitude of board of directors towards the importance of internal control would crucially determine the resource allocation behavior the firm will choose, and ultimately induce the corresponding compliance effects. This evidence provides regulatory implications that it is very crucial for regulators to advocate the importance of internal control and stimulate managers to raise their inherent awareness of such control, so that they would design proper rules systems and pay more attention to internal control, which will in turn induce good internal control implementation.

Overall, I conclude that corporate insiders ascribe to ICFR disclosure rules important benefits that are unique to China's institutional environment and may extend to other emerging markets that are considering similar regulation. The findings of my thesis support the idea that the effectiveness of mandated ICFR disclosure depends crucially on the broader market and institutional environment in which firms operate.

5.2 Research Opportunities

It is a hot topic about the benefits and costs of internal control, which is also very hard to measure. In this thesis, by using the survey data conducted by CSRC, I analyze the compliance effects of mandated ICFR rules in China from corporate insiders' perspective. The future research could investigate the following two topics:

1. Nowadays, information technology, which is overwhelmingly adopted and used, plays an increasingly indispensable role in the development for enterprises, and brings tremendous changes to the business environment and operating way. As shown by the evidence in my thesis, internal control informatization expense accounts for 70-80% of total compliance costs, and increases stably from 2011 to 2014, which is probably driven by the national strategy "Internet Plus". As information technology brings new challenges to traditional internal control methods, what impact it will bring to internal control? How to integrate information technology and internal control together? How to control risks induced by information technology?

2. Since internal control is a process needed to be implemented by persons, in which "persons" is the key factor that affects the compliance effects. However, there is a lack of studies that investigate the impact of personal traits on internal control effectiveness, such as managers' culture or religion, staff's capability, etc. The scholars could examine the relation between personal traits and internal control effectiveness in future studies.

Tables

Table 4.1 Survey Participation by Industry and Individual Respondent’s Title and Tenure

This table shows the survey participation by industry and individual respondent’s title and tenure. The sample comprises 1,458 firms listed in A-share and B-share markets at the time of survey. Panel A reports the number of respondent firms and the response rate within each of the CSRC industry classification criteria. Panel B lists the number of respondents by title and tenure. When respondents claim more than one title, the highest title rank—defined by the listing in the Table—is assigned for that respondent. The tenure data about Chairman, CEO, Board Secretary, and CFO are from the Wind database and collected by hand, while the others are filled by the respondents.

Panel A: Industries of Respondent Firms								
				<i>Targeted Firms</i>	<i>Respondent Firms</i>			<i>Response Rate (%)</i>
Agriculture, forestry, animal husbandry and fishery				22	21			95
Mining				63	47			75
Manufacturing				767	614			80
Electricity, heat, gas and water production and supply				82	66			80
Construction				39	30			77
Wholesale and Retail Sales				122	102			84
Transportation, warehousing and postal service				74	57			77
Hotels and Catering Services				9	8			89
Communication, software and information technology services				31	26			84
Finance				43	37			86
Real estate				127	103			81
Leasing and Business Service				14	11			79
Scientific research and technical services				2	2			100
Water resources, environment and public facilities management				15	11			73
Education, Health, and Social Work				2	1			50
Culture, Sports and Entertainment				21	12			57
Others				25	19			76
<i>All industries</i>				1,458	1,167			80
Panel B: Respondent’s Title and Tenure								
	Chairman	CEO	Board Secretary	CFO	Internal Auditor	IT Director	IC Director	Total
One year	231	211	182	201	75	48	25	973
Two or three years	251	289	271	311	136	119	58	1,435
Four or five years	215	176	206	212	126	101	54	1,090
More than five years	434	272	492	361	758	716	384	3,417
No response	-	-	-	35	34	36	18	123
Total	1,131	948	1,151	1120	1129	1020	539	7,038

Table 4.2 Survey Responses on the Costs, Benefits, and Net Benefits of EICS Compliance

N is the number of respondents; *Mean* is the average response, and *%positive* is the fraction of the responses citing a positive impact. The missing values of Panel A responses are omitted in all rows, and the average responses of all 4 groups of questions are provided in the final row (I classify 19 benefits questions into 4 groups, and the responses to all 19 questions are shown in Appendix F). Panel B reports the estimated EICS compliance costs by component and compliant year. The missing value of internal control consulting fees is coded as zero. The missing value of internal control informatization is set to the predicted values from the regression of observed costs on total assets, their square, and their compliance year. Internal control staff salary is the staff salary of the department in charge of internal control; for some reasons, firms are only required to answer three years (2011-2013), and year 2014 data are treated the same as year 2013. There are two conditions of missing values of internal control staff salary: 1. for firms that just provided the internal control staff number but not the staff salary, the observed salary per person is used to predict these missing values; 2. for firms that did not provide both the internal control staff number and staff salary, these missing values are treated by using the estimation procedure of internal control informatization. The data of EICS-related audit fees are from the DIB database; for some compliant companies not disclosing the fees, I treat these missing values as follows: 1. if the company disclosed at least one year of EICS-related audit fees, the average of EICS-related audit fees is calculated and the missing values are set to the average value; 2. if the company did not disclose any year of EICS-related audit fees, the estimation procedure of internal control informatization is used. The company that has no data on these four components is deleted. Panel B questions require the respondent to provide data for four years (2011-2014) (excluding internal control staff salary), and then I classify corresponding years to compliant years. The row “The third and fourth compliance years” for all compliant firms turns to be “The third compliance year” for firms with at least three compliance years. Panel C questions require the respondent to provide data for three successive compliance years (for compliant companies, the first compliance year is one of the years from 2011 to 2014).

Panel A: Benefits

"To the best of your knowledge, what impact has EICS compliance had on the following?"

(3-point scale: -1= no positive impact; 0= little positive impact; 1= large positive impact)

	Firm level		
	<i>N</i>	<i>Mean</i>	<i>%positive</i>
Firm Performance	1,154	0.26	81.54
Quality of Disclosure	1,154	0.44	88.75
Mkt Participants' Confidence	1,154	0.00	68.94
Achieving EICS Objectives	1,154	0.10	87.44
Average across all questions	1,154	0.20	81.67

Panel B: Costs (expressed in ten thousand yuan)

	All compliant firms				Firms with at least 3 years of compliance			
	<i>N</i>	<i>Mean</i>	<i>Median</i>	<i>Sd</i>	<i>N</i>	<i>Mean</i>	<i>Median</i>	<i>Sd</i>

The first compliance year

1. IC_Audit	1167	39.48	33.40	34.08	726	42.53	33.17	39.80
2. IC_Consult	1167	38.79	27.92	47.97	726	43.34	30.00	52.06
3. IC_IT	1167	436.70	132.41	1706.66	726	531.54	135.53	1948.40
4. IC_Salary	1167	138.50	53.00	245.18	726	152.90	55.00	274.28
Total (1+2+3+4)	1167	643.81	271.74	1750.28	726	755.45	289.50	1999.02
<i>The second compliance year</i>								
1. IC_Audit	863	42.46	35.00	37.00	726	42.48	33.50	38.48
2. IC_Consult	863	27.28	15.00	42.88	726	26.86	15.00	43.22
3. IC_IT	863	628.06	277.88	1987.31	726	629.12	269.98	2017.37
4. IC_Salary	863	163.66	59.26	289.99	726	166.05	59.26	294.64
Total (1+2+3+4)	863	848.44	387.54	2037.87	726	849.27	383.76	2071.60
<i>The third and fourth compliance years</i>								
1. IC_Audit	949	46.62	35.00	43.91	726	43.42	35.00	39.27
2. IC_Consult	949	24.67	5.00	43.50	726	23.51	8.00	41.04
3. IC_IT	949	903.72	418.03	2403.30	726	739.39	413.23	2067.87
4. IC_Salary	949	185.43	60.00	325.20	726	174.69	59.26	310.45
Total (1+2+3+4)	949	1137.43	541.85	2465.02	726	965.35	512.03	2130.48

Panel C: Net benefits

(3-point scale: -1= costs far outweigh benefits; 0= small net benefits; 1= benefits far outweigh costs)

	All compliant firms			Firms with at least 3 years of compliance		
	<i>N</i>	<i>Mean</i>	<i>%positive</i>	<i>N</i>	<i>Mean</i>	<i>%positive</i>
First year	1,105	-0.11	37.47	677	-0.06	40.62
Second year	824	0.46	71.36	677	0.45	71.34
Third year	687	0.78	90.54	677	0.78	90.69

Table 4.3 Correlation Coefficients between Survey Responses on the Costs, Benefits, and Net Benefits of EICS Compliance

This table reports the Pearson (lower triangular) and Spearman (upper triangular) correlation coefficients between each set of responses on the costs, benefits, and net benefits of EICS compliance for three compliance years.

	<i>1</i>	<i>2</i>	<i>3</i>
<i>The first compliance year</i>			
1. Average response to all 4 groups of questions in Panel A Table 4.2		0.02	0.21***
2. Total costs	0.01		0.05*
3. Net benefits	0.21***	0.06*	
<i>The second compliance year</i>			
1. Average response to all 4 groups of questions in Panel A Table 4.2		0.03	0.25***
2. Total costs	0.02		0.08**
3. Net benefits	0.24***	0.09**	
<i>The third compliance year</i>			
1. Average response to all 4 groups of questions in Panel A Table 4.2		0.05	0.29***
2. Total costs	0.03		0.14***
3. Net benefits	0.28***	0.10**	

Table 4.4 Firm Characteristics: Sample Means and Sample Correlations

Panel A reports the mean company characteristics. *Firmage* is the number of years since the respondent company was publicly traded. *MVE* is the log of the respondent company's market value of equity. *R&D* is research and development expenses scaled by total assets and is equal to zero when no research and development expenses are reported. *Multisegment* is an indicator variable equal to one when the number of unique business industry segments reported by the Wind database is greater than one, and zero otherwise or when not reported. *Crosslist* is an indicator variable equal to one when the firm is listed abroad, and zero otherwise. *SOE* is an indicator variable equal to one if the firm is a state-owned enterprise. *Dual* is an indicator variable equal to one if the Chairman and CEO are the same person. *InstOwn* is the aggregate institutional ownership measured at the fiscal year end. *OwnBalance* is the ownership value of the largest shareholder minus the ownership of the second to tenth largest shareholders. *ICDcurrent* is an indicator variable equal to one when an internal control deficiency is reported in the current year, and zero otherwise. *ICDremediation* is an indicator variable equal to one when an internal control deficiency reported in a prior year has been remediated, and zero otherwise. *Restatement* is an indicator variable equal to one when the company restated the financial report in the current year, and zero otherwise. *Excessret* is monthly alphas from January 2009 to December 2013 (post-EICS period), defined as the intercept from the time-series regression of each firm's monthly stock returns in excess of risk-free rate on Carhart's (1997) four factors. All of the variables are constructed using the most recently available data at the time of the corresponding survey response, namely 2013. Panel B reports the Pearson correlation coefficients between firm characteristics, obfuscated into decile or centile rankings according to Appendix E. Panel C reports the Pearson correlation coefficients between these obfuscated measures and the responses to the survey questions reported in Table 4.2. The bold-faced values indicate statistical significance at the 10% level.

