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The quality of financial reporting in China: An examination from an accounting restatement perspective

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ABSTRACT

This study uses restatements to reveal the poor quality of past accounting information reported within China's capital market. We show that up to a quarter of listed firms in mainland China explicitly admitted the poor quality of their financial information by restating their previous financial reports between 1999 and 2005. Many of these firms managed their earnings mainly via below-the-line items to avoid losses and promote survival, rather than to support refinancing goals. Such poor-quality financial reporting is more likely among firms that have weaker profitability and a shareholder base that is state-controlled, with diffused ownership and a relatively low proportion of shares held by institutional investors. Furthermore, we find the market to be relatively insensitive to such admissions. Investors' reactions capture only the earnings information of the current reported year, rather than also reflecting the concurrently revealed correction of past financial

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reporting. However, the equity market does not completely ignore the earnings information. Investors' reliance on earnings is merely low relative to the mature US market. These findings demonstrate that accounting credibility in China has low value; providing poor-quality financial information bears little cost because various market mechanisms fail to deter such behavior. Nevertheless, regulators' ongoing efforts to enhance the quality of financial information and disclosure among listed firms are still fruitful. The frequency of restatements decreased over our sample period, which reinforces the current regulatory prospects and strategies for further improving China's capital markets.

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1. Introduction

Efficient capital markets reward high-quality financial reporting, which facilitates the efficient raising and allocation of corporate capital and thus creates benefits for investors. In the past decade, China's stock market has become very popular among domestic investors, as the stock market is one of a very limited number of investment vehicles open to them. The total market value of equity invested in the Chinese stock market grew by an order of magnitude during the 1999–2007 period.² In less than three years, from mid-2005 to late-2007, the Shanghai and Shenzhen Stock Exchange Composite Index experienced a sixfold increase, after a decade of quietness. These gains generated euphoria among investors, at least until the stock market started to correct by as much as 70% a year from the end of 2007. This rise and fall of the stock market highlighted general concerns over the quality of financial reporting in China.

The negatively perceived turn of events in the Chinese market appears to parallel that of the US market during the same period. It is noted that an increasing number of US firms in recent years have had to restate their previous years' financial reports, either voluntarily or when forced to do so by regulators (Scholz, 2008; Wu, 2002). The number of firms restating their previous financial reports reached almost 300 in 2005, amounting to roughly two percent of all public companies in the United States. This number was high enough to draw appreciable attention from the media, regulators and academics. In mainland China, a similar yet more pronounced phenomenon recently emerged. We find that a significant proportion of listed companies on the Shanghai and Shenzhen Stock Exchanges restated their annual reports for the years from 1999 to 2005. Interestingly, in contrast to the enormous publicity received by US earnings restatements, in China restatements have received scant coverage in the Chinese media, despite the problem being more pronounced.

Restatements represent clear-cut violations of accounting rules and hence an explicit admission of the poor quality of companies' past financial reporting. Research shows that

² From 821 billion Chinese Yuan (approximately USD99.2 billion at USD1 = CNY8.2768) by the end of 1999 to 8555 billion Yuan (approximately USD1171.9 billion at the USD1 = CNY7.30) by the end of 2007.

in the United States, the announcement of a firm's earnings restatement usually triggers a severe decline in the stock price, thus harshly penalizing the restatement firm (Palmrose et al., 2004; Wu, 2002; Turner et al., 2001). US research also finds that after a restatement, the market relies less on earnings information to determine a firm's stock price, reflecting investors' loss of confidence in the company's financial reports (Wu, 2002; Andersen and Yohn, 2002), and the company is forced to pay a higher cost for equity capital (Hribar and Jenkins, 2004). These effects reflect the damage to the credibility of a firm's future financial reports in the wake of previously released low-quality financial information. In an emerging market such as China, however, it is highly uncertain whether the same market reaction exists, because investors' confidence in firms' financial reports may be low at the outset. The question also arises whether earnings restatements will reduce investors' reliance on accounting earnings for setting stock prices, or increase the firm's cost of equity capital, as found in the US research. Furthermore, it is possible that many of the restatements in China could be the result of opportunistic behavior, although with different motivations than in the United States, given the different institutional setting. Thus, China's restatements provide an opportunity to examine the value ascribed by an emerging market to the quality and credibility of financial reports, relative to the value assigned by a mature market.

Our first objective in this paper is to explore the characteristics of poor-quality firms—defined as firms that issue restatements—relative to control firms. We also investigate the incentives to report poor-quality financial information previously released by such firms. In addition, we examine the consequences, in terms of the stock market reaction, of admitting the publication of such information. Finally, we rationalize why Chinese companies so frequently provide poor-quality financial reporting, only to subsequently correct it. We hope this study will offer insights to regulators on how to detect poor-quality companies and suggest aspects that may improve the quality of listed firms. As with many other studies on issues concerning mainland China, this study also aims to remind readers that the regulatory and financial reporting environment is vastly different in China, as are the motivations and consequences for firms and for the market as a whole.

This study offers academic researchers, regulators and investors—both domestic and international—insights into the overall quality of China's accounting information and a further understanding of China's increasingly important capital markets. This is perhaps the first empirical study that directly examines the issue of accounting quality in China—a nation whose capital markets are becoming increasingly important and hence cannot be ignored in the global capital market. This study complements the broad research literatures on China, earnings quality and restatements.

Previous literature (Wu, 2002; Anderson and Yohn, 2002) on the US market argues that earnings restatements are indicators of the poor quality of prior financial reporting. Poor accounting quality is generally penalized by the capital market, and such penalties serve as a deterrent to companies' delivery of poor accounting quality via accounting manipulation and similar means. The results of our study imply that such penalties do not yet exist in China. Along with the Ministry of Finance (MOF), which sets accounting standards, China's regulatory body, the Chinese Securities and Regulatory Commission (CSRC), has been making efforts since 1996 to enhance the regulatory environment of the nation's capital market. Accounting regulation is an important part of this process and there have been significant and gradual economic improvements since 1978. Meanwhile, we also realize that such efforts must be persistently carried into the future. For example, our study shows

that in the absence of an effective penalty system in the market, investors generally do not distinguish between good and poor accounting quality. Hence, our study also suggests the establishment of an effective penalty system through government regulation, which appears to be a necessary step for China's emerging market to become a complete capital market.

Following this introduction, the paper consists of six sections. Section 2 offers a detailed, topic-relevant background to China's accounting and regulatory environment. Section 3 conducts a literature review on restatements and other related areas. Section 4 develops our hypotheses and outlines the empirical models. Section 5 describes the details of restatements in China. Section 6 provides the empirical tests and interprets the results. Section 7 concludes.

2. Accounting standards and regulatory background in China

The securities regulator in the People's Republic of China (PRC) is the CSRC, which is equivalent to the US Securities and Exchange Commission (SEC). Established in October 1992, the CSRC is an institution of the PRC State Council and is authorized to regulate China's securities and futures markets. Although it did not issue its first version of *Procedure for Inspecting Listed Companies* until December 21, 1996 (*the 1996 Procedure*), it became effective immediately. *The Procedure* covered the scope and procedures, and the CSRC's responsibilities during inspections. The scope emphasized the truthfulness, completeness, accuracy and timeliness of disclosures by listed companies.

In the 1990s, companies followed the old PRC accounting standards, which failed to specify how to deal with accounting errors and irregularities. Accounting treatments therefore varied widely among companies and across industries. China's accounting reform of the late 1990s introduced the first accounting standard: *The Standard of Changes in Accounting Policies and Estimates, and Corrections of Material Accounting Errors*³ (*the 1999 Standard*). It was issued in June 1998 by the MOF, PRC's accounting standard setter and came into effect on January 1, 1999. Section 3 of *the 1999 Standard* described the restatement methods and required disclosure of the reason(s) for and total amount of the restatement. *The 1999 Standard* was modified slightly in January 2001, with one item added: Any abuse of changes in accounting policies or accounting estimates will be treated as material accounting mistakes and therefore restated. *The 1999 Standard* only required a restatement to be disclosed in the company's forthcoming annual report. For several years, the Accounting Standards of Business Enterprises (ASBE) were adopted in parallel with the Companies Accounting System, which mentioned the correction of errors in its tenth chapter and provided technical treatments that were consistent with those of *the Old Standard*.

Issued in October 1999, the CSRC's *Notice on Improving Financial Information Disclosure of Listed Companies* (*the 1999 Notice*) states that: (1) listed companies should make proper loss estimates of accounts receivable, inventories, investments, etc., and should not change the method of provision and percentage of provision within the same reporting period at the companies' will and (2) listed companies should disclose any change in accounting policies or estimates.

In 2001, there was still no rule that explicitly required listed companies to disclose accounting irregularities or mistakes publicly in a timely fashion. Unlike the common

³ This Standard was a chapter in the Accounting Standards of Business Enterprises (ASBE), which was completed in 2002; thus, it is also called China's 2002 ASBE.

US practice of public disclosure of a restatement upon first discovery by the media, China's press remained largely silent. Hence, investors were first informed of a restatement upon the public release of a company's annual report in major Chinese business newspapers and the website⁴ designated by the CSRC.

Unlike the practices of US listed firms, in which a restatement will revise any affected line items in all relevant quarter(s)' and year(s)' income statements and balance sheets, restatements in China under *the Old Standard* are not required to tabulate the corrected financial statements of all affected years. In most cases, where only the financial statements of the previous year ($t - 1$) are corrected, the corrected financial statements will be found in the current year's (t) annual report for comparison purposes. If the corrected year(s) reaches beyond the previous year ($t - 1$), then the correction will not be made in the earlier released reports, but will instead bypass the profit and loss statement for year $t - 1$ and directly hit the corrected balance sheet. The overall cumulative effect would, of course, be adjusted in the beginning balance of retained earnings and other affected items on the balance sheet in the annual report of year t . Because of the subtle difference between the accounting treatments required by the US Generally Accepted Accounting Principles (GAAP) and the International Financial Reporting Standards (IFRS), we cautiously call our event "restatements" rather than "earnings restatements" because not all the affected earnings would be restated during the sample period, only the previous year's earnings. Note also that *the Old Standard* required the detailed reasons for and amount of the restatement to be disclosed in the footnotes, but in practice such disclosures, especially regarding the reasons for restatement, were generally rather brief and opaque.

On March 19, 2001, the CSRC issued the revised *Procedure for Inspecting Listed Companies (the 2001 Procedure)*, which superseded the original 1996 *Procedure*. With the new release came a CSRC announcement that it would strengthen the inspection of listed companies' financial reports, corporate governance structures and independence from related parties. *The 2001 Procedure* required companies to correct any irregularities found in the inspection and to disclose them publicly within 30 days of an official notice.

