How to Make Public Enforcement Work in Weak Investor Protection Countries? Evidence from China

Bin Ke[1] and Xiaojun Zhang[2]

March 11, 2017

We wish to thank Qiang Cheng, Dan Collins, Zhaoyang Gu, Darius Miller (discussant), Terence Ng, Susan Shu (discussant), Siew Hong Teoh, Gwen Yu, Huai Zhang, and workshop participants at the Beijing Technology and Business University, Stanford Business School conference on Global Crossroads**:** *Navigating the World*, the MIT Asia Conference in Accounting, Nanyang Business School, Shanghai University of International Business and Economics, Shanghai University of Finance and Economics, Singapore Management University, and Tsinghua University for helpful comments and Na Liu and Jin Zhang for able research assistance.

[1] Department of Accounting, NUS Business School, National University of Singapore, Mochtar Riady Building, BIZ 1, # 07-53, 15 Kent Ridge Drive, Singapore 119245. Tel: +65 6601 3133. Fax: +65 6773 6493. Email: bizk@nus.edu.sg.

[2] Department of Accounting, Guanghua School of Management, Peking University, Guanghua School of Management Building 2, #471, 5 Yiheyuan Rd., Beijing, China 118431. Tel: +86 (010) 6275 9650. Email: zxj@gsm.pku.edu.cn.

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Abstract

Exploiting an innovative public enforcement campaign in 2007 to enforce China's first mandatory Corporate Governance Code of 2002, we provide insight into how to make public enforcement work in weak institutional environments. The 2007 campaign differs from past public enforcement activities in several important aspects. First, the 2007 campaign provided a very detailed check list asking a lot of specific questions about a firm's corporate governance status. Second, the 2007 campaign was very transparent with regard to the disclosure and correction of identified corporate governance noncompliance problems. Third, the 2007 campaign required the CSRC regional offices to be more involved in monitoring the implementation of the public enforcement campaign. Fourth, the 2007 campaign imposed more binding penalties for firms that fail to timely correct the identified governance noncompliance problems. Our analyses suggest that the 2007 campaign was effective in improving publicly listed firms' corporate governance and shareholder value. Our results suggest that public enforcement, if properly implemented, still matters in increasing shareholder value in weak investor protection countries.

Key words: public enforcement; weak investor protection countries; China; shareholder value
JEL codes: G34, G38, M41, K22

1. Introduction

Despite its perceived importance to shareholder value and economic growth (La Porta et al. 2000; Shleifer and Wolfenzon 2002; Allen et al. 2005), investor protection is lacking in many less developed economies. While it is relatively easy to propose investor protection regulations, the enforcement of such regulations is often ineffective in less developed economies. Hence, an important question and challenge to policy makers is to identify effective mechanisms that can help improve the enforcement of investor protection regulations in less developed economies. The objective of this study is to shed light on this important question by analyzing the efficacy of a unique public enforcement campaign undertaken by the China Securities Regulatory Commission (CSRC) in 2007 to enforce China's first mandatory Corporate Governance Code issued in January 2002.

Whether public enforcement can help protect investors carries additional significance in weak investor protection countries because private enforcement mechanisms usually do not work well due to lack of an independent judiciary (La Porta et al. 2006). In addition, it is extremely difficult to develop credible private enforcement institutions in many developing economies and the only viable option readily available to protect investors is public enforcement (Layton 2008). Therefore, it is of utmost importance to understand whether and how public enforcement works in weak investor protection countries.