Panel A: Firm Characteristics													
	<i>Firmage</i>	<i>MVE</i>	<i>R&D</i>	<i>Multisegment</i>	<i>Crosslist</i>	<i>SOE</i>	<i>Dual</i>	<i>InstOwn</i>	<i>OwnBalance</i>	<i>ICDcurrent</i>	<i>ICDremediation</i>	<i>Restatement</i>	<i>Excessret</i>
<i>N</i>	1079	1061	1079	1036	1090	1090	1090	1090	1078	1090	1090	1090	1072
<i>Mean</i>	14.01	22.83	0.01	0.72	0.04	0.59	0.16	0.44	0.19	0.12	0.13	0.06	0.01

Panel B: Pearson correlation coefficients between firm characteristics													
	1	2	3	4	5	6	7	8	9	10	11	12	13
1. <i>Firmage</i>	1												
2. <i>MVE</i>	-0.09	1											
3. <i>R&D</i>	-0.20	0.08	1										
4. <i>Multisegment</i>	0.11	0.05	-0.14	1									

<i>5. Crosslist</i>	-0.10	0.26	0.07	0.01	1								
<i>6. SOE</i>	0.02	0.19	-0.01	-0.01	0.09	1							
<i>7. Dual</i>	-0.06	-0.13	0.04	-0.04	-0.02	-0.22	1						
<i>8. InstOwn</i>	-0.07	0.44	0.04	0.00	0.14	0.29	-0.18	1					
<i>9. OwnBalance</i>	-0.07	0.14	-0.01	0.02	-0.11	0.28	-0.10	0.26	1				
<i>10. ICDcurrent</i>	0.02	-0.04	-0.01	-0.05	-0.01	0.04	-0.01	-0.03	0.01	1			
<i>11. ICDremediation</i>	0.02	0.01	0.00	0.04	-0.03	0.08	-0.05	-0.01	0.00	-0.14	1		
<i>12. Restatement</i>	0.00	-0.02	-0.06	0.03	-0.04	-0.04	0.03	-0.05	-0.05	0.10	-0.04	1	
<i>13. Excessret</i>	0.06	0.16	0.03	0.00	-0.01	-0.14	0.02	0.07	-0.08	-0.06	-0.02	-0.01	1

Table 4.4 (Cont'd)

Panel C: Pearson correlation coefficients between survey responses and firm characteristics													
	<i>Firmage</i>	<i>MVE</i>	<i>R&D</i>	<i>Multisegment</i>	<i>Crosslist</i>	<i>SOE</i>	<i>Dual</i>	<i>InstOwn</i>	<i>OwnBalance</i>	<i>ICD current</i>	<i>ICD remediation</i>	<i>Restatement</i>	<i>Excessret</i>
<i>Benefits: "To the best of your knowledge, what impact has EICS compliance had on the following?"</i>													
Firm Performance	0.01	0.08	-0.05	0.01	0.04	0.02	-0.03	0.02	-0.02	0.03	-0.01	0.04	0.03
Quality of Disclosure	0.00	0.09	-0.03	-0.03	0.02	0.00	-0.01	0.01	-0.02	0.05	-0.01	0.03	0.01
Mkt Participants' Confidence	-0.02	0.12	-0.02	0.01	0.03	0.02	-0.02	0.04	0.02	0.01	-0.01	0.04	0.01
Achieving EICS Objectives	0.01	0.09	-0.03	-0.01	0.04	0.05	-0.05	0.06	-0.01	0.00	0.01	0.00	0.02
Average across all questions	0.00	0.10	-0.04	-0.01	0.03	0.02	-0.03	0.02	-0.02	0.04	0.00	0.03	0.01
<i>Costs: Respondent company's total EICS compliance costs (ten thousand yuan)</i>													
First year	-0.13	0.42	0.08	0.06	0.34	0.09	-0.01	0.2	0.06	-0.09	0.06	-0.06	0.04
Second year	-0.17	0.44	0.1	0.02	0.34	-0.01	0.06	0.18	0.04	-0.09	-0.05	-0.06	0.08
Third and fourth years	-0.2	0.47	0.07	-0.03	0.39	0.02	0.04	0.19	0.04	-0.04	-0.03	-0.06	0.02
<i>Net benefits: "For your company, how are the benefits of EICS compliance compared with the costs of compliance?"</i>													
First year	0.02	0.07	-0.08	0.00	0.00	0.10	0.01	0.05	0.04	0.01	-0.03	-0.09	0.05
Second year	-0.02	0.03	-0.08	-0.05	-0.01	0.05	-0.04	0.07	0.08	-0.06	0.03	-0.02	0.01
Third year	-0.08	0.11	-0.06	-0.03	0.01	0.03	-0.08	0.10	0.07	-0.02	0.00	-0.01	0.07

Table 4.5 Determinants of Perceived Benefits of EICS Compliance

The table reports the estimation results of the regressions that examine the determinants of cross-sectional variation in the average response across 4 groups of perceived compliance effect (*Benefits*) questions. *Yrs1* is an indicator variable equal to one when a respondent firm has the corresponding number of years of EICS compliance experience in the compliance year corresponding to the response, and zero otherwise. *Public08* is an indicator variable equal to one when a respondent was already publicly traded when the EICS legislation was passed, and zero otherwise. All of the other explanatory variables are as described in Table 4.4. The columns report OLS estimates. The base regression in Columns 1-2 comprises all observations with non-missing values for the explanatory variables. All column specifications include industry fixed effects (*Industry FE*). Columns 3-4 use the state-owned enterprise (SOE=1) sub-sample, and Columns 5-6 comprise non-state-owned enterprises (SOE=0). The robust t-statistics are reported in parentheses. All non-indicator variables are converted to either decile or centile rankings as described in Appendix E. The ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Sample</i>	<i>ALL FIRMS</i>		<i>SOEs</i>		<i>Non-SOEs</i>	
<i>Yrs1</i>		-0.002 (-0.06)		-0.077 (-0.86)		-0.008 (-0.15)
<i>Firmage</i>	0.001 (0.13)	0.001 (0.14)	-0.010 (-1.59)	-0.010 (-1.59)	0.015* (1.85)	0.015* (1.83)
<i>MVE</i>	0.010** (2.08)	0.010** (2.00)	0.001 (0.10)	0.001 (0.21)	0.026*** (2.99)	0.026*** (2.66)
<i>R&D</i>	0.002 (0.43)	0.002 (0.43)	-0.003 (-0.48)	-0.002 (-0.35)	0.007 (0.73)	0.007 (0.73)
<i>Multisegment</i>	-0.023 (-0.85)	-0.023 (-0.86)	0.026 (0.74)	0.028 (0.79)	-0.110** (-2.43)	-0.110** (-2.44)
<i>Crosslist</i>	-0.005 (-0.09)	-0.005 (-0.09)	0.064 (1.02)	0.063 (1.01)	-0.101 (-0.66)	-0.100 (-0.65)
<i>Dual</i>	-0.026 (-0.79)	-0.026 (-0.79)	0.000 (0.01)	0.003 (0.06)	-0.076* (-1.68)	-0.076* (-1.67)
<i>InstOwn</i>	-0.000 (-0.04)	-0.000 (-0.03)	0.000 (0.48)	0.000 (0.60)	-0.001 (-0.78)	-0.001 (-0.75)
<i>OwnBalance</i>	-0.000 (-0.88)	-0.000 (-0.88)	0.000 (0.32)	0.000 (0.34)	-0.001 (-1.18)	-0.001 (-1.18)
<i>ICDcurrent</i>	0.051 (1.42)	0.052 (1.42)	0.022 (0.49)	0.026 (0.55)	0.118* (1.79)	0.119* (1.78)
<i>ICDremediation</i>	0.021 (0.67)	0.022 (0.67)	0.054 (1.44)	0.057 (1.51)	-0.047 (-0.76)	-0.046 (-0.75)
<i>Restatement</i>	0.033 (0.68)	0.033 (0.68)	0.001 (0.01)	-0.003 (-0.05)	0.080 (1.03)	0.079 (1.01)

<i>Excessret</i>	0.000 (0.04)	0.000 (0.04)	0.005 (0.84)	0.005 (0.78)	-0.006 (-0.93)	-0.006 (-0.92)
<i>Public08</i>	-0.006 (-0.13)	-0.006 (-0.13)	0.101 (1.37)	0.102 (1.39)	-0.073 (-0.92)	-0.075 (-0.94)
<i>Constant</i>	0.068 (0.68)	0.069 (0.68)	-0.131 (-1.26)	-0.066 (-0.51)	0.294 (1.60)	0.294 (1.60)
<i>Industry FE</i>	YES	YES	YES	YES	YES	YES
<i>N</i>	1008	1008	605	605	403	403
<i>Adj. R-sq</i>	0.014	0.013	0.003	0.003	0.046	0.043

Table 4.6 Determinants of Reported Costs of EICS Compliance

This table reports the OLS estimation results where the dependent variable is the log of the reported compliance costs in RMB (ten thousand yuan). Column 1 includes all observations. Columns 2 through 3 are the regression results for sub-samples (SOEs and Non-SOEs). *Yrs2* and *Yrs3* are indicator variables equal to one when a respondent firm has the corresponding number of years of EICS compliance experience in the compliance year corresponding to the response, and zero otherwise. All of the other explanatory variables are defined in the previous tables and constructed separately for each of the compliance years with the exception of *Excessret*, which is measured at the fiscal year end of 2013. The *t*-statistics based on the standard errors corrected for firm clustering are reported in parentheses. The ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

<i>Sample</i>	(1) <i>ALL FIRMS</i>	(2) <i>SOEs</i>	(3) <i>Non-SOEs</i>
<i>Yrs2</i>	-0.031 (-1.55)	-0.010 (-0.53)	-0.083* (-1.82)
<i>Yrs3</i>	0.042* (1.78)	0.036 (1.55)	0.015 (0.20)
<i>Firmage</i>	-0.017 (-1.59)	-0.025* (-1.87)	0.001 (0.07)
<i>MVE</i>	0.150*** (14.94)	0.161*** (13.19)	0.128*** (7.57)
<i>R&D</i>	-0.008 (-0.71)	-0.000 (-0.00)	-0.008 (-0.48)
<i>Multisegment</i>	0.107* (1.84)	0.100 (1.40)	0.187* (1.96)
<i>Crosslist</i>	0.626*** (4.45)	0.544*** (3.60)	0.809* (1.89)
<i>Dual</i>	0.123* (1.71)	0.241** (2.41)	-0.006 (-0.06)
<i>InstOwn</i>	0.001 (1.09)	0.001 (0.91)	0.001 (0.58)
<i>OwnBalance</i>	0.000 (0.57)	0.000 (0.33)	-0.000 (-0.35)
<i>ICDcurrent</i>	-0.120** (-2.21)	-0.146** (-2.28)	-0.141 (-1.39)
<i>ICDremediation</i>	-0.041 (-0.74)	-0.053 (-0.82)	-0.076 (-0.71)
<i>Restatement</i>	-0.201*** (-2.64)	-0.145* (-1.72)	-0.348** (-2.32)
<i>Excessret</i>	-0.006 (-0.67)	-0.008 (-0.65)	-0.009 (-0.57)
<i>Public08</i>	0.097 (0.79)	0.057 (0.34)	0.074 (0.42)
<i>Constant</i>	5.019*** (27.63)	4.966*** (21.39)	5.323*** (16.61)

<i>Industry FE</i>	<i>YES</i>	<i>YES</i>	<i>YES</i>
<i>N</i>	2537	1844	693
<i>Adj. R-sq</i>	0.320	0.340	0.296

Table 4.7 Determinants of Perceived Benefits Net of Costs of EICS Compliance

This table reports the OLS estimation results where the dependent variable is the perceived compliance benefits net of costs (*Net Benefits*). Column 1 includes net benefits for the years 2011 to 2014. Column 2 adds perceived benefits. Columns 3 through 6 are the regression results for sub-samples (SOEs and Non-SOEs). *Yrs2* and *Yrs3* are indicator variables equal to one when a respondent firm has the corresponding number of years of EICS compliance experience in the compliance year corresponding to the response, and zero otherwise. All of the other explanatory variables are defined in the previous tables and constructed separately for each of the compliance years with the exception of *Excessret*, which is measured at the fiscal year end of 2013. The *t*-statistics based on the standard errors corrected for firm clustering are reported in parentheses. The ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

<i>Sample</i>	(1)	(2)	(3)	(4)	(5)	(6)
	<i>ALL FIRMS</i>		<i>SOEs</i>		<i>Non-SOEs</i>	
<i>Yrs2</i>	0.517*** (22.18)	0.514*** (22.04)	0.520*** (21.06)	0.517*** (20.92)	0.487*** (5.63)	0.492*** (5.64)
<i>Yrs3</i>	0.307*** (14.57)	0.303*** (14.48)	0.304*** (13.51)	0.300*** (13.42)	0.356*** (4.81)	0.353*** (4.88)
<i>Benefits</i>		0.463*** (7.66)		0.435*** (6.80)		0.661*** (3.20)
<i>Firmage</i>	-0.003 (-0.36)	0.002 (0.21)	-0.002 (-0.24)	0.003 (0.32)	-0.043 (-1.16)	-0.041 (-1.27)
<i>MVE</i>	0.010 (1.29)	0.010 (1.32)	0.008 (1.03)	0.009 (1.19)	0.024 (0.81)	0.022 (0.83)
<i>R&D</i>	-0.002 (-0.23)	-0.001 (-0.15)	-0.007 (-0.65)	-0.006 (-0.56)	0.029 (1.36)	0.024 (1.23)
<i>Multisegment</i>	-0.070 (-1.44)	-0.084* (-1.81)	-0.021 (-0.42)	-0.037 (-0.75)	-0.516*** (-3.77)	-0.460*** (-3.34)
<i>Crosslist</i>	-0.047 (-0.52)	-0.075 (-0.90)	-0.063 (-0.68)	-0.093 (-1.08)	-0.053 (-0.33)	0.013 (0.07)
<i>Dual</i>	-0.043 (-0.52)	-0.040 (-0.52)	0.071 (0.82)	0.064 (0.79)	-0.424** (-2.34)	-0.365** (-2.26)
<i>InstOwn</i>	0.001 (1.34)	0.001 (1.62)	0.001 (1.22)	0.001 (1.41)	0.002 (1.00)	0.002 (1.33)
<i>OwnBalance</i>	0.001 (1.11)	0.000 (0.54)	0.001 (1.27)	0.001 (0.86)	-0.001 (-0.35)	-0.003 (-1.39)
<i>ICDcurrent</i>	0.003 (0.06)	-0.005 (-0.10)	0.019 (0.39)	0.008 (0.16)	0.023 (0.18)	0.032 (0.24)
<i>ICDremediation</i>	0.012 (0.24)	0.021 (0.46)	0.050 (0.92)	0.053 (1.01)	-0.108 (-0.84)	-0.060 (-0.47)
<i>Restatement</i>	-0.142** (-2.18)	-0.145** (-2.31)	-0.152** (-2.13)	-0.154** (-2.20)	-0.008 (-0.04)	-0.089 (-0.46)
<i>Excessret</i>	0.020** (2.41)	0.015* (1.92)	0.026*** (2.96)	0.021** (2.56)	-0.016 (-0.61)	-0.026 (-1.10)
<i>Public08</i>	-0.022 (-0.20)	-0.068 (-0.67)	-0.016 (-0.14)	-0.050 (-0.48)	0.179 (0.70)	-0.029 (-0.11)
<i>Constant</i>	-0.203 (-1.25)	-0.113 (-0.71)	-0.270 (-1.56)	-0.204 (-1.23)	0.040 (0.16)	0.627* (1.94)
<i>Industry FE</i>	<i>YES</i>	<i>YES</i>	<i>YES</i>	<i>YES</i>	<i>YES</i>	<i>YES</i>