The two years following the release of *the 2001 Procedure* witnessed a tremendous effort by the CSRC, resulting in the issue of 19 chapters of Rules on Information Disclosure for Listed Companies. Chapter 19: *The Correction of Financial Information and its Disclosure (Rule 19)* was issued at the end of 2003. *Rule 19* demands that listed companies immediately file an official report with the CSRC regarding any material events, including the correction of financial statements, and submit a revised and audited annual report within 45 days if the most recent annual report is incorrect. However, due to a loophole, *Rule 19* did not include a scenario for change-of-accounting estimates, and thus it had little real effect on disclosure patterns. Because a change-of-accounting estimate was not defined as a material event, it did not require timely disclosure. Many companies intentionally misclassified the correction of mistakes as a change-of-accounting estimate and routinely disclosed them in the forthcoming annual report rather than providing an immediate disclosure in the form of a change-of-accounting estimate.⁵

⁴ The CSRC designates the following four newspapers for listed companies to disclose their financial information: *China Securities Journal*, *Shanghai Securities Journal*, *Securities Time*, and *Securities Daily*. The CSRC-designated website is www.cninfo.com.cn.

⁵ Note that a change-of-accounting estimate does not change past accounting numbers, only future ones. The true accounting practice to ameliorate a false claim is, however, a restatement.

On January 6, 2004, just one day after a press conference offering explanations for both the substantial number of companies that received a qualified auditor's opinion and the increased number of restatements in 2002, the CSRC issued the *Notice on Further Improving Financial Information Disclosure of Listed Companies (the 2004 Notice)*. By emphasizing the 1999 Notice, the 2004 Notice clearly states that listed companies should not abuse asset impairments, change-of-accounting estimates or correction of material mistakes to manipulate financial results. Any company doing so would be held responsible. However, the 2004 Notice did not specify the scope of responsibility that a company would bear for committing a violation.

On February 15, 2006, the MOF announced that starting from 2007 annual reports, all publicly traded companies would adopt the new Accounting Standards of Business Enterprises (2006 ASBE), representing a major convergence towards the IFRS. The 2006 ASBE, Changes in Accounting Policies and Estimates and Corrections of Accounting Errors, fully adopted the practices of the IFRS, which are consistent with US GAAP. That is, from 2007 annual reports and thereafter, a restatement will revise any affected line items in income statements and balance sheets for all relevant quarter(s) and year(s).

Table 1 summarizes the development of accounting regulations related to this specific issue.

Table 1
Regulatory timeline.

| Date of issuance | Effective date | Issuer | Name of document | Abbreviation |
|-------------------|-------------------|--------|--|-----------------------------|
| December 21, 1996 | December 21, 1996 | CSRC | Procedure for Inspecting Listed Companies | 1996 Procedure |
| June 25, 1998 | January 1, 1999 | MOF | ASBE: Changes in Accounting Policies, Estimates and Corrections of Material Accounting Errors | The 1999 Standard |
| October 10, 1999 | October 10, 1999 | CSRC | Notice on Improving Financial Information Disclosure of Listed Companies | 1999 Notice |
| December 29, 2000 | January 1, 2001 | MOF | Companies' Accounting System 2001, Chapter 10: Accounting Adjustment; Section 3: Corrections of Accounting Errors | Accounting System |
| January 18, 2001 | January 1, 2001 | MOF | ASBE: Changes in Accounting Policies and Estimates and Corrections of Material Accounting Errors (Revised) | The 1999 Standard (revised) |
| March 19, 2001 | March 19, 2001 | CSRC | Procedure for Inspecting Listed Companies (Revised) | 2001 Procedure |
| December 1, 2003 | December 1, 2003 | CSRC | Rules on Information Disclosure for Listed Companies #19: The Correction of Financial Information and its Disclosure | Rule 19 |
| January 8, 2004 | January 8, 2004 | CSRC | Notice on Further Improving Financial Information Disclosure of Listed Companies | 2004 Notice |
| February 15, 2006 | January 1, 2007 | MOF | New ASBE #28: Changes in Accounting Policies, Estimates and Corrections of Material Accounting Errors | New Standard |

Notes: CSRC: China's Securities Regulatory Commission. MOF: Ministry of Finance, People's Republic of China.

3. Literature review

3.1. Earnings restatements in the United States

Using a sample of 73 firms that corrected previously reported quarterly earnings, [Kinney and McDaniel \(1989\)](#) find that the sample firms were smaller and less profitable, had a higher level of debt and lower level of growth, and faced more serious uncertainties due to the receipt of more qualified audit opinions. Analyzing 224 SEC accounting and auditing enforcement releases between 1982 and 1989, [Feroz et al. \(1991\)](#) find that the SEC most often pursued overstatements of accounts receivable and inventories due to premature revenue recognition and delayed write-offs. They also find that the disclosure of these reporting violations changed expectations of the target firm's future earnings, as reflected in financial analysts' reduced earnings estimates after the disclosures. [DeFond and Jambalvo \(1991\)](#) examine 44 earnings restatements and find that 41 of them involved overstatement, consistent with an income-increasing motivation. They find that earnings overstatements are negatively correlated with growth in earnings and are more likely when firms have diffuse ownership and few income-increasing GAAP alternatives available. They also find that restating firms are less likely to have audit committees. [Dechow et al. \(1995\)](#) find that an important motivation for earnings manipulation is the desire to attract external financing at a lower cost. Firms that manipulate earnings are more likely to have: (1) boards of directors dominated by management, (2) a CEO who simultaneously serves as the chairman of the board, and (3) a CEO who is also the firm's founder. In addition, these firms are less likely to have an audit committee and an outside blockholder. Firms that manipulate earnings experience a significant increase in their cost of capital after the manipulation is made public.

Enron's accounting scandal in 2001 and Worldcom's in 2002 spawned a large volume of research on earnings restatements. This research can be broadly classified into three categories: (1) descriptive and market reaction studies around restatement announcements, (2) investigation of the motivations that lead to restatements, and (3) examination of the consequences of restatements. In the first category, [Wu \(2003\)](#) documents the characteristics of more than 1200 US restatements announced between 1977 and 2001. She shows that there has been a significant increase in the number of restatements since the late 1990s and finds a significant market reaction of more than –11% over a three-day window—a reaction that can be explained by both qualitative and quantitative information carried in the restatement announcements. Concurrent research by [Palmrose et al. \(2004\)](#) and [Turner et al. \(2001\)](#) also find similar market reactions to the announcements. Furthermore, [Lev et al. \(2008\)](#) find that restatements that eliminate or shorten the history of earnings growth or positive earnings have significantly more adverse effects for investor valuations and the likelihood of lawsuits than other restatements.

In the second category of studies, [Richardson et al. \(2003\)](#) suggest that capital market pressures motivate restatement companies to adopt aggressive accounting policies; that is, the typical restatement firm has been attempting to maintain a string of consecutive quarters of positive earnings growth and consecutive positive quarterly earnings surprises. In addition, top executives at these firms receive a larger portion of their compensation from equity relative to leaders of non-restating firms. [Richardson et al. \(2003\)](#) also find the information in accruals to be a key indicator of the earnings manipulation that leads to the restatements. [Griffin \(2003\)](#) investigates the patterns of insider trading in restating

firms and implies that profiting from insider trading is one of the incentives for managers to overstate earnings. Agrawal and Chadha (2005) find that the incidence of independent directors with a background in accounting or finance on the board or audit committee is negatively related to the probability of restatements. However, unlike Burns and Kedia (2006), they do not find significant deficiencies in other aspects of corporate governance.

In the third category, several studies explore the consequences of restatements. Wu (2003) finds that the earnings response coefficient (ERC) dropped dramatically following restatement, which could be interpreted as a loss of confidence among investors. Hribar and Jenkins (2004) find that accounting restatements lead to both decreases in expected future earnings and increases in the firm's cost of equity capital. Srinivasan (2005) shows that outside directors, especially audit committee members, bear reputational costs for failures in financial reporting.

3.2. Earnings management and restatements in China

China research often focuses on earnings management, which offers a rich background for the restatement issue. Typical incentives that are found in the United States to manipulate earnings are almost nonexistent in China. For example, demand for financing, especially equity financing, is huge in China, whereas incentives to meet or beat analysts' expectations are minimal. The compensation plans of China's listed companies are rarely incentive-based, thus managers cannot manipulate earnings to inflate stock prices with intent to benefit their own compensation. Chinese companies also do not face pressure from debt covenant constraints. Earnings management, nevertheless, usually occurs when companies are conducting their IPOs. Aharony et al. (2000) suggest that state-owned enterprises in unprotected industries may manage accounting accruals to boost earnings and/or list those business units with temporarily high profits resulting from high accounting accruals during the process of financial packaging. Earnings management also takes place when listed companies conduct secondary issuances or rights issuances. Given that listed companies are required to achieve a minimum average return on equity (ROE) of 10% for the three years prior to secondary issuances or rights issuances, and given the reality that the CSRC has limited resources to monitor all applicants closely, Chen and Yuan (2004) show that many firms were able to gain approval for rights issues through earnings management and subsequently performed worse than those that did not employ such practices. Thus, capital resources might have been better allocated had the regulators examined the management of earnings more closely. Listed companies also massage earnings to avoid consecutive losses, which would result in them being tagged with "special treatment"⁶ (ST) (Lu, 1999) or, worse, "particular transfer"⁷ (PT). In addition,

⁶ Special Treatment (ST) has been adopted since April 22, 1998, as a signal for listed companies experiencing any of the following abnormal financial or other abnormal situations: (1) two consecutive years of losses; (2) stockholders' equity falling below the nominal value in the most recent year (in China, the nominal value per share is stipulated as 1 Yuan for all listed companies); (3) independent auditor issuance of a qualified opinion or refusal of issuing opinion; (4) stockholders' equity, net of the auditor fee and unrecognized portion by concerned parties, falling below the nominal value by the end of the most recent year; (5) two consecutive years of losses following the restatement of a previous year's result in the most recent year's annual report; or (6) any financial situation the CSRC deems abnormal. Other abnormal situations include discontinuation of operations due to natural disaster or other significant event, possible punitive and compensatory damages from lawsuits exceeding net assets, etc. A cap of 5% of the stock price movement (increase or decrease) applies to ST stocks.

⁷ Particular Transfer (PT), effective since July 9, 1999, is designed for listed companies that experience three consecutive years of losses. The daily trading will be suspended and substituted with once-a-week special transfers among investors. A cap of 5% will be imposed on increasing stock prices, but no stop limit for declining price.

earnings management is commonly conducted through “below-the-line” non-operating items (Chen and Yuan, 2004). Finally, work by Wang and Zhang (2004) shows that an increasing number of firms issued restatements between 1999 and 2002.