The 2007 public enforcement campaign is interesting to study because it differs from past public enforcement campaigns in several important aspects. First, the 2007 campaign provides a very detailed check list asking a lot of specific questions about a firm's corporate governance status. The detailed questions could have made firms difficult to dodge the problems. Second, the 2007 campaign is very transparent by requiring publicly listed firms to publicly disclose not only the identified corporate governance problems for public comments but also their remedial solutions to the identified problems. This is such a significant departure from the CSRC's typical regulatory approach that the Chinese media dubbed the 2007 public enforcement campaign as "sunshine regulatory supervision" (Lu 2007). The public disclosures could have increased the pressure for management to propose effective remedies for the identified problems. Third, the 2007 campaign required the CSRC regional offices to conduct their own independent assessment of corporate governance noncompliance for *all* publicly

listed firms. Such intensive regulatory scrutiny could have further increased the pressure for management to solve the identified problems. Finally, the circular of the 2007 campaign stated clearly that the CSRC would bar firms that fail to timely correct the identified governance noncompliance problems from proposing managerial stock option schemes or applying for major corporate decisions such as seasonal equity offerings, share transfers, and mergers and acquisitions (Lu 2007). In contrast, past public enforcement campaigns often don't state any explicit punishment for noncompliant firms. We believe that it is interesting to examine whether such an innovative public enforcement approach would result in any genuine increase in shareholder value for the affected firms.

The 2007 public enforcement campaign was implemented in sequential steps that were known to the firms in advance. First, all firms were required to self-confess existing corporate governance noncompliance problems and suggest remedial solutions and timetable in a *self-assessment report*. Second, the CSRC conducted its own independent investigation of listed firms' corporate governance compliance status. To the extent that the CSRC identified additional noncompliance problems, it would recommend further remedial solutions in a separate *remediation report*.

Judging by the number of identified and corrected corporate governance noncompliance problems, the 2007 campaign appears to be a huge success. For our sample of 1,187 unique firms, representing approximately 90% of the stocks listed on the mainboards of the two mainland stock exchanges, the public enforcement campaign reported a total of 5,785 self-confessed governance noncompliance problems and 5,856 CSRC-identified governance noncompliance problems. For both the listed firms' self-assessment reports and the CSRC's remediation reports, more than half of the identified problems are related to the board of directors/supervisory board and internal control. The disclosures of the listed firms in 2008 indicate that the mean (median) firm *claimed* to have corrected 90.8% (100%) of the self-confessed problems and 93.8% (100%) of the CSRC identified problems.

To determine whether the 2007 campaign results in a genuine improvement in corporate governance for the affected firms, we examine how the *forced* correction of the corporate governance noncompliance problems affects the affected firms' net shareholder value measured by future operating accounting performance. The number of corrected corporate governance noncompliance problems *forced* by the 2007 campaign varies across firms due to the firms' differential degree of prior compliance

with the corporate governance code. Hence, we identify the effect of the 2007 campaign by comparing the effect for the firms significantly affected versus the firms less significantly affected by the public enforcement in the pre versus post public enforcement periods. As we explain in Section 4, ex ante it is far from clear that such visible corporate governance changes made in response to the 2007 campaign would necessarily lead to a genuine increase in net shareholder value.

We also examine the specific channels through which the 2007 campaign affects shareholder value. The extant corporate governance literature indicates that controlling shareholders' tunneling and low-quality financial reporting are two major challenges facing investors in emerging markets, including China (Hung 2000; Leuz et al. 2003; Jian and Wong 2010; Jiang et al. 2010). Hence, we examine the effect of the public enforcement campaign on the following two specific corporate outcomes: controlling shareholders' tunneling via inter-corporate loans (Jiang et al. 2010) and earnings quality measured by the earnings response coefficient (ERC) (Hackenbrack and Hogan 2002).

Our regression results show that correcting *self-confessed* corporate governance problems during the 2007 campaign helps reduce controlling shareholders' tunneling, improves earnings quality, and results in higher future accounting performance. However, we find no evidence that correcting *CSRC-identified* governance problems has any positive or negative impact on controlling shareholders' tunneling, earnings quality, or future accounting performance. Further analyses indicate that the insignificant results for correcting the CSRC-identified problems are due to the fact that the CSRC-identified corporate governance problems are not as important as the self-confessed corporate governance problems. We perform a variety of robustness tests to rule out the possibility that our results are due to either confounding regulatory events, violation of the parallel trends assumption for our regression specifications, or endogeneity of self-confessed noncompliance problems. Overall, our results suggest that if executed appropriately, public enforcement can be effective in improving corporate governance and shareholder value in weak investor protection countries.