<i>N</i>	1749	1746	1536	1533	213	213
<i>Adj. R-sq</i>	0.292	0.338	0.301	0.342	0.436	0.490

Table 4.8 Relation between ICFR Quality and Perceived Benefits of EICS Compliance

This table reports the correlation between perceived benefits and internal control quality. Internal control quality is from DIB, and converted into centile rankings. According to EICS, internal control consists of internal environment, risk assessment, control activities, information and communication, and internal monitoring. DIB has developed an assessment indicator system for listed companies based on these five elements and with reference to EICS and IC-IF (2013). The system consists of 87 indexes with regard to these five elements (all indexes are shown in Appendix G). On the basis of these indexes, DIB built an assessment index for the internal control disclosure of listed companies for 2007 to 2014 by collecting data from annual reports, quarterly reports, interim statements, corporate governance and internal control self-assessment reports, and internal control authentication reports of the listed companies. The total scores of the five elements included in these indexes are used to measure the firm's internal control quality: the higher the value of index, the better the internal control quality. *Benefits 1* is the response to group 1 of benefits (Improve firm performance) at the firm level. *Benefits 2* is the response to group 2 of benefits (Quality of disclosure) at the firm level. *Benefits 3* is the response to group 3 of benefits (Market participants' confidence) at the firm level. *Benefits 4* is the response to group 4 of benefits (Achieving the EICS objectives) at the firm level. The robust t-statistics are reported in parentheses. All other non-indicator variables are converted to either decile or centile rankings as described in Appendix E. The ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Sample</i>	<i>ALL FIRMS</i>					<i>SOEs</i>	<i>Non-SOEs</i>
<i>Benefits</i>	3.562*					1.027	6.456**
	(1.66)					(0.34)	(2.11)
<i>Benefits 1</i>		1.836					
		(1.04)					
<i>Benefits 2</i>			3.274*				
			(1.66)				
<i>Benefits 3</i>				1.957			
				(1.35)			
<i>Benefits 4</i>					4.436**		
					(2.11)		
<i>YrsI</i>	27.504***	27.556***	27.444***	27.796***	27.075***	28.817***	25.604***
	(13.12)	(13.14)	(13.05)	(13.30)	(12.76)	(4.93)	(8.11)
<i>Firmage</i>	-0.166	-0.164	-0.174	-0.131	-0.149	-0.062	0.016
	(-0.51)	(-0.51)	(-0.54)	(-0.41)	(-0.46)	(-0.15)	(0.03)
<i>Dual</i>	-3.644*	-3.685*	-3.688*	-3.882*	-4.281*	-3.798	-1.823
	(-1.65)	(-1.67)	(-1.67)	(-1.77)	(-1.93)	(-1.05)	(-0.67)
<i>MVE</i>	1.051***	1.066***	1.055***	1.072***	1.052***	0.989**	1.351**
	(3.06)	(3.10)	(3.07)	(3.12)	(3.06)	(2.31)	(2.26)
<i>R&D</i>	0.396	0.401	0.404	0.378	0.440	0.156	0.690*
	(1.11)	(1.13)	(1.14)	(1.06)	(1.24)	(0.31)	(1.66)
<i>Multisegment</i>	-0.411	-0.459	-0.413	-0.568	-0.566	-0.354	-0.976
	(-0.23)	(-0.25)	(-0.23)	(-0.31)	(-0.32)	(-0.15)	(-0.34)

<i>Crosslist</i>	9.695** (2.45)	9.573** (2.43)	9.758** (2.47)	9.632** (2.41)	9.724** (2.46)	9.839** (2.16)	7.346 (0.77)
<i>InstOwn</i>	0.071** (2.14)	0.071** (2.13)	0.071** (2.14)	0.072** (2.16)	0.068** (2.05)	0.088** (2.05)	0.062 (1.10)
<i>OwnBalance</i>	-0.026 (-0.86)	-0.026 (-0.88)	-0.026 (-0.86)	-0.029 (-0.98)	-0.022 (-0.72)	-0.050 (-1.27)	0.010 (0.21)
<i>Excessret</i>	0.197 (0.65)	0.191 (0.63)	0.185 (0.61)	0.179 (0.59)	0.189 (0.63)	0.190 (0.46)	-0.036 (-0.08)
<i>Public08</i>	-2.357 (-0.73)	-2.410 (-0.74)	-2.160 (-0.67)	-2.687 (-0.82)	-2.310 (-0.71)	-9.769** (-2.31)	2.625 (0.56)
<i>Constant</i>	10.409 (1.47)	10.503 (1.49)	9.647 (1.35)	11.178 (1.58)	11.367 (1.61)	22.727* (1.94)	12.524** (2.01)
<i>Industry FE</i>	YES	YES	YES	YES	YES	YES	YES
<i>N</i>	1008	1008	1008	1003	1001	605	403
<i>Adj. R-sq</i>	0.292	0.291	0.292	0.291	0.294	0.102	0.309

Table 4.9 Relation between Cost of Capital and Perceived Benefits of EICS Compliance

This table reports the correlation between perceived benefits and the cost of capital. I use methods in Pittman and Fortin (2004) and Easton (2003) to estimate the cost of debt and cost of equity, respectively. Then I calculate the proportion of debt and equity to the sum of debt and equity, and get the value of the cost of capital. *Benefits 1* to *Benefits 4* are the same as those defined in Table 4.8. Further, beyond the variables shown in Appendix E, I also control for some other factors that would influence the cost of capital. *Lnassets* is the log value of total assets, and converted in the cross-section to a decile ranking. *Lev* is the firm's leverage, defined as debt divided by the sum of debt and equity, and converted in the cross-section to a centile ranking. *Sales* is the firm's total gross revenue divided by total assets, and converted in the cross-section to a centile ranking. *Cash* is the firm's cash divided by total assets, and converted in the cross-section to a centile ranking. *ROA* is return on assets, and converted in the cross-section to a decile ranking. The robust t-statistics are reported in parentheses. All other non-indicator variables are converted to either decile or centile rankings as described in Appendix E. The ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

<i>Sample</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	<i>ALL FIRMS</i>					<i>SOEs</i>	<i>Non-SOEs</i>
<i>Benefits</i>	-0.011**					-0.008	-0.015*
	(-1.97)					(-1.06)	(-1.85)
<i>Benefits 1</i>		-0.007					
		(-1.50)					
<i>Benefits 2</i>			-0.013***				
			(-2.61)				
<i>Benefits 3</i>				-0.005			
				(-1.28)			
<i>Benefits 4</i>					0.000		
					(0.05)		
<i>Yrs1</i>	-0.012**	-0.012**	-0.012**	-0.013**	-0.012**	0.004	-0.008
	(-2.43)	(-2.42)	(-2.41)	(-2.53)	(-2.33)	(0.28)	(-1.52)
<i>Firmage</i>	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(-1.47)	(-1.50)	(-1.47)	(-1.47)	(-1.56)	(-0.80)	(-0.77)
<i>Dual</i>	0.001	0.001	0.001	0.002	0.000	0.008	-0.002
	(0.15)	(0.23)	(0.11)	(0.28)	(0.06)	(0.90)	(-0.31)
<i>Lnassets</i>	0.003**	0.003**	0.003**	0.003***	0.002**	0.002*	0.003**
	(2.58)	(2.53)	(2.56)	(2.64)	(2.17)	(1.86)	(2.13)
<i>R&D</i>	-0.002*	-0.002*	-0.002*	-0.002**	-0.002*	0.000	-0.001
	(-1.90)	(-1.91)	(-1.95)	(-2.03)	(-1.92)	(0.35)	(-0.99)
<i>Lev</i>	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.000***	-0.001***
	(-6.28)	(-6.25)	(-6.27)	(-6.36)	(-6.32)	(-3.39)	(-5.64)
<i>Sales</i>	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-0.69)	(-0.67)	(-0.68)	(-0.69)	(-0.49)	(-0.97)	(-0.86)
<i>Cash</i>	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-0.35)	(-0.40)	(-0.32)	(-0.38)	(-0.43)	(-0.35)	(-0.73)
<i>ROA</i>	-0.000	-0.000	-0.000	-0.000	-0.000	0.000*	-0.000***

	(-0.25)	(-0.26)	(-0.30)	(-0.24)	(-0.29)	(1.74)	(-2.63)
<i>Multisegment</i>	0.003	0.003	0.003	0.004	0.003	-0.005	0.005
	(0.68)	(0.68)	(0.72)	(0.83)	(0.70)	(-0.91)	(0.75)
<i>Crosslist</i>	0.001	0.002	0.001	0.001	0.003	-0.006	-0.005
	(0.14)	(0.28)	(0.10)	(0.12)	(0.36)	(-0.72)	(-0.31)
<i>InstOwn</i>	0.000	0.000	0.000	0.000	0.000	0.000	-0.000
	(0.90)	(0.90)	(0.91)	(0.78)	(0.88)	(1.36)	(-0.21)
<i>OwnBalance</i>	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-0.48)	(-0.43)	(-0.40)	(-0.35)	(-0.43)	(-0.19)	(-0.31)
<i>Excessret</i>	0.000	0.000	0.000	0.000	0.000	-0.000	0.001
	(0.54)	(0.57)	(0.66)	(0.62)	(0.54)	(-0.05)	(1.36)
<i>Public08</i>	0.010	0.010	0.009	0.009	0.010	-0.000	0.014
	(1.30)	(1.31)	(1.18)	(1.17)	(1.32)	(-0.03)	(1.36)
<i>Constant</i>	0.138***	0.139***	0.141***	0.139***	0.138***	0.085***	0.150***
	(6.20)	(6.12)	(6.28)	(6.25)	(6.10)	(3.59)	(7.73)
<i>Industry FE</i>	YES	YES	YES	YES	YES	YES	YES
<i>N</i>	453	453	453	450	449	269	184
<i>Adj. R-sq</i>	0.174	0.169	0.181	0.174	0.169	0.071	0.190

Table 4.10 Perceived Benefits of EICS Compliance Conditional on Province Marketization

This table reports the OLS estimation results where the dependent variables are the perceived compliance benefits (*Benefits*), internal control quality and cost of capital for the high and low marketization sub-samples. *Prov. Mkt* is the marketization index, constructed by Fan and Wang (2011), to measure the institutional development of each province in China. Although the index ends in 2009, there is still variation among different regions. So I use that to proxy for the marketization of 2013. The robust t-statistics are reported in parentheses. All other control variables are derived from specific regressions of Tables 4.5, 4.8 and 4.9. The ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dependent Variable <i>Sample</i>	(1)	(2)	(3)	(4)	(5)
	Benefits <i>All Firms</i>	Internal Control Quality <i>High</i> <i>Prov. Mkt</i>		Cost of Capital <i>High</i> <i>Prov. Mkt</i>	
<i>Prov. Mkt</i>	-0.019*** (-3.41)				
<i>Benefits</i>		1.078 (0.36)	6.426** (2.15)	-0.007 (-1.03)	-0.016* (-1.84)
<i>All Controls</i>	YES	YES	YES	YES	YES
<i>Industry FE</i>	YES	YES	YES	YES	YES
<i>N</i>	1008	464	544	245	208
<i>Adj. R-sq</i>	0.023	0.297	0.313	0.147	0.183