4. Hypotheses and empirical models

Having elaborated on China’s unique institutional background on companies’ incentives to manipulate earnings in Section 3, we first offer the following two hypotheses on the two major incentives for Chinese companies. The first addresses financing needs, whereas the second concerns survival.

Hypothesis 1. Restatement firms tend to be those with strong financing incentives during or before the restated year. Specifically, restatement firms tend to be those that offered secondary or rights issues during or before the restated year.

Hypothesis 2. Restatement firms tend to be those under delisting pressure during or before the restated year.

Note that these two hypotheses cannot co-exist in the same firm, because the previously mentioned 10% profitability requirement for refinancing is far above the break-even point, and companies meeting this criterion are in little danger of delisting.

Next, we examine which factors collectively influence companies to issue restatements in China’s A-share market. Our testing variables consist of three categories: corporate governance, motivations and firm performance. The reform of Chinese state-owned enterprises (SOE) has been relatively successful in solving short-term but not long-term managerial incentive problems, and has also failed to adequately address the issue of management selection. The latter problem arises from the fact that managers of SOEs are selected by bureaucrats rather than capitalists. Bureaucrats have the authority to select managers but do not need to bear the consequences of that selection. Thus, they have no proper incentives to find and appoint high-caliber managers, which negatively affects the quality of financial reporting (Zhang, 1999). Highly concentrated ownership, which is common in East Asia, can lead to an entrenchment effect and reduce the rights of minority shareholders. Decisions made by controlling owners are often not contestable under the region’s weak legal systems or by ineffective corporate governance mechanisms, such as boards of directors and the market for corporate control (Shleifer and Vishny, 1997; La Porta et al., 1999). Consequently, controlling owners are perceived to report accounting information for self-interested purposes, causing the reported earnings to lose credibility with outside investors in East Asia (Fan and Wong, 2002). Additionally, involvement by institutional investors will enhance corporate governance. In Chinese research, return on assets (ROA) is widely adopted as the prime performance indicator, rather than ROE, as ROE is often manipulated due to the CSRC basing various thresholds on it. Hence, we propose the following hypothesis.

Hypothesis 3. Restatements tend to occur more frequently among firms with poor governance, more concentrated ownership and poorer financial performance.

We propose the following model to test our first three hypotheses:

$$\text{Restatement}_i = \alpha + \beta_1 \text{SOE}_i + \beta_2 \text{L_Share}_i + \beta_3 \text{IIH} + \beta_4 \text{LOSS} + \beta_5 \text{LOSS_ST} + \beta_6 \text{RSI} \\ + \beta_7 \text{DA} + \beta_8 \text{ROA} + \beta_9 \text{LEV} + \beta_{10} \text{Size}_i + \varepsilon_i \quad (1)$$

Here, Restatement_i is a dummy variable for firm i , which takes on the value 1 for restatement firms and 0 for other listed companies. For the sake of parsimony, we use three variables as proxies for corporate governance. The first variable, SOE, is a dummy variable that indicates whether a company is an SOE or not. The second variable is the largest shareholder's ownership proportion, L_Share. Given that the Chinese government is usually the largest shareholder of a China-listed firm, we adopt a third variable, the proportion of top-10 institutional investors' share-holding, IIH. Motivating factors for firm i are represented by the delisting pressure (LOSS and LOSS_ST) and the need for equity financing (RSI). Corporate performance and financial characteristics are represented by discretionary accruals (DA), ROA and leverage (LEV). Firm size (Size) is our control variable.

It is surprising to observe that the considerable number of restatements that occurred in China attracted so little attention. We conjecture that it may be because the market is suspicious of the credibility of financial reports and attaches an almost-independent value to listed companies. Stock prices in China rarely reflect the value of companies, and stock price changes are rarely an effective reflection of the change in available information. Market irregularities were not uncommon among fledgling companies during our sample period and include such practices as insider trading and institutional manipulation of stock prices (CSRC, 2008). Accounting reporting does not serve as central a role in China's capital market as it does in a mature market, and financial reports that overstate or poorly state a Chinese firm's true status may have limited effect on the firm's stock valuation. Hence, we arrive at [Hypotheses 4 and 5](#), along with their corollaries:

Hypothesis 4. The stock market fails to punish the poor quality of financial reports.

Within this general hypothesis, we construct the three following corollaries.

Hypothesis 4a. The stock market fails to punish the poor quality of financial reports following restatement announcements.

We conjecture that the stock market does not react significantly to the announcement of earnings restatements, which means there is no penalty for restatements. For this hypothesis, we focus on the short-term stock price reaction to the restatement announcements. In our analysis, we examine various windows up to two weeks before and after the announcements for any information leakage or delay to the stock market: $(-10, -6)$, $(-5, -2)$, $(-1, +1)$, $(+2, +5)$ and $(+6, +10)$ days around the restatement dates (disclosure dates for enforced restatements and annual report announcement dates for voluntary restatements). Buy-and-hold market-adjusted cumulative abnormal returns (CARs) are used as the return metric.

Hypothesis 4b. The stock market does not anticipate the poor quality of financial reports before the restatement announcements.

We conduct a long-term event study, which is designed to examine the year preceding the restatement announcements. The purpose of this hypothesis is to detect whether any information has been leaked to the stock market, either through insider trading or

analysts' warnings, during the period of the financial report being restated. Again, buy-and-hold market-adjusted CARs are used as the return metric.

Failure to reject the first two null hypotheses would indicate that the stock market in China does not punish poor financial reporting.

Hypothesis 4c. The stock market does not penalize the poor quality of accounting that is uncovered by regulatory inspection.

As mentioned earlier, the restatements disclosed according to the regulatory inspection outcomes represent required restatements. We test whether the market penalizes enforced restatements by examining the market reaction around the disclosure date of the enforced restatements. We examine a window of $(-6, +6)$ months around the disclosure date to allow a reasonable period for routine regulatory procedures before and after the formal announcement.

Hypothesis 5. The stock market attaches minimal value to financial information.

We extend this general hypothesis into two detailed sub-hypotheses, as follows.

Hypothesis 5a. Stock price changes poorly reflect revelations of low-quality earnings.

We conduct two sets of returns/earnings tests on both the level of and change in earnings information.

$$CAR_i = a_0 + a_1 EPS_t + a_2 AdjEPS_{t-1} + \varepsilon_i \quad (2)$$

$$CAR_i = a_0 + a_1 UnEPS_t + a_2 Mag_{t-1} + a_3 \text{Control variables} + \varepsilon_i \quad (3)$$

In Eq. (2), CAR_i is $(-11, +1)$ months for a restating company. EPS_t is the earnings per share in the reported year t . $AdjEPS_{t-1}$ is the adjusted earnings for the previous year $t - 1$; that is, the true earnings per share according to the restatement. We use Eq. (2) to test whether the market comprehensively reflects the value of the company by reacting to both current annual earnings and past earnings, which can be naïvely adjusted by the given corrected amount. We conjecture that the market does not react significantly, at least to the adjusted past earnings.

In Eq. (3), CAR_i is $(-11, +1)$ months for a restating company. $UnEPS_t$ is the surprise reported year t 's earnings per share, which is measured by the difference between the current year's earnings and the expected earnings, represented by the originally reported earnings of $t - 1$, given that barely any systematic analyst's forecasts exist in China so far. Mag_{t-1} is the surprise of the past year, $t - 1$'s, earnings, which is the per-share scaled restated magnitude. We use Eq. (3) to test whether the market reacts fully to the change in the accounting information setting, which includes two surprises: the surprise of current earnings and the surprise of past earnings. We calculate the surprise—or the unexpected part—of the current earnings as the scaled difference between current earnings and one-year-prior earnings, taking into account the limited scope of analysts' forecasting in China. We represent the surprise of past earnings by the scaled magnitude of the restatement. We conjecture that, at minimum, the market does not react significantly to the surprise of past earnings.

Hypothesis 5b. The equity market's reliance on earnings information is minimal.

To test this hypothesis, we conduct the following tests on our sample, using the ERC as a measure of reliance.

$$CAR_i = \alpha + \beta UE_i + \varepsilon_i \quad (4)$$

$$CAR_i = \alpha + \beta_1 UE_i + \beta_2 UE_i T_i + \varepsilon_i \quad (5)$$

Eq. (4) is tested separately before and after the sample firms revealed their poor quality. Eq. (5) is the pooled test with a dummy variable T_i representing the period after restatement. We expect all β s in both (4) and (5) to be insignificant.

5. Description of restatements in China

5.1. Data selection

Due to the absence of a restatement database, we manually collected our sample from domestic companies that issued A-shares⁸ on the Shanghai Stock Exchange and/or the Shenzhen Stock Exchange. We searched the annual reports of these listed companies and collected information from the *Correction of Material Accounting Mistakes* section in the footnotes. Our sample period runs from January 1, 1999, when the *Old Standard* for restatements became effective, to December 31, 2005, just weeks before the announcement of the 2006 ASBE. As such, the 2005 annual reports were the last annual reports filed by listed companies under the 2002 ASBE.

Excluding restatements due to mergers and acquisitions, dividend distributions and changes in accounting policies and accounting estimation, 1092 restatement announcements were identified due to accounting misrepresentation, irregularities, fraud or errors during the study period.

Market and accounting data are from the CSMAR database. Institutional investors' information is from the Genius database.

5.2. Data description

Table 2 shows that during 1999–2000, 21 companies each year restated their financial reports, representing approximately 2% of listed companies. However, the number of restating firms soared in 2001 and 2002 to 282 and 250, respectively, amounting to 24.96% and 20.85% of public companies. Such a dramatic increase is perceived to be a natural delay following the adoption of the *Old Standard*. The number of restating firms dropped in subsequent years, but still comprised more than 10% of listed companies. The reduction may be a direct reflection, not only of the restatements of previous years, but also of the 2001 Rules and the CSRC's intensive and extensive inspection throughout all provinces after observing the increase in qualified auditors' reports. What is striking and puzzling is the large proportion of firms that issued restatements in China. In the United States, although the number of restatements increased during the time frame of our study, the proportion remained low and steady at around 2% by the end of 2005 (Wu, 2003).

On April 4, 2001, the CSRC issued the *Index of Listed Companies' Industry Classification*, which serves as the industry classification standard. The information in Table 3 adopts this standard for the distribution of restatement companies by industry.

⁸ Two types of shares of domestic companies are traded on the Shanghai and Shenzhen stock exchanges: A-shares and B-shares. A-shares are traded in Chinese Yuan and B-shares are traded in US dollars. The stock market is dominated by A-share trading. Only 106 B-shares were traded in January 1999; since the beginning of December 2005 the number has been steady at 109.