Table 4.11 Relation between Attitude towards Internal Control and Department Establishment

This table reports the correlation between the attitude of board of directors towards the importance of internal control and department establishment in the form of Risk Management Committee and Internal Control Department. *RM_Committee* is an indicator variable equal to one when the firm has established a Risk Management Committee, and zero otherwise. *IC_Department* is an indicator variable equal to one when the firm has established a specific Internal Control Department, and zero otherwise. *IC_Attitude* is the attitude of board of directors towards the importance of internal control, which is based on a five-point ordinal scale from no significant importance to significant importance; the higher the value, the higher the importance priority. To alleviate right skewness concerns to some extent, I reconstruct the five-point scale to a three-point scale by combining the original responses 1, 2, and 3 into -1 and changing the point 4 to 0 and 5 to 1. *Foreignsales* is an indicator variable equal to one when the firm has foreign sales, and zero otherwise. Columns 1-2 (3-4) are the regression results when the dependent variable is *RM_Committee* (*IC_Department*). The robust t-statistics are reported in parentheses. All other non-indicator variables are converted to either decile or centile rankings as described in Appendix E. The ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	<i>RM_Committee</i>	<i>RM_Committee</i>	<i>IC_Department</i>	<i>IC_Department</i>
<i>Yrs1</i>		0.250 (1.27)		0.600*** (2.98)
<i>IC_Attitude</i>	0.586*** (3.34)	0.564*** (3.18)	0.376** (2.02)	0.314* (1.69)
<i>Firmage</i>	0.045 (1.54)	0.043 (1.46)	0.063* (1.90)	0.057* (1.72)
<i>Dual</i>	-0.049 (-0.24)	-0.034 (-0.16)	0.449* (1.90)	0.498** (2.07)
<i>MVE</i>	0.090*** (2.92)	0.080** (2.50)	0.013 (0.38)	0.016 (0.44)
<i>R&D</i>	-0.019 (-0.58)	-0.022 (-0.67)	0.015 (0.45)	0.006 (0.17)
<i>Multisegment</i>	0.109 (0.66)	0.116 (0.70)	-0.012 (-0.07)	0.011 (0.06)
<i>Foreignsales</i>	0.426** (2.51)	0.420** (2.48)	0.268 (1.42)	0.261 (1.37)
<i>Crosslist</i>	0.079 (0.23)	0.063 (0.18)	-0.377 (-1.00)	-0.409 (-1.07)
<i>InstOwn</i>	0.004 (1.32)	0.003 (1.08)	-0.001 (-0.38)	-0.003 (-0.92)
<i>OwnBalance</i>	-0.002 (-0.85)	-0.003 (-0.98)	0.006** (2.12)	0.005* (1.82)

<i>Excessret</i>	0.020 (0.75)	0.022 (0.82)	-0.022 (-0.76)	-0.016 (-0.57)
<i>Public08</i>	-0.160 (-0.54)	-0.176 (-0.59)	-0.306 (-0.86)	-0.347 (-0.96)
<i>Constant</i>	-0.998* (-1.67)	-1.068* (-1.77)	1.681* (1.91)	1.568* (1.82)
<i>Industry FE</i>	YES	YES	YES	YES
<i>N</i>	985	985	1005	1005
<i>Pseudo R-sq</i>	0.051	0.051	0.031	0.033

Table 4.12 Relation between Attitude towards Internal Control and Personnel Internal Control Performance Appraisal

This table reports the correlation between the attitude of board of directors towards the importance of internal control and personnel internal control performance appraisal. In this table, *Manager_promotion* is an indicator variable equal to one when the managers' promotion is related to internal control weakness, and zero otherwise. *Manager_salary* is an indicator variable equal to one when the managers' salaries are related to internal control weakness, and zero otherwise. *Staff_promotion* is an indicator variable equal to one when the staff's promotion is related to internal control weakness, and zero otherwise. *Staff_salary* is an indicator variable equal to one when the staff's salary is related to internal control weakness, and zero otherwise. The robust t-statistics are reported in parentheses. All other non-indicator variables are converted to either decile or centile rankings as described in Appendix E. The ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	<i>Manager_promotion</i>	<i>Manager_salary</i>	<i>Staff_promotion</i>	<i>Staff_salary</i>
<i>IC_Attitude</i>	0.290** (2.15)	0.332** (2.32)	0.350*** (2.88)	0.144 (1.16)
<i>Firmage</i>	-0.052* (-1.66)	-0.056* (-1.68)	-0.017 (-0.59)	-0.018 (-0.63)
<i>Dual</i>	0.177 (0.81)	0.415* (1.70)	0.036 (0.18)	0.226 (1.14)
<i>MVE</i>	-0.080*** (-2.59)	0.001 (0.04)	-0.035 (-1.22)	0.010 (0.36)
<i>R&D</i>	0.011 (0.34)	0.016 (0.49)	0.000 (0.01)	-0.018 (-0.63)
<i>Multisegment</i>	-0.114 (-0.66)	0.043 (0.24)	0.014 (0.09)	0.060 (0.38)
<i>Crosslist</i>	0.581 (1.36)	0.911* (1.65)	0.047 (0.13)	-0.235 (-0.67)
<i>InstOwn</i>	0.002 (0.59)	0.001 (0.31)	-0.002 (-0.84)	0.002 (0.83)
<i>OwnBalance</i>	-0.000 (-0.11)	0.000 (0.03)	0.000 (0.03)	0.000 (0.07)
<i>ROA</i>	-0.003 (-0.92)	0.000 (0.16)	-0.001 (-0.35)	0.001 (0.36)
<i>Public08</i>	-0.397 (-1.17)	-0.208 (-0.55)	-0.164 (-0.55)	-0.076 (-0.26)
<i>Constant</i>	1.625** (2.55)	1.115 (1.61)	0.638 (1.06)	-0.190 (-0.32)
<i>Industry FE</i>	YES	YES	YES	YES
<i>N</i>	947	947	947	947
<i>Pseudo R-sq</i>	0.041	0.038	0.019	0.016

Table 4.13 Relation between Attitude towards Internal Control and Rules and Regulations Establishment

This table reports the correlation between attitude of board of directors towards the importance of internal control and rules and regulations establishment in the form of fundamental rules and information communication rules. *Funda_Rules* is the mean value of the degree of fundamental rules establishment including rules of transaction authorization and monitoring, regular property verification and daily management, separation of incompatible duties, and comprehensive budget management. *Information_Rules* is the mean value of the degree of information communication rules establishment, including rules of gathering internal and external relevant information, rules for communication of internal control-related information, existence of an anti-fraud reporting line, and communication channels of contingency. *Rules* is the mean value of the degree of fundamental rules and information communication rules establishment. Responses to each question are coded on a five-point ordinal scale. I follow the reconstruction method for *Funda_Rules* and *Information_Rules*, consistent with *IC_Attitude* mentioned in Table 4.11, to alleviate right skewness concerns to some extent. The robust t-statistics are reported in parentheses. All other non-indicator variables are converted to either decile or centile rankings as described in Appendix E. The ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1) <i>Funda_Rules</i>	(2) <i>Information_Rules</i>	(3) <i>Rules</i>
<i>IC_Attitude</i>	0.160*** (4.80)	0.106*** (3.30)	0.133*** (4.34)
<i>YrsI</i>	0.142*** (2.77)	0.154*** (3.09)	0.148*** (3.12)
<i>Firmage</i>	-0.002 (-0.21)	-0.004 (-0.53)	-0.003 (-0.39)
<i>Dual</i>	-0.028 (-0.49)	0.029 (0.53)	0.001 (0.01)
<i>MVE</i>	0.013 (1.56)	0.014* (1.87)	0.013* (1.83)
<i>R&D</i>	0.002 (0.20)	0.003 (0.42)	0.002 (0.34)
<i>Multisegment</i>	-0.022 (-0.54)	0.022 (0.55)	0.000 (0.01)
<i>Crosslist</i>	0.024 (0.28)	0.084 (1.04)	0.054 (0.71)
<i>InstOwn</i>	0.000 (0.29)	0.001 (1.28)	0.001 (0.83)
<i>OwnBalance</i>	-0.000 (-0.51)	-0.000 (-0.51)	-0.000 (-0.55)
<i>Excessret</i>	0.000 (0.04)	-0.007 (-1.11)	-0.004 (-0.57)
<i>Public08</i>	0.138* (1.77)	0.067 (0.91)	0.103 (1.43)

<i>Constant</i>	-0.377** (-2.34)	-0.541*** (-3.30)	-0.459*** (-2.95)
<i>Industry FE</i>	YES	YES	YES
<i>N</i>	939	939	939
<i>Adj. R-sq</i>	0.048	0.055	0.057

Table 4.14 Sobel Test - Attitude towards Internal Control, Rules and Regulations Establishment, and ICFR Quality

This table reports the results of Sobel test among attitude of board of directors towards the importance of internal control, rules and regulations establishment, and ICFR quality. *ICFR_Quality* is the DIB internal control index and converted into centile rankings, which is consistent with the dependent variable in Table 4.8. *Rules* is the mean value of the degree of fundamental rules and information communication rules establishment. The robust t-statistics are reported in parentheses. All other non-indicator variables are converted to either decile or centile rankings as described in Appendix E. The ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Regression			
	(1)	(2)	(3)
	<i>Path a</i>	<i>Path b</i>	<i>Path c</i>
	<i>ICFR_Quality</i>	<i>Rules</i>	<i>ICFR_Quality</i>
<i>Rules</i>			3.987*** (2.54)
<i>IC_Attitude</i>	3.757*** (2.65)	0.133*** (4.45)	3.227** (2.26)
<i>Yrs1</i>	27.167*** (12.81)	0.148*** (3.31)	26.576*** (12.49)
<i>Firmage</i>	-0.167 (-0.51)	-0.003 (-0.40)	-0.156 (-0.48)
<i>Dual</i>	-4.135* (-1.83)	0.001 (0.02)	-4.138* (-1.84)
<i>MVE</i>	0.887*** (2.57)	0.013* (1.86)	0.833** (2.42)
<i>R&D</i>	0.663** (1.97)	0.002 (0.33)	0.654** (1.95)
<i>Multisegment</i>	-0.905 (-0.50)	0.001 (0.01)	-0.906 (-0.50)
<i>Crosslist</i>	0.963*** (2.70)	0.054 (0.63)	10.749*** (2.65)
<i>InstOwn</i>	0.066** (1.97)	0.001 (0.83)	0.063* (1.91)
<i>OwnBalance</i>	-0.034 (-1.14)	-0.001 (-0.55)	-0.032 (-1.10)
<i>Excessret</i>	0.186 (0.63)	-0.003 (-0.57)	0.200 (0.68)
<i>Public08</i>	-2.925 (-0.86)	0.103 (1.43)	-3.334 (-0.98)
<i>Constant</i>	10.321 (1.49)	-0.459*** (-3.14)	12.152* (1.75)
<i>Industry</i>	YES	YES	YES

<i>N</i>	939	939	939
<i>Adj. R-sq</i>	0.283	0.057	0.287
Panel B: Sobel Test			
	Coef	Z	P>Z
Sobel	0.529	2.208	0.027
Indirect effect	0.529	2.207	0.027
Direct effect	3.227	2.261	0.024
Total effect	3.757	2.653	0.008
Proportion of total effect that is mediated	0.141		
Ratio of indirect to direct effect	0.164		
Ratio of total to direct effect	1.164		

Appendices

Appendix A The Key Events of Sections 302 and 404 Implementation

This table illustrates the key events of Sections 302 and 404 implementation in the U.S. SEC is short for the U.S. Securities and Exchange Commission.

Date	Event and Content
July 30, 2002	SOX was signed into law.
September 5, 2002	<p>The SEC adopted final rules regarding the acceleration of filing deadlines for reports on form 10-K and form 10-Q. The phase-in period for accelerated deadlines of quarterly and annual reports began for reports filed by companies that met the definition of “accelerated filer” as of their first fiscal year ending on or after December 15, 2002.</p> <p>An accelerated filer is an issuer that:</p> <ul style="list-style-type: none"> ● had a public float of at least \$75 million as of the last business day of the most recently completed second fiscal quarter; ● as of such fiscal year-end has been subject to the reporting requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 for at least 12 calendar months; ● has filed at least one annual report under the Exchange Act; and ● is not eligible to file abbreviated reports on forms 10-KSB and 10-QSB. <p>In general, an issuer is eligible to use forms 10-KSB and 10-QSB if both its annual revenues and its public float, based on the closing price on any day within 60 days prior to the fiscal year-end, are less than \$25 million.</p> <p>Once a company becomes an accelerated filer, it remains an accelerated filer regardless of whether it continues to have a public float of \$75 million or more, except that if the company subsequently becomes eligible to use forms 10-KSB and 10-QSB, it will cease to be an accelerated filer until such time as it again satisfies the “accelerated filer” definition (SEC [2002b]).</p>
May 27, 2003	The SEC voted to adopt rules concerning management’s report on internal control (Section 404). Accelerated filers were expected to comply for fiscal years on or after June 15, 2004. All other issuers would be required to comply for their fiscal years ending on or after April 15, 2005 (SEC [2003b]).
February 24, 2004	The SEC approved an extension of the original compliance dates for the amendments related to internal control reporting. The compliance dates for companies that were “accelerated filers” were extended to fiscal years ending on or after November 15, 2004 (an extension of five months), and for nonaccelerated filers and foreign private issuers, to fiscal years ending on or after July 15, 2005 (an extension of three months) (SEC [2004]).

Date	Event and Content
March 2, 2005	The SEC extended Section 404 compliance dates for nonaccelerated filers and foreign private issuers to its first fiscal year ending on or after July 15, 2006 (an extension of one year) (SEC [2005b]).
September 21, 2005	The SEC voted to propose extending Section 404 compliance dates for nonaccelerated filers to its first fiscal year ending on or after July 15, 2007 (an extension of one year) and adjusted the definition for accelerated filers (SEC [2005c]).
December 21, 2005	The SEC issued the final rule regarding exiting the definition of accelerated filer status to provide easier exit. Under the new rules, a company could exit the accelerated filer status in the same year when its public float dropped below \$50 million (SEC [2005a]).
August 9, 2006	The SEC proposed providing further relief for nonaccelerated filers regarding Section 404 compliance dates. The compliance date was moved to its first fiscal year ending on or after December 15, 2007 (an extension of six months); the compliance date to provide an auditor's attestation report on internal control was moved to a fiscal year ending on or after December 15, 2008 (SEC [2006b, 2006c]).
June 20, 2008	The SEC approved an additional one-year extension of the compliance date for smaller public companies to meet Section 404 auditor attestation requirement. With the extension, smaller companies were required to provide the auditor's attestation report for fiscal years ending on or after December 15, 2009 (SEC[2008b]).
October 2, 2009	The SEC extended Section 404(b) compliance dates for smaller public companies to its first fiscal year ending on or after June 15, 2010.
July 21, 2010	The U.S. Congress issued the Dodd-Frank Wall Street Reform and Consumer Protection Act, and Section 989G "Exemption for Nonaccelerated Filers" stated that "Section 404 (b) shall not apply with respect to any audit report prepared for an issuer that is neither a 'large accelerated filer' nor an 'accelerated filer' as those terms are defined in Rule 12b-2 of the Commission (17 C. F. R. 240. 12b-2)".
April 5, 2012	President Obama signed the legislation (Jumpstart Our Business Startups (JOBS) Act) into law. Among other things, the JOBS Act creates a transitional "on-ramp" for a new category of issuer, emerging growth companies (the revenue is less than \$1 billion in the recent fiscal year), to encourage them to pursue IPOs. There is an exemption for emerging growth companies to provide the auditor's attestation report on internal control.

Appendix B Internal Control Norms in China

This table summarizes key internal control norms in China. *NPC* stands for The National People’s Congress; *MOF* stands for Ministry of Finance; *CSRC* stands for China Securities Regulatory Commission; *NAO* stands for National Audit Office of the People’s Republic of China; *CBRC* stands for China Banking Regulatory Commission; *CIRC* stands for China Insurance Regulatory Commission; *SSE* stands for Shanghai Stock Exchange; *SZSE* stands for Shenzhen Stock Exchange.

Date	Authorities	Norm	Main Content	Effective Date
October, 31, 1999	The NPC Standing Committee	<i>Accounting Law of People’s Republic of China</i>	This norm aimed to standardize accounting practices, ensure the authenticity and integrity of accounting data, and strengthen economic and financial management. All firms were required to establish and improve their internal accounting supervision systems.	July 1, 2000
June 22, 2001	MOF	<i>Internal Accounting Control Standard (Trial)</i>	It required firms to establish and perfect controls for separation of incompatible duties, authorization, accounting, budgeting, property preservation systems, risk management, internal reporting, electronic information technology, etc.	June 22, 2001
May 18, 2006	CSRC	<i>The Regulations on IPO Firms</i>	This regulation required that the internal control of IPO firms should be effective in all significant aspects and an external auditor should provide standard internal control attestation.	May 18, 2006
June 5, 2006	SSE	<i>The Guidelines to Internal Control of Listed Firms in SSE</i>	The board of directors should disclose the annual internal control self-assessment report and the verification and evaluation opinions of accounting firms on the internal control self-assessment report accompanying with the annual report.	July 1, 2006
June 6, 2006	SASAC	<i>The Guidelines to the State-owned Enterprises Directly under the Central Government on Fulfilling</i>	It required the state-owned enterprises directly under the central government to carry out comprehensive risk management.	June 6, 2006

Date	Authorities	Norm	Main Content	Effective Date
		<i>Risk Management</i>		
September 28, 2006	SZSE	<i>The Guidelines to Internal Control of Listed Firms in SZSE</i>	The firm should submit the internal control self-assessment report and the evaluation opinions of certified public accountants to the SSE within four months after the end of each fiscal year, and disclose them to the public accompanying with the annual report.	July 1, 2007
April 6, 2007	CIRC	<i>Risk Management Guidelines for Insurance Companies (Trial)</i>	This norm standardized internal control of insurance companies.	July 1, 2007
July 3, 2007	CBRC	<i>Internal Control Guidelines for Commercial Banks</i>	This norm guided commercial banks to conduct internal control management, and establish specific process-level control and information system control according to different businesses.	July 3, 2007
December 28, 2007	CSRC	<i>Notice of Completion of Annual Report and Related Work of Listed Companies in 2007</i>	It encouraged central-owned firms, financial firms and other conditional listed firms to disclose the internal control self-assessment report issued by the board of directors and the verification and evaluation opinions of accounting firms on the internal control self-assessment report accompanying with the annual report of 2007.	December 28, 2007
December 28, 2007	SZSE	<i>Notice of Completion of Annual Report of Listed Companies (SZSE) in 2007</i>	Qualified companies are encouraged to employ auditors to provide evaluation opinions on their internal control over financial reporting	December 28, 2007
January 2, 2008	SSE	<i>Notice of Completion of Annual Report of Listed Companies (SSE) in 2007</i>	The exchange encouraged eligible listed firms to simultaneously disclose internal control self-assessment reports issued by the board of directors and verification and evaluation opinions of accounting firms on the internal control self-assessment report.	January 2, 2008

Date	Authorities	Norm	Main Content	Effective Date
June 28, 2008	MOF CSRC NAO CBRC CIRC	<i>Enterprise Internal Control Standard</i>	The listed firms which implemented this norm should assess internal control effectiveness, disclose their annual self-assessment reports, and employ accounting firms with qualifications of securities and futures business to provide an auditor's report on internal control effectiveness.	January 1, 2011
December 4, 2008	SSE	<i>Notice of Completion of Fulfillment of Social Responsibility and Internal Control Self-assessment Disclosure by the listed companies in 2008</i>	It required firms listed in the Corporate Governance board (231 firms), the firms issuing foreign capital stocks (50 firms) and financial firms (21 firms) in SSE to disclose social responsibility reports and internal control reports accompanying with the annual report of 2008, and other firms were encouraged to do so.	December 4, 2008
December 30, 2008	SZSE	<i>Notice of Completion of Annual Report of Firms Listed in SME Board (SZSE) in 2008</i>	All firms listed in the Small and Medium Enterprise market must disclose internal control self-assessment reports, and at the same time, these firms should employ accounting firms to provide audit opinions on the effectiveness of internal control over financial reporting at least every two years.	December 30, 2008
December 30, 2008	SSE	<i>Notice of Completion of Annual Report of Listed Companies (SSE) in 2008</i>	It required firms listed in the Corporate Governance board, the firms issuing foreign capital stocks and financial firms in SSE to disclose internal control self-assessment reports, and other firms were encouraged to do so. Listed firms were encouraged to employ accounting firms to provide internal control attestation reports if possible.	December 30, 2008
December 30, 2008	SZSE	<i>Notice of Completion of Annual Report of Listed Companies (SZSE) in 2008</i>	All Main Board firms listed in SZSE must disclose internal control self-assessment reports, and if possible, disclosure of internal control attestation reports was encouraged.	December 30, 2008

Date	Authorities	Norm	Main Content	Effective Date
December 31, 2009	SSE	<i>Notice of Completion of Annual Report of Listed Companies (SSE) in 2009</i>	It required firms listed in the Corporate Governance board, the firms issuing foreign capital stocks and financial firms in SSE to disclose internal control self-assessment reports, and other firms were encouraged to do so. Listed firms were encouraged to employ accounting firms to provide internal control attestation reports if possible.	December 31, 2009
December 31, 2009	SZSE	<i>Notice of Completion of Annual Report of Listed Companies (SZSE) in 2009</i>	All Main Board firms listed in SZSE must disclose internal control self-assessment reports, and if possible, disclosure of internal control attestation reports was encouraged.	December 31, 2009
April 26, 2010	MOF CSRC NAO CBRC CIRC	<i>Supporting Guidelines of Enterprise Internal Control Standard</i>	It consisted of guidelines on internal control, including application guidance, evaluation guidance and audit guidance. These guidelines further refined detailed internal control issues, such as firms' internal control design, implementation, evaluation and audit practice.	January 1, 2011
December 31, 2010	SSE	<i>Notice of Completion of Annual Report of Listed Companies (SSE) in 2010</i>	It required firms listed in the Corporate Governance board, the firms issuing foreign capital stocks and financial firms in SSE to disclose internal control self-assessment reports, and other firms were encouraged to do so. Listed firms were encouraged to employ accounting firms to provide internal control attestation reports if possible.	December 31, 2010
December 31, 2010	SZSE	<i>Notice of Completion of Annual Report of Listed Companies (SZSE) in 2010</i>	All Main Board firms listed in SZSE must disclose internal control self-assessment reports. All firms listed in the Small and Medium Enterprise market and Growth Enterprise Market should employ accounting firms to provide audit opinions on the effectiveness of internal control over financial reporting at least every two years.	December 31, 2010
February 14,	CSRC	<i>Notice of Experimental</i>	In addition to the 68 firms listed in domestic and	February 14,

Date	Authorities	Norm	Main Content	Effective Date
2011		<i>Units That Implements Enterprise Internal Control Standard</i>	overseas markets simultaneously that were required to implement Enterprise Internal Control Standard in 2011, the CSRC also selected 216 listed firms to be experimental units to participate in the implementation of Enterprise Internal Control Standard. These units were required to do a good job in the establishment, self-assessment and audit of internal control over financial reporting in the parent company and its important subsidiaries in accordance with the requirements of internal control standard system.	2011
April 11, 2011	CSRC	<i>The Supervision Explanations (No.1) to Enterprise Internal Control Standard Implementation</i>	The CSRC provided supervision explanations to internal control over financial reporting, annual report disclosure, the format of the internal control self-assessment report, and the disclosure exemption of merger and acquisition transactions, core business secret undergoing significant changes or deficiencies.	April 11, 2011
December 30, 2011	CSRC	<i>No. 41[2001] Announcement</i>	It provided some guidelines on the establishment and improvement of the internal control system and disclosure of internal control information in annual reports.	December 30, 2011
December 30, 2011	SSE	<i>Notice of Completion of Annual Report of Listed Companies (SSE) in 2011</i>	It required firms listed in the Corporate Governance board, firms listed in domestic and overseas markets simultaneously, and financial firms in SSE to disclose internal control self-assessment reports, and other firms were encouraged to do so. Firms listed in the domestic and overseas markets were required to disclose the auditor's report on internal control over financial reporting, and other firms were encouraged to do so.	December 30, 2011