Table 2

Yearly restatement characteristics by stock exchange: 1999–2005.

| Annual report year (<i>t</i>) | Number of restatement firms listed on Shenzhen Stock Exchange | Number of A-shares listed on Shenzhen Stock Exchange | Percentage (%) | Number of restatement firms listed on Shanghai Stock Exchange | Number of A-shares listed on Shanghai Stock Exchange | Percentage (%) | Total number of restatements | Total number of A-Shares | Percentage (%) |
|---------------------------------|---|--|----------------|---|--|----------------|------------------------------|--------------------------|----------------|
| 1999 | 14 | 450 | 3.11 | 7 | 471 | 1.49 | 21 | 921 | 2.28 |
| 2000 | 13 | 451 | 2.88 | 8 | 559 | 1.43 | 21 | 1010 | 2.08 |
| 2001 | 139 | 494 | 28.14 | 143 | 636 | 22.48 | 282 | 1130 | 24.96 |
| 2002 | 112 | 494 | 22.67 | 138 | 705 | 19.57 | 250 | 1199 | 20.85 |
| 2003 | 92 | 491 | 18.74 | 106 | 770 | 13.77 | 198 | 1261 | 15.70 |
| 2004 | 84 | 526 | 15.97 | 71 | 827 | 8.59 | 155 | 1353 | 11.46 |
| 2005 | 76 | 534 | 14.23 | 89 | 824 | 10.80 | 165 | 1358 | 12.15 |
| Total | 530 | | | 562 | | | 1092 | | |

Note: $t + 1$ is the year when the annual report for year t is released, in which the restatement of earlier year(s) is disclosed.

Table 3
Industry distribution.

| | | Number of firm observations | Percentage of total firms (%) |
|---|----------------|-----------------------------|-------------------------------|
| Agriculture, Forestry, Fishing and Hunting | A | 36 | 3.30 |
| Mining | B | 11 | 1.00 |
| Manufacturing | C | 610 | 55.84 |
| Food, Beverage | C ₀ | 50 | 4.56 |
| Textile, Apparel, Leather | C ₁ | 36 | 3.28 |
| Wood Product | C ₂ | 3 | 0.27 |
| Paper, Printing | C ₃ | 23 | 2.10 |
| Petroleum, Chemical Product, Rubber, Plastics | C ₄ | 123 | 11.22 |
| Electronic Equipment | C ₅ | 31 | 2.83 |
| Metal, Nonmetallic Mineral Product | C ₆ | 93 | 8.49 |
| Machinery, Equipment, Meter | C ₇ | 163 | 14.93 |
| Medicine, Biologic Products | C ₈ | 77 | 7.05 |
| Other manufacturing | C ₉ | 11 | 1.00 |
| Electricity, Gas, Water Supply | D | 64 | 5.84 |
| Construction | E | 22 | 2.01 |
| Transport, Storage | F | 28 | 2.55 |
| Information, Technology | G | 61 | 5.57 |
| Wholesale and Retail Trade | H | 80 | 7.30 |
| Real Estate | J | 38 | 3.47 |
| Social Services | K | 29 | 2.66 |
| Transmission, Culture | L | 8 | 0.73 |
| Conglomerate | M | 105 | 9.58 |
| Total | | 1092 | 100 |

Note: The classification is based on the *Index of Industrial Distribution of Listed Companies*, issued by the CSRC on April 3, 2001.

More than half of the restatements were from firms in the manufacturing sector, with Machinery, Equipment and Meter, Petroleum and Chemical Products, and Rubber and Plastics making double-digit contributions to the percentage of all restatement firms.

Following its issuance of *the 2001 Rules*, the CSRC started to inspect listed companies' financial reports, corporate governance structures and independence from related parties. The *Rules* require companies to correct any irregularities found in the inspection and to disclose them publicly within 30 days of official notice. Because an accounting restatement is one possible result of the tightened regulatory inspection, such disclosure makes it possible for us to identify the restatements initiated by the inspection versus those disclosed by firms voluntarily. Table 4, Panel A, shows the number of enforced restatements disclosed by firms each year as a result of the inspection findings, along with those resulting from voluntary disclosure, from 1999 to 2005.

The enforced restatements comprise only 6% of the sample and are largely concentrated in the 2001–2003 period. This is a much lower proportion than in the US, where roughly one-quarter of restatements were instigated by the SEC or other regulators. However, the number of voluntary restatements also increased in China during those years, which could be interpreted as a perception by firms of the serious intent of the *2001 Rules*, leading them to clean up voluntarily rather than be caught by the CSRC. Nevertheless, we do not exclude the possibility that we may have failed to identify a complete set of enforced restatements due to the simple, possibly incomplete, disclosure by listed companies in general. From what we read of companies' statements, no firm ever mentioned that the restatement was suggested by its auditor.

Table 4

Description of restatements, by year of annual report (*t*).

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Total | |
|--|---------------------------------------|---|--------------------------------|---------|---|---------------|-----------------------|---------|-------|
| Panel A: Enforcement by year | | | | | | | | | |
| Number of Voluntary Restatements | 19 | 20 | 265 | 231 | 185 | 146 | 159 | 1025 | |
| Percentage (%) | 90.48 | 95.24 | 93.97 | 92.40 | 93.43 | 94.19 | 96.36 | 93.86 | |
| Number of CSRC-enforced Restatements | 2 | 1 | 17 | 19 | 13 | 9 | 6 | 67 | |
| Percentage (%) | 9.52 | 4.76 | 6.03 | 7.60 | 6.57 | 5.81 | 3.64 | 6.14 | |
| Total | 21 | 21 | 282 | 250 | 198 | 155 | 165 | 1092 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | Total number of firms | | |
| Panel B: Frequency of restatements, by number of years restatements occurred | | | | | | | | | |
| Number of Firms | 354 | 170 | 67 | 34 | 11 | 1 | 637 | | |
| Percentage (%) | 55.57 | 26.69 | 10.52 | 5.34 | 1.73 | 0.16 | 100.00 | | |
| | Year <i>t</i> – 1 only | | Years before <i>t</i> – 1 only | | Both year <i>t</i> – 1 and previous years | | No disclosure | Total | |
| Panel C: Distribution of restated years | | | | | | | | | |
| Number of observations | 494 | 125 | 451 | | | 22 | | 1092 | |
| Percentage (%) | 46.17 | 11.68 | 42.15 | | | 2.01 | | 100.00 | |
| Reason for classification | | Number of restatements in annual report year (<i>t</i>) | | | | | | | |
| | | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Total |
| Panel D: Reasons for restatements by year | | | | | | | | | |
| 1 | Mistakes from Subsidiaries | 2 | 7 | 86 | 83 | 85 | 62 | 78 | 403 |
| | | 10% | 33% | 30% | 33% | 42% | 39% | 47% | 38% |
| 2 | Tax Miscalculation | 3 | 5 | 87 | 93 | 72 | 57 | 52 | 369 |
| | | 14% | 24% | 31% | 37% | 36% | 36% | 32% | 34% |
| 3 | Costs and Expenses | 11 | 5 | 80 | 51 | 30 | 26 | 21 | 224 |
| | | 52% | 24% | 28% | 20% | 15% | 17% | 13% | 20% |
| 4 | Depreciation and Provisions | 2 | 3 | 61 | 37 | 36 | 23 | 27 | 189 |
| | | 10% | 14% | 22% | 15% | 18% | 15% | 16% | 17% |
| 5 | Revenue Recognition | 2 | 1 | 21 | 12 | 11 | 13 | 13 | 73 |
| | | 10% | 5% | 7% | 5% | 5% | 8% | 8% | 7% |
| 6 | Subsidies Revenue and Tax Refunds | 0 | 1 | 17 | 10 | 7 | 3 | 5 | 43 |
| | | 0 | 5% | 6% | 4% | 3% | 2% | 3% | 4% |
| 7 | Other Mistakes and Misclassifications | 10 | 12 | 113 | 74 | 56 | 45 | 49 | 359 |
| | | 48% | 57% | 40% | 29% | 28% | 29% | 30% | 33% |
| | Downward restatements | | Upward restatements | | No impact | No disclosure | | Total | |
| Panel E: Restatement effect on retained earnings | | | | | | | | | |
| Number of observations | 838 | | 181 | | 51 | | 22 | 1092 | |
| Percentage (%) | 76.74 | | 16.58 | | 4.67 | | 2.01 | 100 | |
| | Obs. | Mean | Min. | 25% | Median | 75% | Max. | Std Dev | |
| Panel F: Restated amount (in millions of Chinese Yuan, USD1 = CNY8.2768) | | | | | | | | | |
| Restated Amount | 1068 | –13.811 | –815.467 | –11.147 | –2.383 | –0.172 | 863.188 | 62.267 | |
| Scaled Restated Amount | 1063 | –0.023 | –7.768 | –0.008 | –0.002 | –0.000 | 0.158 | 0.250 | |

(continued on next page)

Table 4 (continued)

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Total |
|---|------|------|------|------|------|------|------|-------|
| <i>Panel G: Change of external auditors, by year (t) of annual report</i> | | | | | | | | |
| Number of Firms with Auditor Change in year t | 6 | 5 | 84 | 20 | 33 | 29 | 33 | 210 |
| Percentage (%) | 29 | 24 | 30 | 8 | 16 | 18 | 20 | 19 |
| Number of Firms with Auditor Change in year $t + 1$ | 6 | 4 | 29 | 21 | 14 | 24 | 19 | 117 |
| Percentage (%) | 29 | 19 | 10 | 9 | 7 | 16 | 12 | 11 |

Notes: Panel D: The sum of the percentage numbers could exceed 100% in each year as most restatements involve more than one reason.

Panel F: *Restated amount*: the amount of change in retained earnings. If the restatement decreased retained earnings, the amount is negative; if it increased, the amount is positive.

Scaled restated amount: scaled by total assets at the beginning of year t .

Panel G: We lost 14 observations in year $t + 1$; they are not included in the percentage calculation. In annual reports, there is no disclosure of whether the audit firm quit or was fired.

Table 4, Panel B, reports that 637 companies produced a total of 1092 restatements from 1999 to 2005. More than half of the sample companies restated just once during the sample period, although some restated several times. One firm, astonishingly, restated six times in seven years. In all, 494 (46.17%) of the restatements were to correct the prior-year's filing,⁹ and 451 (42.15%) of the restatements were to revise the filings of both the prior-year's filing and that of earlier year(s) (Panel C). However, we cannot discern the number of years these firms restated, as such information was not provided in their annual reports. The remainder of the 1092 restatements (147) were to correct mistakes made before the most recent year. Twenty-two observations did not disclose which year(s) they restated.

We notice that the reasons for restatements are quite different from those in the United States. We classify reasons for restatements into eight categories in Table 4, Panel D. Most restatements involved more than one reason; therefore, the sum of each column exceeds the annual sample size.