Date	Authorities	Norm	Main Content	Effective Date
December 30, 2011	SZSE	<i>Notice of Completion of Annual Report of Listed Companies (SZSE) in 2011</i>	All Main Board firms listed in SZSE must disclose internal control self-assessment reports. Firms implementing Enterprise Internal Control Standard on January 1, 2011 and experimental units must disclose the auditor's report on internal control. All firms listed in the Small and Medium Enterprise market and Growth Enterprise Market should employ accounting firms to provide audit reports on the effectiveness of internal control over financial reporting at least every two years.	December 30, 2011
January 30, 2012	SSE	<i>Preparation of Internal Control Report of Listed Companies in 2011</i>	It stipulated the preparation, consideration and disclosure of internal control reports.	January 30, 2012
February 8, 2012	CSRC	<i>The Supervision Explanations (No.2) to Enterprise Internal Control Standard Implementation</i>	The CSRC provided supervision explanations to issues of internal control audit, internal control audit reporting of experimental units, and the impact of material audit adjustments on internal control audit conclusion.	February 8, 2012
February 23, 2012	MOF	<i>The Explanations (No.1) to Enterprise Internal Control Standard Implementation</i>	The MOF provided explanations to the problems reflected in the implementation of Enterprise Internal Control Standard and supporting guidelines.	February 23, 2012
August 14, 2012	MOF CSRC	<i>Notice to Implement Enterprise Internal Control Standard by Categories and Batches</i>	This norm postponed the implementation of internal control standard system for Main Board-listed firms (see the text for details).	August 14, 2012
September 24, 2012	MOF	<i>The Explanations (No.2) to Enterprise Internal Control Standard Implementation</i>	The MOF provided explanations to the problems encountered in the formal implementation of internal control standard system in domestic Main Board-listed firms.	September 24, 2012
December 31, 2012	SSE	<i>Notice of Completion of Annual Report of Listed</i>	It required firms listed in the Corporate Governance board, firms listed in domestic and overseas markets	December 31, 2012

Date	Authorities	Norm	Main Content	Effective Date
		<i>Companies (SSE) in 2012</i>	simultaneously, financial firms and those firms meeting the criteria of “ <i>Notice to Implement Enterprise Internal Control Standard by Categories and Batches</i> ” in SSE to disclose internal control self-assessment reports, and other firms were encouraged to do so. Firms listed in domestic and overseas markets simultaneously and those firms meeting the criteria of “ <i>Notice to Implement Enterprise Internal Control Standard by Categories and Batches</i> ” must disclose the auditor’s report on internal control, and other firms were encouraged to do so.	
December 31, 2012	SZSE	<i>Notice of Completion of Annual Report of Listed Companies (SZSE) in 2012</i>	All Main Board firm listed in SZSE must disclose internal control self-assessment reports. Firms implementing Enterprise Internal Control Standard on January 1, 2011, experimental units, and those central-owned and local stated-owned firms meeting the criteria of “ <i>Notice to Implement Enterprise Internal Control Standard by Categories and Batches</i> ” must disclose the auditor’s report on internal control.	December 31, 2012
December 28, 2013	MOF	<i>The Guidelines of Internal Control Implementation in Petrochemical Industry</i>	Given the characteristics of the petroleum and petrochemical industry, the MOF provided guidelines on the principles, key elements and establishment processes of internal control in the petrochemical industry.	December 28, 2013
December 31, 2013	SSE	<i>Notice of Completion of Annual Report of Listed Companies (SSE) in 2013</i>	It required firms listed in the Corporate Governance board, firms listed in domestic and overseas markets simultaneously, financial firms and those firms meeting the criteria of “ <i>Notice to Implement Enterprise Internal Control Standard by Categories and Batches</i> ” in SSE to disclose internal control self-assessment reports, and other firms were encouraged to do so.	December 31, 2013

Date	Authorities	Norm	Main Content	Effective Date
			Firms listed in domestic and overseas markets simultaneously and those firms meeting the criteria of “ <i>Notice to Implement Enterprise Internal Control Standard by Categories and Batches</i> ” must disclose the auditor’s report on internal control, and other firms were encouraged to do so.	
January 3, 2014	CSRC MOF	<i>The Guidelines for Compilation and Filing of Information Disclosure Rules for Companies Issuing Public Securities (No. 21) - General Provisions of Annual Internal Control Evaluation Reports</i>	This norm standardized the disclosure of internal control information of companies that issue securities to the public, and stipulated the elements (contents) that should be included in the annual internal control evaluation report.	January 3, 2014
September 12, 2014	CBRC	<i>The Guidelines of Internal Control in Commercial Banks</i>	The CBRC issued guidelines to specify internal control practices in commercial banks, which included the objectives, principles, responsibilities, approaches, evaluation content, and supervision measures.	September 12, 2014
December 23, 2014	MOF	<i>The Guidelines of Internal Control Implementation in Electric Power Industry</i>	The MOF issued guidelines on establishing and implementing solutions of internal control system in the electric power industry.	December 23, 2014
June 29, 2017	MOF	<i>Internal Control Standards for Smaller Enterprises (Trial)</i>	The MOF required smaller firms (SME Classification Standards) that had not implemented Enterprise Internal Control Standard to implement accordingly.	January 1, 2018

Appendix C Comparison of Surveys Conducted by IMA and SEC in the U.S.

Survey Authority	Survey Period	Response Rate	Survey Objective	Survey Object	Survey Content	Main Conclusions
IMA	Fourth quarter 2005 to the beginning of 2006	21,916 questionnaires were distributed, 2,098 questionnaires were collected finally. The response rate is 10.01%.	<p>To investigate:</p> <ol style="list-style-type: none"> 1. the principal and incentives of costs of SOX Section 302/404 compliance; and 2. the problems encountered when management and external auditors use a risk-oriented evaluation method. <p>To find out:</p> <ol style="list-style-type: none"> 3. the problems IC-IF (1992) has on SOX implementation; and 4. the shortcomings of expertise of SOX implementation team and consultants. 	Targeted individuals are SEC-registered members, who work mainly in accounting and auditing fields (internal auditor and managers).	<p>The survey contains the following questions:</p> <ol style="list-style-type: none"> 1. basic information, including the respondent's title, tenure, work experience, professional qualifications, time spent on SOX compliance, and the firm's basic information; 2. the problems encountered when implementing Sections 302 and 404; 3. the usage of IC-IF (1992) when implementing Section 404; and 4. expertise needed to evaluate internal control efficiently. 	<p>The results reveal that there is a limitation on the practicability of IC-IF (1992) when it is used in SOX implementation, and it is very hard for the management to make a fair and consistent evaluation of internal control effectiveness if they just rely on IC-IF (1992). The adoption of risk-oriented evaluation method proposed by SEC and PCAOB is not so satisfactory; most firms do not adopt it as the only framework for internal control evaluation.</p>

Survey Authority	Survey Period	Response Rate	Survey Objective	Survey Object	Survey Content	Main Conclusions
SEC	December 2008 to January 2009	8,215 questionnaires were distributed, and 2,091 questionnaires were collected finally. The response rate is 35%.	To investigate: 1. costs and benefits of SOX Section 404 compliance, and provide evidence of the economic effects of SOX Section 404 compliance; and 2. whether the 2007 reforms (Management Guidance and PCAOB AS No. 5) increase the efficiency and effectiveness of Section 404 implementation.	Targeted individuals are CEOs, CFOs, General Counsels and other senior executives.	In addition to questions about various components of the cost of compliance with Section 404, the Web survey included questions about the factors that may explain compliance costs, about the perceived effects of Section 404 compliance, and about the perceived effects of the 2007 reforms on the compliance process. Whenever appropriate, the survey questions were designed to gather data covering a three-year period: the most recent fiscal year for which the respondent's company filed an annual report with the Commission – most recently completed fiscal year, the fiscal year prior to the most recently completed fiscal year, and the fiscal year in progress at the time of the survey.	From survey analysis, SEC finds that: 1. Section 404 compliance will bring certain benefits to firms, but on average, compliance costs outweigh corresponding benefits, especially in smaller firms; and 2. the 2007 reforms have had the intended effect of reducing compliance costs, and it also appears that the benefits of these reforms may not have fully accrued, as companies expect further decreases in compliance costs in the fiscal year in progress at the time of the survey.

Appendix D Reports Conducted by Deloitte in China

This table summarizes internal control reports conducted by Deloitte in China for successive 6 years (2007-2012).

Report Title	Survey Period	No. of Sample	Survey Objective	Survey Object	Survey Content	Survey Conclusions
Report on Internal Control of Listed Firms in China (2007)	June 2007	86	To understand the stage and problems of and support needed for internal control implementation in Chinese listed firms.	Board Secretaries, CFOs, and Securities Affairs Representatives or other senior executives	<ol style="list-style-type: none"> 1. The understanding of external regulatory requirements. 2. The establishment and effectiveness of the enterprise's internal control system. 3. The establishment of an internal control evaluation mechanism. 4. Main obstacles of internal control implementation. 	There are significant deficiencies in internal control establishment in Chinese listed firms. The majority of firms lack a sound internal control system, and cannot meet regulatory requirements.
Report on Internal Control of Listed Firms in China (2008)	May 2008	126	To understand the stage and problems of and support needed for internal control implementation in Chinese listed firms.	Board Secretaries, CFOs, and Securities Affairs Representatives or other senior executives	<ol style="list-style-type: none"> 1. The understanding of external regulatory requirements. 2. The establishment and effectiveness of the enterprise's internal control system. 3. The establishment of an internal control evaluation mechanism. 4. Main obstacles of internal control implementation. 	There are some improvements in internal control system establishment; however, there are still some problems, such as a lack of unified technical standards and insufficient implementation capacity.

Report Title	Survey Period	No. of Sample	Survey Objective	Survey Object	Survey Content	Survey Conclusions
Report on Internal Control of Listed Firms in China (2009)	May 2009	18 (In-depth Interview)	To understand in depth the problems existing in the establishment and evaluation of internal control.	Board Secretaries, Internal Control Establishment Department Officers, and Internal Control Evaluation Department Officers	<ol style="list-style-type: none"> 1. The consideration of internal control in listed firms in the wake of the financial crisis. 2. The implementation status of internal control in Chinese listed firms. 3. Internal control assessment status in Chinese listed firms. 	Chinese listed firms have got some positive improvements in respect of internal control implementation and evaluation, and have paid more attention to enterprise risk management in the wake of the financial crisis. Firms attach great importance to the construction of control activities, but pay insufficient attention to the internal environment. The leading department and evaluation criteria of internal control need to be considered.

Report Title	Survey Period	No. of Sample	Survey Objective	Survey Object	Survey Content	Survey Conclusions
Report on Internal Control of Listed Firms in China (2010)	May 2010	215	To understand in depth the problems existing in the establishment and evaluation of internal control in Chinese listed firms. To find a way to further improve firms' operational capability through internal control.	Board Secretaries, Internal Control Establishment Department Officers, and Internal Control Evaluation Department Officers	<ol style="list-style-type: none"> 1. The understanding of EICS in Chinese listed firms. 2. Implementation status of internal control. 3. Improvement approaches needed to meet regulatory requirements. 	The effects of internal control gradually appear, and the effects of internal control implementation meet management's expectation in some firms. However, there are still some problems, such as the shortage of internal control professionals, the lack of information systems related to internal control, and weak executive force.

Report Title	Survey Period	No. of Sample	Survey Objective	Survey Object	Survey Content	Survey Conclusions
Report on Internal Control of Listed Firms in China (2011)	March 2011	226	To understand in depth the problems existing in EICS implementation in Chinese listed firms. To find a way to further improve firms' operational capability through internal control.	Board Secretaries, CFOs, Internal Control Establishment Department Officers, and Internal Control Evaluation Department Officers	<ol style="list-style-type: none"> 1. The perception of internal control. 2. Implementation status of internal control. 3. The main problems encountered during internal control implementation. 4. The change in operation and management induced by internal control implementation. 	Internal control implementation continues to progress, but quite a few enterprises still believe that the implementation of internal control is just to meet regulatory requirements, and senior executives do not pay enough attention to that.