The correction of mistakes in subsidiaries when consolidated financial reports are prepared tops our list. This type of restatement is more technical, because parent companies cannot fully control the subsidiaries' financial reports to the same extent to which they control their own. The more subsidiaries a parent company has, the more difficult the process of management may be and the greater the likelihood of error and subsequent restatement. Unfortunately, no database contains such information, so we do not have the opportunity to test this hypothesis. Without detailed disclosure, we are unable to measure its effect on the magnitude of overall restatements.

Incorrect tax estimation, which is a rarity among US firms, is frequently observed in China. Approximately three-quarters of companies in this category underestimated the tax paid, which led us to suspect that such underestimation is more intentional than unintentional.

Misstating, mostly under-misstating, the cost of goods sold or operating expenses is quite common in China, whereas manipulation of recognized revenue is not a major vehicle: only 7% of restatements involve inflating revenue or recognizing revenue earlier (in the United States, nearly 40% of the restatements are due to the revenue recognition problem).

⁹ Chinese companies' fiscal year is stipulated to be the same as the calendar year.

During our sample years, as many as 17% of restatements were to correct depreciation or various provision estimates, which is not particularly surprising considering the existence of many types of provisions in China. In 1999, four types of provisions required estimation: bad-debt reserve, provision for inventory impairment, provision for short-term investment impairment and provision for long-term investment impairment. Later in 2001, four more types of provisions were added: provision for fixed-assets impairment, provision for intangible-assets impairment, provision for construction-in-progress impairment and provision for entrusted-loans impairment. The estimation of such provisions demands significant professional judgment and becomes quite a challenge to accounting professionals with limited experience¹⁰ in a fledging capital market. Meanwhile, various kinds of provisions also offer room for manipulation, which is reflected in the CSRC's 2004 Notice, emphasizing that listed companies should not abuse asset impairments, change-of-accounting estimates or correction-of-material mistakes for the purpose of manipulation.

For many years, a tax refund policy has served as a major incentive to encourage export in mainland China. In July 2000, the MOF issued the *Rules of Accounting Treatments for Tax Refunds*, etc., which clearly demanded the adoption of cash accounting, rather than accrual accounting, for income from subsidies and tax refunds to prevent companies from manipulating earnings via such vehicles. However, a few listed companies continue to openly violate the tax refund rules and adopt homemade recognition practices.

Because the simple and general disclosures in one-third of the observations make these restating companies difficult to categorize, we combine this large fraction into a single category that includes unspecified mistakes, oversights and reclassifications.

Table 4, Panels E and F, shows that more than three-quarters of the events are related to an earlier overstatement of retained earnings; the remaining quarter are either underreported or had no effect on retained earnings. The amount of restatements varies widely, from reducing retained earnings by CNY815 million (USD98.43 million) to increasing retained earnings by CNY863 million (USD104.23 million), with an average decrease of 2.3% of total assets, which is comparable to US percentages.

Table 4, Panel G, shows that almost 20% of the firm-observations changed auditors during the annual report year and 11% during the event year when restatements were disclosed. However, with limited disclosure in annual reports, we are unable to distinguish whether such changes were due to the auditing firm leaving the employment of the client company voluntarily or under duress.

6. Empirical analysis

6.1. Firm characteristics and potential motivations

We now analyze the characteristics of our sample and seek the potential motivations for these companies to file incorrect financial reports.

Table 5, Panel A, reveals that restatement firms have slightly lower mean total assets compared with other listed companies, but most observations fall within the comparable size range.

Table 5, Panel B, compares various company characteristics in the restated year (year $t - 1$) of the restatement sample to the control sample. As a control, we used the full set

¹⁰ China only embarked on the development of the CPA profession in the early 1980s. The Chinese Institute of Certified Public Accountants (CICPA) was established in November 1988, and the first CPA exam was conducted in 1991.

Table 5

Restatement firm characteristics.

| | Obs. | Mean | Min. | 25% | Median | 75% | Max. | Std Dev |
|---|-------------------------------|----------------------------|-----------|-------------------------------|----------------------------|--------------------|----------|---------|
| Panel A: Firm size (in millions of Chinese Yuan) | | | | | | | | |
| Restatement Firm Size | 1086 | 1994.15 | 42.01 | 725.51 | 1217.12 | 2315.29 | 31426.19 | 2471.01 |
| Firm size of all A-share Companies | 8242 | 2611.84 | 21.51 | 748.89 | 1270.47 | 2413.29 | 520,572 | 11,635 |
| | Mean | | | Median | | | | |
| | Restatement sample N = 911 | Control sample N = 3058 | t-Stat | Restatement sample N = 911 | Control sample N = 3058 | Wilcoxon Z-stat | | |
| Panel B: Comparison between the restatement sample and control sample | | | | | | | | |
| E/P | 0.000 | 0.022 | −7.39*** | 0.012 | 0.022 | −13.60*** | | |
| B/P | 0.502 | 0.558 | −7.46*** | 0.498 | 0.562 | −7.43*** | | |
| Income | 0.010 | 0.046 | −9.61*** | 0.027 | 0.050 | −13.08*** | | |
| OpInc | 0.009 | 0.043 | −10.33*** | 0.022 | 0.045 | −13.60*** | | |
| EPS | 0.055 | 0.198 | −7.58*** | 0.119 | 0.210 | −13.92*** | | |
| EG | −0.013 | 0.002 | −2.12** | −0.003 | 0.002 | −7.84*** | | |
| LEV | 0.552 | 0.440 | 7.35*** | 0.506 | 0.429 | 10.87*** | | |
| UI | −0.005 | 0.006 | −3.32*** | 0.002 | 0.003 | −3.03*** | | |
| Age | 5.850 | 5.290 | 5.48*** | 6.000 | 5.000 | 6.31*** | | |
| L_Share | 40.450 | 45.970 | −8.60*** | 37.920 | 46.230 | −8.73*** | | |
| SOE | 0.670 | 0.650 | 0.87 | 1.000 | 1.000 | 0.87 | | |
| II | 0.368 | 0.436 | −3.70*** | 0.000 | 0.000 | −3.70*** | | |
| IIH | 0.005 | 0.008 | −5.07*** | 0.000 | 0.000 | −4.55*** | | |
| TA | −0.035 | −0.019 | −3.43*** | −0.022 | −0.014 | −3.70*** | | |
| DA | −0.016 | −0.002 | −3.04*** | −0.002 | 0.004 | −3.34*** | | |
| ROA | −0.001 | 0.027 | −5.07*** | 0.022 | 0.037 | −11.27*** | | |
| CROA | 0.007 | 0.033 | −5.92*** | 0.022 | 0.039 | −9.94*** | | |
| ROE | −0.019 | 0.021 | −2.02** | 0.048 | 0.066 | −9.14*** | | |
| LOSS_ST | 0.068 | 0.022 | 5.62*** | 0.000 | 0.000 | 7.27*** | | |
| LOSS | 0.162 | 0.081 | 6.15*** | 0.000 | 0.000 | 7.17*** | | |
| RSI | 0.290 | 0.303 | −0.76 | 0.000 | 0.000 | −0.76 | | |

Notes: Panel A: Firm size: the total assets at the end of year t .

Firm size of all A-share companies: the size of A-share listed companies across the board from 1999 to 2005.

Panel B: All are measured at the end of year $t - 1$, the restated year).

E/P: Fiscal Operating Earnings/Market Capitalization.

B/P: Book Value/Market Capitalization.

Income: Net income before Extraordinary Items/mean Total Assets.

OpInc: Operating Income/mean Total Assets.

EPS: Earnings per share.

EG: Earnings Growth, $(\text{Net Income}_{t-1} - \text{Net Income}_{t-2})/\text{Total Assets}$.

LEV: Leverage, Total Debt/Stockholders' Equity.

UI: Below-the-line items, $(\text{income from investment} + \text{non-operating income} + \text{subsidiaries})/\text{Total Assets}$.

Age: The number of years firms have been listed on the stock exchange.

L_Share: The percentage stock holding by the largest stakeholder.

SOE: Dummy variable. State = 1 if a state-owned enterprise, and 0 otherwise.

II: Institutional investor among top 10 shareholders. If there is an institutional investor, II = 1, and 0 otherwise.

IIH: Institutional investor's holding proportion among top 10 shareholders.

TA: Total accruals = $(\text{Operating Income} - \text{Cash Flow from Operation})/\text{Total Assets}$.

DA: Discretionary accruals, calculated with modified Jones Model.

ROA: Return on Assets = $(\text{EBIT} - \text{Tax})/\text{Total Assets}$.

CROA: Return of Operating Income on Assets.

ROE: Return on Equity = $\text{Net Income}/\text{Shareholders' Equity}$.

LOSS: Dummy variable. LOSS = 1 when there was a loss in year $t - 1$, and 0 otherwise.

LOSS_ST: Dummy variable. LOSS_ST = 1 when there was a loss in both years $t - 1$ and $t - 2$, and 0 otherwise.

RSI: Dummy variable. RSI = 1 if rights or secondary issuance occurred in $t - 1$, $t - 2$, or $t - 3$, and 0 otherwise.

* Statistical significance at the 10% level for two-tailed tests.

** Statistical significance at the 5% level for two-tailed tests.

*** Statistical significance at the 1% level for two-tailed tests.

of listed companies that did not file restatements and relied on their test year's information to calculate the results. The reason for such a "naïve" matching method is the relatively small number of companies listed on either the Shanghai or Shenzhen stock exchanges by the end of 2005 (just over 1300 in all). If we adopted the conventional method of matching by industry and firm size among the non-restatement companies, then there would be very few comparable companies and we would be unable to construct an effective matched sample.

Table 5, Panel B, shows that the restatement companies generally have lower valuations, poorer performance, higher leverage and greater losses compared with the control sample. The largest shareholders of the sample firms hold a lower proportion of shares than those of the control sample. There is no significant difference between the two samples in terms of the number of SOEs.

Notably, we observe that restatement firms have been listed significantly longer on the stock exchange, with a mean age of almost 6 years compared with 5.29 years for control firms. Their ROA, core ROA and ROE are all significantly lower than those of the control sample. Meanwhile, the benchmark for determining whether a firm can offer rights or a secondary issue, ROE, is far from the 10% threshold. The mean ROE is slightly below 0. This result contradicts our expectation in Hypothesis 1. Restatement companies have a higher frequency of single-year losses and consecutive losses, consistent with our expectation in Hypothesis 2. Although Table 5, Panel B, shows that approximately 29.6% of the sample had rights or secondary issuances in the two years prior to and in the most-recent restated year, combining all of the results, we would not claim that companies' manipulation during the restated year is aimed principally at achieving equity financing needs, but is more likely to be associated with a struggle against poor performance and delisting pressures.

Consistent with the China research literature, we find that both total accruals and discretionary accruals are generally negative during the most recent restated year. Perplexingly, however, we also observe that both types of accruals in the test sample are significantly lower than in the control sample. No explanation for this finding comes to mind.