Report Title	Survey Period	No. of Sample	Survey Objective	Survey Object	Survey Content	Survey Conclusions
Report on Internal Control of Listed Firms in China (2012)	December 2012	267	To understand in depth the current status of EICS implementation in Chinese listed firms and private firms. To find a way to further improve firms' operational capability through internal control.	Board Secretaries, CFOs, Internal Control Establishment Department Officers, and Internal Control Evaluation Department Officers	<ol style="list-style-type: none"> 1. The perception of internal control. 2. Implementation status of internal control. 3. The main problems encountered during internal control implementation. 4. Approaches needed to take for future internal control implementation. 	<p>The effects of internal control implementation have been gradually realized. The role of internal audit in internal supervision has been recognized.</p> <p>However, internal control needs to be further extended in the fields of risk management and authorization optimization. The lack of awareness, supervision, inspection and a punishment mechanism make it difficult to establish an effective internal control system. There is also still a shortage of professionals and technical personnel to implement internal control.</p>

Appendix E Variable Definitions

Variable	Definition
<u>Company complexity</u>	
<i>Firmage</i>	The number of years since the company was publicly traded, which is converted in the cross-section to a decile ranking.
<i>MVE</i>	The market value of equity from CSMAR, measured at the fiscal year end and converted in the cross-section to a decile ranking.
<i>R&D</i>	Research and development expense reported by Wind divided by total assets and converted in the cross-section to a decile ranking.
<i>Multisegment</i>	An indicator variable equal to one when the number of operating segments reported in the Wind database is greater than one.
<i>Crosslist</i>	An indicator variable equal to one when the firm is listed abroad.
<u>Firm governance</u>	
<i>SOE</i>	An indicator variable equal to one when the firm is a state-owned enterprise, defined as a firm that is ultimately controlled by the government.
<i>Dual</i>	An indicator variable equal to one when the CEO and Chairman are the same person.
<i>InstOwn</i>	The aggregate ownership of institutions, measured at the fiscal year end and converted in the cross-section to centile rankings.
<i>OwnBalance</i>	The ownership of the largest shareholder minus the ownership of the second to tenth largest shareholders and converted to centile rankings.
<u>Internal control weakness</u>	
<i>ICDcurrent</i>	An indicator variable equal to one if the firm discloses at least one internal control weakness.
<i>ICDremediation</i>	An indicator variable equal to one if the firm does not disclose an internal control weakness in the year, but the company did disclose at least one internal control weakness in the prior year.
<i>Restatement</i>	An indicator variable equal to one if the company restated the financial report.
<u>Other factors</u>	
<i>Excessret</i>	Excess return, I use the firm's monthly alphas from January 2009 to December 2013, defined as the intercept from the time-series regression of each firm's monthly stock returns in excess of the risk-free rate on Carhart's (1997) four factors. Converted to decile rankings.
<i>Public08</i>	An indicator variable equal to one if the company went public in 2008.
<i>Prov. Mkt</i>	Province-level marketization index, constructed by Fan and Wang (2011).

Appendix F Firm-Level Mean Response to 19 Benefit Questions

"To the best of your knowledge, what impact has EICS compliance had on the following?"

(3-point scale: -1= no positive impact; 0= little positive impact; 1= large positive impact)

	Firm-level		
	<i>N</i>	<i>Mean</i>	<i>%positive</i>
<i>1. Firm performance</i>	<i>1,154</i>	<i>0.26</i>	<i>81.54</i>
1.1. Organizational efficiency	1,154	0.42	86.67
1.2. Operating efficiency	1,154	0.17	77.17
1.3. Investment efficiency	1,154	0.10	74.36
1.4. Firm value	1,154	0.36	87.94
<i>2. Quality of disclosure</i>	<i>1,154</i>	<i>0.44</i>	<i>88.75</i>
2.1. Ability to prevent and detect fraud	1,154	0.45	91.62
2.2. Accuracy of management forecast profits	1,154	0.21	80.59
2.3. Efficiency of financial reporting process	1,154	0.53	92.23
2.4. Audit committee's confidence in ICFR	1,154	0.60	94.04
2.5. Quality of financial reports	1,154	0.54	91.76
2.6. Timely issue of audit opinions on financial reports	1,154	0.33	82.28
<i>3. Confidence of market participants</i>	<i>1,154</i>	<i>0.00</i>	<i>68.94</i>
3.1. Financing ability	1,154	0.03	70.76
3.2. Investor confidence	1,154	0.23	80.31
3.3. Attract analysts to track the company	1,154	-0.05	66.77
3.4. Stock liquidity	1,154	-0.20	57.93
<i>4. Achieving EICS objectives</i>	<i>1,154</i>	<i>0.10</i>	<i>87.44</i>
4.1. Ensure legal compliance	1,154	0.22	94.53
4.2. Ensure security of assets	1,154	0.19	93.72
4.3. Ensure reliability and integrity of financial reports	1,154	0.25	94.61
4.4. Improve operating effect	1,154	-0.05	79.03
4.5. Facilitate achievement of firm strategy	1,154	-0.09	75.32
Average response across all 19 questions	1,154	0.20	81.67

Appendix G Checklist for DIB Internal Control Disclosure Index

This table reports the checklist for DIB internal control disclosure index. According to EICS, internal control consists of internal environment, risk assessment, control activities, information and communication, and internal monitoring. DIB has developed an assessment indicator system for listed companies based on these five elements and with reference to EICS and IC-IF (2013). The system consists of 87 indexes with regard to these five elements. On the basis of these indexes, DIB built an assessment index for internal control disclosure of listed companies for 2007 to 2014 by collecting data from annual reports, quarterly reports, interim statements, corporate governance and internal control self-assessment reports, and internal control authentication reports of the listed companies.

Five components of IC	First-Level Indicators	No.	Second-Level Indicators
1. Internal environment	Governance structure	01	Ownership restriction
		02	Proportion of institutional ownership
		03	Board size
		04	Proportion of independent directors
		05	Size of the board of supervisors
		06	Duality
	Internal control responsibility	07	Independent directors' evaluation of internal control
		08	Board of supervisors' evaluation of internal control
	Audit Committee	09	Number of Audit Committee meetings
		10	Internal control report revealed by the Audit Committee
		11	Number of Audit Committee members
		12	Proportion of independent directors in the Audit Committee
	Internal Audit Department	13	Disclosing the establishment of an internal audit department
		14	Disclosing the personnel allocation of the internal audit department
	Human resource policy	15	Proportion of staff with an educational level above junior college
		16	Disclosing the key technical team or key technical staff
		17	Disclosing employee training
	Social responsibility	18	Disclosing corporate culture
		19	Disclosing the corporate social responsibility report
	Legal	20	The firm is legal compliance
		21	Top executives are not involved in litigation
		22	The firm is not involved in litigation
2. Risk assessment	Goal setting	23	Disclosing the development strategy
		24	Disclosing the development strategy in detail

	25	Disclosing an operational plan	
	26	Disclosing a quantitative operational plan	
Risk identification	27	Disclosing the number of internal risks	
	28	Disclosing the number of external risks	
Risk analysis	29	Quantitative analysis of the number of internal risks	
	30	Quantitative analysis of the number of external risks	
Risk response and tracking of risk change	31	Disclosing the number of tactics for internal risk	
	32	Disclosing the number of tactics for external risk	
	33	Analyzing the trend of industry development	
3. Control activities	Incompatible duties	34	Disclosing separation of incompatible duties
	Approval authority	35	Disclosing relevant authorization procedures
	Accounting system control	36	No major accounting mistake
		37	No financial report restatement
		38	Scheduled disclosure of announcements not changed
		39	The CFO has audit experience, with MPAcc or CPA qualifications
	Assets safety control	40	The controlling shareholder and related parties do not expropriate the listed firm's cash.
		41	No related party transactions in non-daily operations
		42	No abnormal allowances for asset impairment
	Budget control	43	Disclosing the overall budget
	Operational control	44	Management discussed changes in income items
		45	Management discussed changes in cash flow items
		46	Management discussed changes in balance sheet items
	Compensation control	47	Number of compensation and audit committee meetings
48		Disclosing evaluation and compensation of executives	
49		Disclosing employee compensation policy	
Disclosure of operating risk	50	No production accident	
	51	No product quality and safety problems	
4. Information and communication	Internal information and communication	52	Number of board meetings
		53	Number of board of supervisors meetings
		54	Independent directors participate in all board meetings
	Investor relations	55	Number of shareholders' meetings
		56	No situations questioned by the media

	57	The website has an investor relationship column	
IT	58	Disclosing the application of an IT system	
Anti-fraud	59	Independent directors propose no objection to company resolutions	
	60	Board of supervisors propose no objection to supervisory matters	
Complaints	61	Disclosing a complaint reporting mechanism and an accuser protection mechanism	
5. Internal monitoring	Daily monitoring and special monitoring mechanism	62	Disclosing the internal control monitoring mechanism
	Identification criteria for internal control deficiencies	63	Disclosing the quantitative identification criteria for deficiencies in internal control over financial reporting
		64	Disclosing the qualitative identification criteria for deficiencies in internal control over financial reporting
		65	Disclosing the quantitative identification criteria for deficiencies in internal control over non-financial reporting
		66	Disclosing the qualitative identification criteria for deficiencies in internal control over non-financial reporting
	Internal control deficiencies disclosure	67	No material financial weaknesses
		68	No significant financial deficiencies
		69	No financial control deficiencies
		70	No material non-financial weaknesses
		71	No significant non-financial deficiencies
		72	No non-financial control deficiencies
	Remediation of internal control deficiencies	73	Material financial weaknesses have been remedied
		74	Significant financial deficiencies have been remedied
		75	Non-financial material weaknesses have been remedied
		76	Significant non-financial deficiencies have been remedied
	The scope of internal control evaluation	77	Disclosing the scope of evaluation
78		Disclosing high-risk areas	
79		Disclosing key operational items	
80		Proportion of total assets	
81		Proportion of sales	
Internal control evaluation report	82	Disclosing the internal control evaluation report	
	83	The internal control evaluation report is disclosed in a normative format	
	84	The conclusion of internal control evaluation report is effective	

Internal control audit report	85	Disclosing the internal control audit report
	86	The internal control audit report is disclosed in a normative format
	87	The conclusion of internal control audit report is standard and unqualified

References

- Ajzen, I. 1985. From Intentions to Actions: A theory of planned behavior. In J. Kuhl and J. Beckmann (Eds). *Action control: From cognition to behavior*, Berlin, Germany, Springer-Verlag: 11-39.
- Alexander, C. R., S. W. Bauguess, G. Bernile, Y. A. Lee, and J. Marietta-Westberg. 2013. Economic Effects of SOX Section 404 Compliance: A corporate insider perspective. *Journal of Accounting and Economics* 56 (2–3): 267-290.
- Altamuro, J., and A. Beatty. 2010. How does Internal Control Regulation Affect Financial Reporting? *Journal of Accounting and Economics* 49 (1-2): 58-74.
- Asare, S. K., and A. Wright. 2012. The Effect of Type of Internal Control Report on Users' Confidence in the Accompanying Financial Statement Audit Report. *Contemporary Accounting Research* 29 (1): 152-175.
- Ashbaugh-Skaife, H., D. W. Collins, and W. R. Kinney. 2007. The Discovery and Reporting of Internal Control Deficiencies prior to SOX-mandated Audits. *Journal of Accounting and Economics* 44 (1-2): 166-192.
- Ashbaugh-Skaife, H., D. W. Collins, W. R. Kinney JR, and R. LaFond. 2009. The Effect of SOX Internal Control Deficiencies on Firm Risk and Cost of Equity. *Journal of Accounting Research* 47 (1): 1-43.
- Ashbaugh-Skaife, H., D. W. Collins, W. R. Kinney, and R. LaFond. 2008. The Effect of SOX Internal Control Deficiencies and Their Remediation on Accrual Quality. *The Accounting Review* 83 (1): 217-250.
- Balsam, S., W. Jiang, and B. Lu. 2014. Equity Incentives and Internal Control Weaknesses. *Contemporary Accounting Research* 31 (1): 178-201.
- Baron, R. M., and D. A. Kenny. 1986. The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology* 51 (6): 1173-1182.
- Bedard, J. C., and L. Graham. 2011. Detection and Severity Classifications of Sarbanes-Oxley Section 404 Internal Control Deficiencies. *The Accounting Review* 86 (3): 825-855.
- Beneish, M. D., M. B. Billings, and L. D. Hodder. 2008. Internal Control Weaknesses and Information Uncertainty. *The Accounting Review* 83 (3): 665-703.
- Brochet, F. 2010. Information Content of Insider Trades before and after the Sarbanes-Oxley Act. *The Accounting Review* 85 (2): 419-446.
- Burks, J. J. 2011. Are Investors Confused by Restatements after Sarbanes-Oxley? *The Accounting Review* 86 (2): 507-539.
- Carhart, M. 1997. On Persistence in Mutual Fund Performance. *Journal of Finance*

52 (1): 57–82.

Carter, M. E., L. J. Lynch, and S. L. C. Zechman. 2009. Changes in Bonus Contracts in the Post-Sarbanes–Oxley Era. *Review of Accounting Studies* 14 (4): 480-506.

Chen, K., Z. Chen, and K. Wei. 2009. Legal Protection of Investors, Corporate Governance, and the Cost of Equity Capital. *Journal of Corporate Finance* 15 (3): 273-289.

Cheng, Q, B. W., Goh, and J. B. Kim. 2017. Internal Control and Operational Efficiency. *Contemporary Accounting Research*, forthcoming.

Christensen, H.B., L. Hail, and C. Leuz, 2016. Capital-Market Effects of Securities Regulation: Prior Conditions, Implementation, and Enforcement. *Review of Financial Studies* 29 (11): 2885-2924.

Cohen, D. A., A. Dey, and T. Z. Lys. 2008. Real and Accrual-Based Earnings Management in the Pre- and Post-Sarbanes-Oxley Periods. *The Accounting Review* 83 (3): 757-787.