6.2. Determinants of restatements

Here, we examine whether the company characteristics during the corrected year ($t - 1$) can collectively explain the restatement phenomenon in China. These characteristics may offer some guidance to regulators on which aspects to explore when seeking out poor-quality firms.

Table 6 provides the Pearson correlations for all of the potential test variables. The performance variables are highly correlated with one another. We leave ROE in the table, as it is an important threshold in China's capital market. However, ROE is widely manipulated in the Chinese market due to its role as a threshold. We omit it from our official empirical model (Eq. (2)) and adopt only ROA in the final test. We similarly omit earnings growth from our official empirical tests. Naturally, ROA is highly correlated with LOSS, LOSS_ST and LEV, which we will control for in the regressions.

Table 7 examines the company characteristics and incentives that collectively lead to a restatement. The final regression is conducted on the complete sample and includes all variables. It shows that companies with lower profitability, higher leverage, lower holdings by institutional investors, lower ownership concentration and SOEs are more likely to be restatement firms. Because the incentive variables for delisting pressure, LOSS and

Table 6
Pearson correlations.

| | R | DA | ROA | ROE | EG | LOSS-ST | LOSS | LEV | L_Share | SOE | RSI | Size |
|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|
| R | 1 | | | | | | | | | | | |
| DA | −0.048*** | 1 | | | | | | | | | | |
| ROA | −0.086*** | 0.679*** | 1 | | | | | | | | | |
| ROE | −0.027* | 0.356*** | 0.569*** | 1 | | | | | | | | |
| EG | −0.017 | 0.322*** | 0.453*** | 0.377*** | 1 | | | | | | | |
| LOSS_ST | 0.080*** | −0.382*** | −0.472*** | −0.291*** | −0.092*** | 1 | | | | | | |
| LOSS | 0.114*** | −0.354*** | −0.498*** | −0.332*** | −0.257*** | 0.533*** | 1 | | | | | |
| LEV | 0.138** | −0.150** | −0.348** | −0.195** | −0.023 | 0.172** | 0.219*** | 1 | | | | |
| L_Share | −0.135*** | 0.058** | 0.121*** | 0.085*** | 0.003 | −0.079** | −0.128*** | −0.134 | 1 | | | |
| SOE | 0.014 | 0.000 | 0.030* | 0.024 | −0.007 | −0.009 | −0.032** | 0.013 | 0.268*** | 1 | | |
| RSI | −0.012 | 0.093*** | 0.072*** | 0.045*** | −0.029* | −0.084*** | −0.115*** | −0.108*** | −0.001 | 0.038** | 1 | |
| Size | −0.059*** | 0.046*** | 0.146*** | 0.077*** | −0.002 | −0.140 | −0.173*** | 0.171*** | 0.213*** | 0.142*** | 0.143*** | 1 |
| IIH | −0.069*** | 0.062*** | 0.108*** | 0.048*** | 0.026 | −0.062*** | −0.115*** | −0.043*** | 0.011 | −0.025 | 0.030* | 0.171*** |

Notes: See Table 5 notes for variable definitions.

R: A dummy variable. R = 1 if restatement, otherwise 0 for all listed companies.

* Statistical significance at the 10% level.

** Statistical significance at the 5% level.

*** Statistical significance at the 1% level.

Table 7
Determinants of restatements.

| Dependent Variables (predicted sign) | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | | Model 6 | |
|---|----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|
| | Coefficient | Pr > Chi | Coefficient | Pr > Chi | Coefficient | Pr > Chi | Coefficient | Pr > Chi | Coefficient | Pr > Chi | Coefficient | Pr > Chi |
| Intercept | 0.208 | 0.829 | −0.442 | 0.635 | −0.196 | 0.833 | 0.151 | 0.876 | 0.178 | 0.854 | 0.098 | 0.919 |
| SOE (+) | 0.320 | 0.000 | 0.296 | 0.001 | 0.293 | 0.000 | 0.321 | 0.000 | 0.322 | 0.000 | 0.322 | 0.000 |
| L_Share (+) | − 0.017 | <.000 | − 0.019 | <.000 | − 0.019 | <.000 | − 0.017 | <.000 | − 0.016 | <.000 | − 0.017 | <.000 |
| IIH (−) | − 8.440 | 0.003 | − 9.252 | 0.001 | − 9.873 | 0.000 | − 7.968 | 0.005 | − 7.926 | 0.004 | − 7.916 | 0.005 |
| LOSS (+) | 0.365 | 0.013 | 0.534 | <.000 | | | | | | | 0.165 | 0.354 |
| LOSS_ST(+) | −0.053 | 0.839 | | | 0.469 | 0.039 | | | −0.107 | 0.686 | −0.161 | 0.549 |
| RSI (+) | 0.055 | 0.534 | −0.038 | 0.665 | −0.057 | 0.509 | 0.044 | 0.624 | 0.043 | 0.629 | 0.047 | 0.600 |
| DA (+) | −0.142 | 0.747 | 0.218 | 0.602 | 0.270 | 0.523 | 0.221 | 0.641 | 0.205 | 0.667 | 0.203 | 0.183 |
| ROA (−) | | | −0.501 | 0.201 | − 0.843 | 0.045 | − 2.031 | 0.002 | − 2.142 | 0.002 | − 1.714 | 0.039 |
| LEV (+) | 1.579 | <.000 | | | | | 1.447 | <.000 | 1.449 | <.000 | 1.452 | <.000 |
| Size (?) | −0.078 | 0.105 | −0.006 | 0.896 | −0.014 | 0.762 | −0.069 | 0.154 | −0.069 | 0.147 | −0.068 | 0.163 |
| Chi-square | 162.63 | | 130.91 | | 120.07 | | 165.98 | | 166.15 | | 166.99 | |
| Number of observations | | | | | | | 3928 | | | | | |

Notes: All variables are for year $t - 1$.

Bold numbers indicate statistical significance at the 5% level.

See Table 5 for variable definitions.

LOSS_ST, are highly positively correlated with the performance variables, ROA and leverage, we test the model alternatively with and without ROA or LEV. The results imply that the delisting pressure is an incentive to manipulate earlier years' earnings and contributes to later restatement. All tests fail to demonstrate that firms' financing needs serve as an incentive for manipulation in our sample.

We are surprised to find that our test produces the opposite sign from that expected for ownership concentration; that is, the lower the proportion of the largest shareholder's stake, or the lower the ownership concentration, the higher the probability that a listed company will restate. We interpret this result as follows: in China, the "shell" of a listed company is a very valuable and limited resource due to the slow CSRC approval process. When a company faces profitability stress or potential losses, the largest shareholder will pump profits into the company by arranging, for example, related-party transactions, a very common practice in China. However, companies with lower ownership concentration will not benefit from their largest shareholders when experiencing the same pressure, as the largest shareholders have insufficient incentive to rescue the ailing company. Such companies then either face being delisted, or resort to accounting manipulation, which is later reversed through restatement. Such conjecture is supported by the significant negative correlation between ownership concentration and the delisting pressure variables, LOSS and LOSS_ST.

Our control variable of firm size is negatively but not significantly related to restatements.

We also conduct extra tests within subsamples, limiting the observations to downward restatements and core earnings related to restatements. The results, which we do not include in the tables, are consistent with our primary tests.

Combining all factors, one can understand why a large SOE, whose largest shareholder is the government, will remain above the financial fray and avoid the need to restate: it is simply because the government will not let that happen.

Table 8

Cumulative Abnormal Returns (CAR) around restatement announcements. Full sample 1999–2005.

| Period | N | Mean | Median | Std Dev | t-Stats | P-value | Signed rank P-value |
|--|------|---------|---------|---------|---------|---------|---------------------|
| <i>Panel A: Short-term CAR with available return data</i> | | | | | | | |
| Day (−10, −6) | 1088 | −0.0034 | −0.0058 | 0.0572 | 0.1361 | | <.0001 |
| Day (−5, −2) | 1087 | −0.0039 | −0.0051 | 0.0468 | 0.0124 | | 0.0009 |
| Day (−1, +1) | 1087 | −0.0001 | −0.0048 | 0.0573 | 0.7802 | | 0.0003 |
| Day (+2, +5) | 1087 | 0.0008 | −0.0031 | 0.0537 | 0.4227 | | 0.3721 |
| Day (+6, +10) | 1085 | 0.0037 | −0.0002 | 0.0558 | 0.0361 | | 0.1314 |
| <i>Panel B: Long window—periods leading up to the announcement</i> | | | | | | | |
| Day (−251, −211) | 1007 | −0.0104 | −0.0126 | 0.1053 | 0.0024 | | 0.0011 |
| Day (−210, −170) | 1012 | −0.0107 | −0.0147 | 0.1049 | 0.0013 | | <.0001 |
| Day (−169, −128) | 1020 | −0.0057 | −0.0113 | 0.1183 | 0.1275 | | 0.0041 |
| Day (−127, −86) | 1023 | −0.0114 | −0.0176 | 0.1189 | 0.0022 | | <.0001 |
| Day (−85, −44) | 1030 | −0.0162 | −0.0164 | 0.1188 | <.0001 | | <.0001 |
| Day (−43, −22) | 1089 | −0.0048 | −0.0017 | 0.0821 | 0.0714 | | 0.4887 |
| Day (−21, −11) | 1089 | −0.0018 | −0.0059 | 0.0713 | 0.3442 | | 0.0001 |

Notes: Significance levels are for two-tailed tests. A market-adjusted returns model is adopted. We obtained our data from the CSMAR database. Individual stock's daily abnormal return is calculated as $AR_{it} = R_{it} - R_{mt}$. R_{mt} is the market return, represented by the A-share composite index daily return. Sample daily abnormal returns are calculated as $\overline{AR}_t = \frac{1}{N} \sum_i^N AR_{it}$. Portfolio CARs are calculated as $CAR_{BE} = \sum_{t=B}^E \overline{AR}_t$. B and E, respectively, represent the beginning and ending days around event day 0.

6.3. Consequences of revealing poor earnings quality

Even though financial restatements in China have become a prevailing phenomenon, it remains largely below the radar, which seems perplexing. We now test [Hypothesis 4](#) and offer explanations.

Following most research on restatements in the US, we conduct event tests and let their results tell the story. [Table 8](#), Panel A, shows the short-term CARs for our restatement sample. Contrary to the strikingly negative results from US data (CARs of approximately -11%), China's stock market reacts very weakly, barely registering any reaction to restatement announcements. The mean CAR values for the 3-day period around the announcement ($-1,+1$) are not significant, although the median CARs are significant, with a market reaction of -0.48% . During the week ahead of the annual report release, however, the market reacts in a significantly negative way, a drop of roughly half of one percent. These results show that investors in China's stock market fail to punish the poor quality of financial reports following restatement announcements as severely as investors in the US stock market.

Nevertheless, investors may perceive such poor-quality accounting ahead of the restatements due to possible information leakage. Hence, we look back over a longer period prior to the release of the annual report and find that the results are quite mixed. We divide the timeframe into several periods for examination. We find there is a slight decline one year before the release of the report. However, the CARs of some timeframes are significantly negative, whereas others are not. Some are significant for the median, but not the mean. Overall, the magnitude is limited and the mixed results do not permit us to reject [Hypothesis 5](#), which states that investors do not anticipate the poor quality of financial reports.

Long-term tests up to six months before the restatement announcements are presented in [Table 9](#), Panel C; these fail to reveal a post-announcement drift, which implies that the poor quality of financial reports negates the potential for the market to digest the information and eventually react in a rational, albeit delayed, fashion.

Table 9

Cumulative Abnormal Returns (CAR) around restatement announcements. CSRC-enforced subsample 1999–2005.

| Period | N | Mean | Median | Std Dev | t-Stats P-value | Signed rank P-value |
|--|----|----------|----------|---------|-----------------|---------------------|
| <i>Panel A: Short-term CAR with available return data</i> | | | | | | |
| Day ($-10,-6$) | 67 | 0.006 | 0.000 | 0.047 | 0.289 | 0.666 |
| Day ($-5,-2$) | 67 | -0.001 | -0.004 | 0.039 | 0.776 | 0.384 |
| Day ($-1,+1$) | 67 | -0.011 | -0.010 | 0.042 | 0.028 | 0.014 |
| Day ($+2,+5$) | 67 | 0.007 | -0.004 | 0.055 | 0.273 | 0.482 |
| Day ($+6,+10$) | 67 | -0.008 | 0.000 | 0.058 | 0.237 | 0.955 |
| Day ($+11,+21$) | 67 | 0.013 | 0.012 | 0.074 | 0.134 | 0.085 |
| <i>Panel B: Long window—periods leading up to the announcement</i> | | | | | | |
| Day ($-251,-211$) | 63 | -0.008 | -0.012 | 0.067 | 0.231 | 0.024 |
| Day ($-210,-170$) | 64 | -0.009 | -0.017 | 0.062 | 0.189 | 0.018 |
| Day ($-169,-128$) | 65 | -0.005 | -0.010 | 0.110 | 0.127 | 0.026 |
| Day ($-127,-86$) | 67 | -0.002 | -0.013 | 0.098 | 0.767 | 0.000 |
| Day ($-85,-44$) | 67 | -0.014 | -0.015 | 0.109 | 0.000 | 0.000 |
| Day ($-43,-22$) | 67 | 0.003 | -0.001 | 0.076 | 0.712 | 0.879 |
| Day ($-21,-11$) | 67 | -0.009 | -0.018 | 0.059 | 0.177 | 0.017 |

Notes: Refer to those for [Table 8](#).

Our analysis also indicates that the stock market only slightly penalizes the poor quality of accounting uncovered by the CSRC's inspection following restatement announcements. In Table 10, Panel A, the CARs of -1% are significant both for the mean and the median only for the $(-1, +1)$ period around the event date. Usually, the regulatory inspection will take a few months to conclude, leading us to look back over a longer period preceding the CSRC's decision. During the six months preceding the restatement in Table 10, Panel B, the CAR values (mean -1.4% , median -1.5%) are significant only between the fourth month and the second month. The CARs from the remaining time frames are mostly negative and insignificant.

Overall, the stock market reaction offers an ambiguous and different picture of restatements from that of the US stock market. We can claim that the stock market in China either fails to punish poor financial reporting or does not punish it enough.

6.4. Usefulness of accounting information

Puzzled by the market's failure to react to the restatement phenomenon, we suspect that investors may attach a different value to accounting information in China, and thus may partially or completely ignore such information. Restatements are disclosed in firms' annual reports, which also offer a great deal of other information, mainly relating to the current reported year. Buried within, the revealing of restatements may simply be missed by investors. Hence, we test two dimensions of the return/earnings relationship: the level of and the change in information.

Table 11, Panel A, shows how the stock market reacts to the current year's earnings and the past year's corrected earnings. We obtain the latter by adding the restated amount back onto the originally reported earnings for those sample firms that restate at least the previous year's results. The results show that the market does respond to accounting information: its reaction is clearly and significantly related to the current year's earnings. However, it ignores the corrected past year's earnings, which is also new information re-

Table 10

Cumulative Abnormal Returns (CAR) around restatement announcements. Subsample of core earnings reasons 1999–2005.

| Period | N | Mean | Median | Std Dev | t-stats P-value | Signed rank P-value |
|--|-----|----------|----------|---------|-----------------|---------------------|
| <i>Panel A: Short-term CAR with available return data</i> | | | | | | |
| Day $(-10, -6)$ | 376 | -0.004 | -0.005 | 0.054 | 0.169 | 0.029 |
| Day $(-5, -2)$ | 375 | -0.003 | -0.005 | 0.053 | 0.214 | 0.089 |
| Day $(-1, 1)$ | 375 | -0.004 | -0.006 | 0.057 | 0.164 | 0.004 |
| Day $(+2, +5)$ | 374 | 0.003 | -0.001 | 0.063 | 0.367 | 0.765 |
| Day $(+6, +10)$ | 372 | 0.005 | 0.000 | 0.061 | 0.131 | 0.104 |
| Day $(+11, +21)$ | 369 | 0.007 | 0.004 | 0.075 | 0.083 | 0.156 |
| <i>Panel B: Long window—periods leading up to the announcement</i> | | | | | | |
| Day $(-251, -211)$ | 362 | 0.000 | -0.002 | 0.046 | 0.432 | 0.284 |
| Day $(-210, -170)$ | 362 | -0.011 | -0.015 | 0.107 | 0.061 | 0.019 |
| Day $(-169, -128)$ | 365 | -0.014 | -0.019 | 0.125 | 0.032 | 0.011 |
| Day $(-127, -86)$ | 365 | -0.020 | -0.036 | 0.187 | 0.038 | 0.000 |
| Day $(-85, -44)$ | 364 | -0.026 | -0.025 | 0.117 | <0.000 | <0.000 |
| Day $(-43, -22)$ | 376 | 0.006 | -0.002 | 0.088 | 0.216 | 0.592 |
| Day $(-21, -11)$ | 376 | 0.001 | -0.005 | 0.087 | 0.898 | 0.205 |

Notes: Refer to those for Table 8.

leased to the market. These results imply that accounting information is partially useful to the equity market. Investors seem to pay attention, naïvely, only to the current year's accounting information while ignoring information about the past.

Table 11, Panel B, presents the test results on the market reaction to the change in information. Such change has two components in our tests: the change in the current year's earnings, proxied by unexpected earnings, and the change in past earnings, represented by the magnitude of the restatement. We use a dummy variable, Loss, to control for the major characteristics of the current year's earnings, along with variables describing the restatement characteristics, and find the marginal significance of the magnitude disap-

Table 11
Usefulness of earnings information.

| CAR _i = a ₀ + a ₁ EPS _t + a ₂ AdjEPS _{t-1} + ε | | | | | | | | |
|--|-------------|--------|-------------|--------|-------------|--------|-------------|--------|
| | Coefficient | | | | | | t-Stat | |
| Panel A: Returns on earnings | | | | | | | | |
| Intercept | −0.007 | | | | | | −0.98 | |
| EPS _t | 0.142 | | | | | | 9.23 | |
| AdjEPS | −0.010 | | | | | | −0.93 | |
| R ² | | | | | | | 9.18% | |
| F value | | | | | | | 43.33 | |
| Number of observations | | | | | | | 838 | |
| CAR _i | Model 1 | | Model 2 | | Model 3 | | Model 4 | |
| | Coefficient | t-Stat | Coefficient | t-Stat | Coefficient | t-Stat | Coefficient | t-Stat |
| Panel B: Returns on earnings surprises | | | | | | | | |
| Intercept | −0.006 | −0.86 | −0.066 | −0.70 | −0.061 | −0.65 | −0.079 | −0.83 |
| Un_EPS | 0.051 | 4.94 | 0.030 | 2.82 | 0.031 | 2.87 | 0.030 | 2.83 |
| Magnitude | 0.051 | 1.87 | 0.027 | 0.98 | 0.031 | 1.12 | 0.027 | 0.95 |
| Loss | | | −0.105 | −5.82 | −0.107 | −5.92 | −0.103 | −5.70 |
| CSRC | | | −0.017 | −0.61 | −0.017 | −0.62 | −0.015 | −0.54 |
| Tax | | | | | | | 0.013 | 0.86 |
| Subsidiary | | | | | | | −0.011 | −0.75 |
| Revenue | | | | | 0.035 | −1.23 | | |
| Core | | | 0.006 | 0.41 | | | 0.006 | 0.41 |
| Firm_Size | | | 0.007 | 0.89 | 0.007 | 0.84 | 0.008 | 1.01 |
| R ² | 2.57% | | 5.73% | | 5.86% | | 5.70% | |
| F value | 14.38 | | 11.02 | | 11.26 | | 8.48 | |
| Number of observations | 1015 | | 989 | | 989 | | 989 | |

Notes: CAR_i: Cumulative abnormal returns of (−5,+1) months around the restatement event date.

EPS_t: EPS for year *t*.

AdjEPS_{t−1}: True EPS for year *t* − 1, naively adjusted by restated amount.

Un_EPS: Unexpected earnings per share (EPS): the reported EPS subtracts' expected EPS, which is last year's EPS.

Magnitude: Restated amount per share.

Loss: A dummy variable. Loss = 1 if the company experienced a loss in year *t*, and 0 otherwise.

CSRC: A dummy variable. CSRC = 1 if the restatement is CSRC-enforced, and 0 otherwise.

Tax: A dummy variable. Tax = 1 if the restatement is tax related, and 0 otherwise.

Subsidiary: A dummy variable. Subsidiary = 1 if the restatement is a mistake from a subsidiary, and 0 otherwise.

Revenue: A dummy variable. Revenue = 1 if the restatement is revenue recognition related, and 0 otherwise.

Core: A dummy variable. Core = 1 if the restatement reason(s) is/are related to revenue, cost & operating expenses, and/or depreciation and provision, and 0 otherwise.

Firm size: The log form of total firm assets.