Cohen, J., G. Krishnamoorthy, and A. Wright. 2010. Corporate Governance in the Post-Sarbanes-Oxley Era: Auditors' Experiences. *Contemporary Accounting Research* 27 (3): 751-786.

Committee of Sponsoring Organizations of the Treadway Commission. 1992. Internal Control – Integrated Framework.

Committee of Sponsoring Organizations of the Treadway Commission. 2013. Internal Control – Integrated Framework.

Cook, K. A., G. R. Huston, and T. C. Omer. 2008. Earnings Management through Effective Tax Rates: The Effects of Tax-Planning Investment and the Sarbanes-Oxley Act of 2002. *Contemporary Accounting Research* 25 (2): 447-471.

Costello, A. M., and R. Wittenberg-Moerman. 2011. The Impact of Financial Reporting Quality on Debt Contracting: Evidence from Internal Control Weakness Reports. *Journal of Accounting Research* 49 (1): 97-136.

DeFond, M. L., and C. S. Lennox. 2011. The Effect of SOX on Small Auditor Exits and Audit Quality. *Journal of Accounting and Economics* 52 (1): 21-40.

Dhaliwal, D., C. Hogan, R. Trezevant, and M. Wilkins. 2011. Internal Control Disclosures, Monitoring, and the Cost of Debt. *The Accounting Review* 86 (4): 1131-1156.

Doyle, J., W. Ge, and S. McVay. 2007. Determinants of Weaknesses in Internal Control over Financial Reporting. *Journal of Accounting and Economics* 44 (1-2):193-223.

Doyle, J., W. Ge, and S. McVay. 2007b. Accruals Quality and Internal Control over Financial Reporting. *The Accounting Review* 82 (5): 1141-1170.

- Earley, C. E., V. B. Hoffman, and J. R. Joe. 2008. Reducing Management's Influence on Auditors' Judgments: An Experimental Investigation of SOX 404 Assessments. *The Accounting Review* 83 (6): 1461-1485.
- Easton, P.D. 2004. PE Ratios, PEG Ratios, and Estimating the Implied Expected Rate of Return on Equity Capital. *The Accounting Review* 79 (1): 73-95.
- Eleswarapu, V., R. Thompson, and K. Venkataraman. 2004. The Impact of Regulation Fair Disclosure: Trading Costs and Information Asymmetry. *Journal of Financial and Quantitative Analysis* 39 (2): 209-225.
- Engel, E., R. M. Hayes, and X. Wang. 2007. The Sarbanes–Oxley Act and Firms' Going-private Decisions. *Journal of Accounting and Economics* 44 (1-2): 116-145.
- Fan, G., and X. Wang. 2003. Report on the Relative Process of Marketization of Each Region in China. The Economic Science Press (in Chinese).
- Fan, G., and X. Wang. 2011. Report on the Relative Process of Marketization of Each Region in China. The Economic Science Press (in Chinese).
- Francis, J., D. Nanda, and X. Wang. 2006. Re-examining the Effects of Regulation Fair Disclosure Using Foreign Listed Firms to Control for Concurrent Shocks. *Journal of Accounting and Economics* 41 (3): 271–92.
- Gao, F., J. S. Wu, and J. Zimmerman. 2009. Unintended Consequences of Granting Small Firms Exemptions from Securities Regulation: Evidence from the Sarbanes-Oxley Act. *Journal of Accounting Research* 47 (2): 459-506.
- Gao, Y. 2011. The Sarbanes-Oxley Act and the Choice of Bond Market by Foreign Firms. *Journal of Accounting Research* 49 (4): 933-968.
- Gelos, R., and S. Wei. 2005. Transparency and International Portfolio Holdings. *Journal of Finance* 60 (6): 2987-3020.
- Goh, B. W. 2009. Audit Committees, Boards of Directors, and Remediation of Material Weaknesses in Internal Control. *Contemporary Accounting Research* 26 (2): 549-579.
- Goh, B. W., and D. Li. 2011. Internal Controls and Conditional Conservatism. *The Accounting Review* 86 (3): 975-1005.
- Gong, G., B. Ke, and Y. Yu. 2013. Home Country Investor Protection, Ownership Structure and Cross-Listed Firms' Compliance with SOX-Mandated Internal Control Deficiency Disclosures. *Contemporary Accounting Research* 30 (4): 1490-1523.
- Gordon, L. A., and A. L. Wilford. 2012. An Analysis of Multiple Consecutive Years of Material Weaknesses in Internal Control. *The Accounting Review* 87 (6): 2027-2060.
- Guedhami, O., and J. Pittman. 2006. Ownership Concentration in Privatized Firms: The Role of Disclosure Standards, Auditor Choice, and Auditing Infrastructure.

Journal of Accounting Research 44 (5): 889-929.

Hail, L., and C. Leuz. 2006. International Differences in the Cost of Equity Capital: Do Legal Institutions and Securities Regulation Matter? *Journal of Accounting Research* 44 (3): 485–531.

Hammersley, J., L. Myers, and C. Shakespeare. 2008. Market Reactions to the Disclosure of Internal Control Weaknesses and to the Characteristics of Those Weaknesses under Section 302 of the Sarbanes Oxley Act of 2002. *Review of Accounting Studies* 13 (1): 141-165.

Hart, O. 2009. Regulation and Sarbanes-Oxley. *Journal of Accounting Research* 47 (2): 437-445.

Hayes, R. M. 2009. Discussion of Unintended Consequences of Granting Small Firms Exemptions from Securities Regulation: Evidence from the Sarbanes-Oxley Act. *Journal of Accounting Research* 47 (2): 507-518.

Hochberg, Y. V., P. Sapienza, and A. Vissing-Jørgensen. 2009. A Lobbying Approach to Evaluating the Sarbanes-Oxley Act of 2002. *Journal of Accounting Research* 47 (2): 519-583.

Hogan, C. E., and M. S. Wilkins. 2008. Evidence on the Audit Risk Model: Do Auditors Increase Audit Fees in the Presence of Internal Control Deficiencies? *Contemporary Accounting Research* 25 (1): 219-242.

Hoitash, R., U. Hoitash, and K. M. Johnstone. 2012. Internal Control Material Weaknesses and CFO Compensation. *Contemporary Accounting Research* 29 (3): 768-803.

Hoitash, U., R. Hoitash, and J. C. Bedard. 2009. Corporate Governance and Internal Control over Financial Reporting: A Comparison of Regulatory Regimes. *The Accounting Review* 84 (3): 839-867.

Iliev, P. 2010. The Effect of SOX Section 404: Costs, Earnings Quality, and Stock Prices. *Journal of Finance* 65 (3): 1163-1196.

Jain, P. K., and Z. Rezaee. 2006. The Sarbanes-Oxley Act of 2002 and Capital-Market Behavior: Early Evidence. *Contemporary Accounting Research* 23 (3): 629-654.

Johnstone, K., C. Li, and K. H. Rupley. 2011. Changes in Corporate Governance Associated with the Revelation of Internal Control Material Weaknesses and Their Subsequent Remediation. *Contemporary Accounting Research* 28 (1): 331-383.

Kim, J., B. Y. Song, and L. Zhang. 2011. Internal Control Weakness and Bank Loan Contracting: Evidence from SOX Section 404 Disclosures. *The Accounting Review* 86 (4): 1157-1188.

Kinney JR., W. R., and M. L. Shepardson. 2011. Do Control Effectiveness Disclosures Require SOX 404(b) Internal Control Audits? A Natural Experiment

- with Small U.S. Public Companies. *Journal of Accounting Research* 49 (2): 413-448.
- Krishnan, J. 2005. Audit Committee Quality and Internal Control: An empirical analysis. *The Accounting Review* 80 (2): 649-675.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny. 1997. Legal Determinants of External Finance. *Journal of Finance* 52 (3): 1131-1150.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny. 1998. Law and Finance. *Journal of Political Economy* 106 (6): 1113-1155.
- La Porta, R., F. Lopez-de-Silanes, and A. Shleifer. 2006. What Works in Securities Laws? *Journal of Finance* 61 (1): 1-32.
- Leuz, C. 2007. Was the Sarbanes–Oxley Act of 2002 really this Costly? A discussion of evidence from event returns and going-private decisions. *Journal of Accounting and Economics* 44 (1-2): 146-165.
- Leuz, C., A. Triantis, and T. Yue Wang. 2008. Why do Firms Go Dark? Causes and economic consequences of voluntary SEC deregistrations. *Journal of Accounting and Economics* 45 (2-3): 181-208.
- Leuz, C., and P. Wysocki. 2016. The Economics of Disclosure and Financial Reporting Regulation: Evidence and Suggestions for Future Research. *Journal of Accounting Research* 54 (2): 525-622.
- Li, C., L. Sun, and M. Ettredge. 2010. Financial Executive Qualifications, Financial Executive Turnover, and Adverse SOX 404 Opinions. *Journal of Accounting and Economics* 50 (1): 93-110.
- Li, W.F., B. Lin, D.M. Yang, and Y. Sun. 2010. Internal Control Disclosure, Firm Over-Investment, and Financial Crisis: Evidence from Chinese Listed Companies. *China Accounting and Finance Review* 12: 107-141.
- Lin, S., M. Pizzini, M. Vargus, and I. R. Bardhan. 2011. The Role of the Internal Audit Function in the Disclosure of Material Weaknesses. *The Accounting Review* 86 (1): 287-323.
- Lisic, L. L., T. L. Neal, I. X. Zhang, and Y. Zhang. 2016. CEO Power, Internal Control Quality, and Audit Committee Effectiveness in Substance Versus in Form. *Contemporary Accounting Research* 33 (3): 1199-1237.
- Lu, H., G. Richardson, and S. Salterio. 2011. Direct and Indirect Effects of Internal Control Weaknesses on Accrual Quality: Evidence from a unique Canadian regulatory setting. *Contemporary Accounting Research* 28 (2): 675-707.
- Masli, A., G. F. Peters, V. J. Richardson, and J. M. Sanchez. 2010. Examining the Potential Benefits of Internal Control Monitoring Technology. *The Accounting Review* 85 (3): 1001-1034.
- Naiker, V. and D. S. Sharma. 2009. Former Audit Partners on the Audit Committee

- and Internal Control Deficiencies. *The Accounting Review* 84 (2): 559-587.
- Ogneva, M., K. R. Subramanyam, and K. Raghunandan. 2007. Internal Control Weakness and Cost of Equity: Evidence from SOX Section 404 disclosures. *The Accounting Review* 82 (5): 1255-1297.
- Patterson, E. R., and J. R. Smith. 2007. The Effects of Sarbanes-Oxley on Auditing and Internal Control Strength. *The Accounting Review* 82 (2): 427-455.
- Piotroski, J. D., and S. Srinivasan. 2008. Regulation and Bonding: The Sarbanes-Oxley Act and the flow of international listings. *Journal of Accounting Research* 46 (2): 383-425.
- Pittman, J.A. and S. Fortin. 2004. Auditor Choice and the Cost of Debt Capital for Newly Public Firms. *Journal of Accounting and Economics* 37 (1): 113-136.
- Rice, S. C., and D. P. Weber. 2012. How Effective Is Internal Control Reporting under SOX 404? Determinants of the (Non-) Disclosure of Existing Material Weaknesses. *Journal of Accounting Research* 50 (3): 811-843.
- Rose, J. M., C. S. Norman, and A. M. Rose. 2010. Perceptions of Investment Risk Associated with Material Control Weakness Pervasiveness and Disclosure Detail. *The Accounting Review* 85 (5): 1787-1807.
- Wang, Q., T.J. Wong, and L. Xia. 2008. State Ownership, the Institutional Environment, and Auditor Choice: Evidence from China. *Journal of Accounting and Economics* 46 (1): 112-134.
- Wang, X. 2010. Increased Disclosure Requirements and Corporate Governance Decisions: Evidence from Chief Financial Officers in the pre- and post-Sarbanes-Oxley periods. *Journal of Accounting Research* 48 (4): 885-920.
- Wolfe, C. J., E. G. Mauldin, and M. C. Diaz. 2009. Concede or Deny: Do management persuasion tactics affect auditor evaluation of internal control deviations? *The Accounting Review* 84 (6): 2013-2037.
- Wu, Y., and B. Tuttle. 2014. The Interactive Effects of Internal Control Audits and Manager Legal Liability on Managers' Internal Controls Decisions, Investor Confidence, and Market Prices. *Contemporary Accounting Research* 31 (2): 444-468.
- Zhang, I. X. 2007. Economic Consequences of the Sarbanes–Oxley Act of 2002. *Journal of Accounting and Economics* 44 (1-2): 74-115.
- Zingales, L. 2009. The Future of Securities Regulation. *Journal of Accounting Research* 47 (2): 391-425.