Table 12

Earnings credibility – earnings response coefficients.

| | $CAR_i = \alpha + \beta UE_i + \varepsilon_i$ | | | | (4) | |
|------------------------|--|--------|-------------|--------|-------------|--------|
| | $CAR_i = \alpha + \beta_1 UE_i + \beta_2 UE_i T_i + \varepsilon_i$ | | | | (5) | |
| | $t - 1$ | | t | | Pooled | |
| | Coefficient | t-Stat | Coefficient | t-Stat | Coefficient | t-Stat |
| Intercept | −0.001 | −0.14 | 0.058 | 5.25 | 0.028 | 4.14 |
| UE | 0.376 | 8.21 | 0.244 | 5.71 | 0.392 | 7.11 |
| UE \times T | | | | | −0.136 | −2.04 |
| F value | 67.44 | | 32.61 | | 48.63 | |
| Adj R^2 | 0.072 | | 0.036 | | 0.053 | |
| Number of observations | 857 | | 857 | | 1715 | |

Notes: CAR_i : Cumulative returns for $(-11,+1)$ months around annual report date.

UE_i : Unexpected earnings of year i : the difference between the reported earnings and the expected earnings, i.e., the prior-year's earnings, scaled by the stock price of the day before the announcement date.

T_i : Dummy variable. $T = 1$ if UE_i is for year t , and $T = 0$ if UE_i is for year $t - 1$.

pears. The change in the current year's earnings and the loss character of its earnings are captured significantly by investors, whereas the change in the previous year's earnings information via outright admission of poor-quality earnings for the previous period is completely ignored. These results are consistent with those in Table 11, Panel A.

Next, we test the credibility of accounting information to investors using annual data. The dependent variable is unexpected annual earnings, which we compute by subtracting the prior year's earnings per share from the current year's earnings per share. The independent variable is the corresponding CAR for $(-11,+1)$ months around the annual report date. As demonstrated in Table 12, before the restatement, the ERC of β_1 is significantly positive (0.356), and after the restatement it drops to 0.231. The drop is significantly negative at the 10% level, as shown by $\beta_2 = -0.127$ for dummy \times UE in the pooled sample. This can be interpreted as the market's acknowledgement that revealing poor accounting quality is bad news, although the ERCs in China are low. Our tests show that they are below 0.4, which is much lower than in the United States, where they are above 1. Such a contrast implies that investors in China generally attach much lower value to accounting information.

6.5. Robustness tests

We also conduct robustness tests by taking out observations due to miscalculations, typos and postings by mistake due to human error. All statistical results remain consistent with earlier tests.¹¹ The CARs for the year-long window leading up to the annual report announcement increase slightly from around -6% to around -10% , which again indicates that investors do not punish poor financial reporting as much as they should.

7. Conclusion

China's capital market has been rapidly improving since the end of the 1970s, however it has yet to mature and become as efficient as developed markets. Our accounting-based research yields a variety of test results that collectively indicate that low-quality accounting

¹¹ We do not list these tables in the paper. They are available upon request.

reporting persists in China. Moreover, accounting reporting has yet to play the significant role in investment behavior and philosophy that it does in mature markets.

Various aspects of capital markets can offer insights into our test results on market reaction. We now examine these in turn.

Short-selling, an important stock market mechanism, was not available either directly or indirectly to investors during our sample period.¹² Investors' inability to sell short deters a stock's ability to approach an efficient price in a timely manner.

The investor structure is disproportionate relative to that in mature markets. The scale of institutional investors is small. Individual investors, especially medium and small investors, account for a significant proportion of trading accounts and trading turnover. Short-term speculation dominates long-term investment (CSRC, 2008). Our test results imply that accounting information has yet to play a significant role in investment behavior and philosophy. Developing institutional investment and improving investors' education are suggested to be crucial tasks for the government and regulators.

We call for effective regulation on the disclosure of financial reporting. Poor disclosure causes market inefficiency in China. Throughout our research, our attention was caught by the limited amount of information disclosed. For example, when a restatement involves more than one year, there is no indication of the number of prior years that it affects, and when there is more than one reason for restatement, there is no guidance on the relative weight of the reasons. Although the 2004 Notice defined the need for timely and separate disclosure of significant events, including restatements, the specification is not reliably followed.

We also call for more vigorous regulatory and administrative enforcement. The CSRC does not have the power to determine appropriate monetary penalties for regulation-violating corporate behavior. The executor of the justice system, the court, is legally equipped with the power to decide the size of monetary penalties, based on the Law of the People's Republic of China on Administrative Penalty¹³ and the Securities Law of the People's Republic of China.¹⁴ Nevertheless, the penalty's cap is so low—CNY 600,000¹⁵—that it cannot act as a real financial deterrent to violating companies. Alternative punishments come from the regulatory body of the CSRC, which could either exert pressure on a listed company's future application for rights or secondary issuances, or publicly criticize violating companies on the stock exchange. Disallowing refinancing would be a substantial discouragement to a company with financing needs. However, as our tests show, the financial status of companies that issue restatements generally forbids them from effectively applying for equity financing. Financing needs may not even appear in their timetable because survival has a higher priority than financing. As for the option of public criticism, it does not inflict much real imme-

¹² Investors still cannot short-sell stocks directly, but can do so via put options on a limited number of companies. The first (call) option in China was of Baosteel Co., Ltd., listed and traded on the Shanghai Stock Exchange on August 22, 2005, whereas the first put option was not issued until May 30, 2006, on China Kweichow Maotai Distillery Co., Ltd. By the end of 2007, there were only 27 options issued in total, 21 of which had already expired with six still outstanding; 10 of the 27 were put options. (Shanghai Stock Exchange: <http://www.sse.com.cn>)

¹³ The Law was passed at the fourth Session of the Eighth National People's Congress and promulgated by Order No. 63 of the President of the People's Republic of China on March 17, 1996. It became effective on October 1, 1996.

¹⁴ The Securities Law was passed at the sixth Meeting of the Standing Committee of the Ninth National People's Congress on December 29, 1998, revised at the 18th Meeting of the Standing Committee of the Tenth National People's Congress of the People's Republic of China on October 27, 2005, according to the Decision on Revising the Securities Law of the People's Republic of China made at the 11th meeting of the Standing Committee of the Tenth People's Congress on August 28, 2004.

¹⁵ CNY600,000 \approx USD72,464 during our sample period.

diate damage. There are insufficient regulatory and administrative penalties in China and they need to be enforced and substantiated.

Class action lawsuits, a commonly practiced US legal vehicle to inflict damage, are a rarity in China. First, from our tests on stock market reaction, a company that reveals mistakes in previously released financial reports incurs little if any damage. In fact, there is hardly any damage to seek. Second, although there is damage from the decline in the individual stock price, China's courts simply will not accept damage cases as, to the courts, such cases are not as important as numerous other civil lawsuits. Implicitly, such reality encourages companies to report poor-quality financial statements because later discovery and restatement will be virtually costless. The introduction of a legal procedure for processing cases, along with a punitive legal system to deal with violations of accounting rules, should provide a valuable complement to the current structure of China's capital market.

China's credit market falls far behind the mature markets worldwide. The scale of the credit market, especially the corporate bond market, is quite small¹⁶ (CBRC, 2006). Bank loans are the major form of corporate debt. The process of introducing a free lending rate into the market from the People's Bank of China (PBOC) offers a few crucial implications for the debt capital market. As with reforms in many other aspects of the economy, the introduction of a free lending rate is also a gradual process. The floating range of financial institutions' lending interest rate is completely regulated by the PBOC. Before January 1, 2004, the ceiling was capped at 10% above the base rate.¹⁷ It was relaxed to 70% for the next nine months before being totally freed. Under the regulated lending system, the rate a company received did not necessarily reflect the rate it should have received according to the company's overall risk—risk that includes accounting quality as a crucial component. Specifically, poor accounting quality was not penalized fairly with an appropriately higher lending rate. The low additional cost from loan borrowings cannot effectively prevent companies from providing low-quality financial reports. Unfortunately, we are unable to test this hypothesis directly, because interest expense is combined with other operating expenses in all existing databases. During most of our sample period, commercial banks did not have sufficient incentive to distinguish clearly among companies with different credit levels until the big four state banks and top-tier banks were listed on the Hong Kong Stock Exchange. This began only in mid-2005 after shaking off a significant amount of non-performing loans, following international banking rules and accounting standards, and offering executive stock option plans.

From examining accounting restatements in our sample of China's A-share listings, we conclude that companies with weak profitability, a state-controlled shareholder and diffused ownership tend to report poor financial statements and later restate. In an emerging market such as China's, however, we find that the stock market does not react significantly to restatements forced by low-quality accounting. The stock market is only able to digest partial accounting information and accounting credibility is low. These findings, together with the inefficient debt market, weak regulatory system and legal punitive system discussed above, underscore why restatements were such a widespread phenomenon during our sample period. We show that in China, accounting credibility has lower value and an

¹⁶ By the end of 2006, the total value of the credit market was 28.7% of GDP, compared to 188% in the United States. The value of corporate bonds was 1.44% of GDP versus 125.72% in the United States.

¹⁷ In 1998, the ceiling was increased to 20% above the base rate for small enterprises, and to 30% for medium and small enterprises in 1999. The floor lending rate has remained steady at 10% below the base rate. For example, on January 1, 2004, the PBOC's one-year base lending rate was 5.31%; the range of lending rates would therefore be 4.78–9.03%.

accounting misstatement is much less costly than in a mature market, such as that of the United States, because the market mechanism fails to deter firms' misstatement behavior. We advocate the reinforcement of market regulation and supervision, strengthening of the legal system, further improvement of free-market mechanisms and continuous investor education in China's capital markets.

We believe our study to be very timely, given that it echoes the recent spirit and reforms of the Chinese government and regulators. The release of the *Opinions of the State Council on Promoting the Reform, Opening and Steady Growth of Capital Markets (the Opinions)* on January 31, 2004, sees the role of capital markets as sovereign and strategic for national economic development. The CSRC concurrently implemented a series of reforms to refine market infrastructure and functionality—reforms that include improving the quality of listed companies and facilitating institutional investors' entrance into the capital market.¹⁸ Interestingly, we find that our sample size starts to decrease during the final two to three years of our 1999–2005 sample period. This coincides with: (1) the CSRC's adoption of a decentralized supervision system in 2004, a measure intended to improve the quality of listed companies and whose regulatory efficiency was immediately evident (CSRC, 2008); (2) the CSRC's *Rule 19*, introduced at the end of 2003, and the 2004 *Notice on Further Improving Financial Information Disclosure of Listed Companies*; (3) the CBRC's introduction of a free lending-rate system in 2004; and (4) the listing of big banks in Hong Kong since 2005, following various international industry standards. Accounting quality is improving, in terms of the decreasing number of firm restatements, as a result of regulatory efforts and a more extensive free-market mechanism. We also expect that when China's capital market achieves maturity in the near future, investors' behavior will change commensurately towards that of investors in mature markets. Specifically, in relation to our studied cases, investors will effectively differentiate bad accounting quality from good practices.

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¹⁸ Other measures include the initiation of the non-tradable share reform, restructuring of securities companies, reform of the share issuance system and the introduction of a free market for investment funds.

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