Our study makes several important contributions. Our first contribution is to the literature on law enforcement (La Porta et al. 2006; Jackson and Roe 2009). While the problem of weak law enforcement is widely recognized, little research has been devoted to identifying innovative mechanisms that can improve law enforcement in financial markets with weak institutional

environments. To our best knowledge, we are the first empirical study that uses a quasi-experiment to directly examine the effect of public enforcement on shareholder value in a representative weak investor protection country, China. The evidence from our study suggests that public enforcement, if appropriately designed and implemented, could work in weak institutional environments.

Second, we contribute to the international corporate governance literature by demonstrating the effect of investor protection *laws* on shareholder value in a representative weak investor protection country, China. Despite the common assumption that investor protection laws are important in weak investor protection countries, the validity of this assumption has never been tested for a simple reason: investor protection laws are rarely enforced in weak investor protection countries. In addition, recent research raises doubt about the relevance of investor protection laws. For instance, after analyzing the long-run evolution of investor protection and corporate ownership in the United Kingdom over the twentieth century, Franks, Mayer and Rossi (2009) find no evidence that investor protection had a significant impact on the dispersion of ownership, as predicted by La Porta et al. (1998). Franks et al.'s finding raises the possibility that investor protection may not be that important to the economic prosperity of nations with weak investor protection laws. We contribute to this debate by providing evidence that strong investor protection laws, if adequately enforced, still matter in improving shareholder value in weak investor protection countries.

The rest of the paper is organized as follows. Section 2 provides the institutional background about the 2002 and 2007 public enforcement campaigns. Section 3 discusses the sample selection procedures and descriptive statistics. Section 4 examines the economic consequences of the 2007 public enforcement campaign. Section 5 conducts a variety of robustness tests to rule out alternative explanations for our regression results. Section 6 concludes.

2. Institutional background

China is known for its poor investor protection (Allen et al. 2005). Over the years since China's reestablishment of the domestic stock markets in the early 1990s, the Chinese Government has introduced a series of investor protection regulations. Unfortunately, most of these regulations provide little benefit to investors because they are not effectively enforced. In this section we compare the

differences between the CSRC's traditional public enforcement approach and the CSRC's unique public enforcement approach used in the 2007 campaign. One interesting aspect of our setting is that the CSRC launched a public enforcement campaign using the traditional approach in 2002 with the aim to improve publicly listed firms' compliance with the same 2002 mandatory Corporate Governance Code. While we cannot assess the efficacy of the 2002 campaign in this study due to lack of data availability, we can use the 2002 campaign to highlight the unique features of the 2007 campaign.

2.1. The 2002 public enforcement campaign

The requirements for the 2002 public enforcement campaign are outlined in the CSRC's Notice on the Examination of Listed Companies' Modern Enterprise System Development (CSRC [2002] No. 32). According to the Notice, the objective of the 2002 public enforcement campaign was to conduct a thorough assessment on the extent of listed firms' noncompliance with the Corporate Governance Code of 2002, and mandate the affected firms to remediate any identified noncompliance problems.

The public enforcement campaign was carried out in the three sequential stages. In the first stage (May to June 2002) all firms and their controlling shareholders were required to prepare *a self-assessment report* on the extent of the firm's noncompliance with the Corporate Governance Code following the detailed guidelines issued by the CSRC. The self-assessment report must be approved by the board of directors and submitted to both the respective CSRC regional offices and the CSRC headquarters. In the second stage (July-September 2002), the CSRC regional offices were required to select some listed firms under their jurisdictions for special examination. The CSRC headquarters may also send its own representatives to the CSRC regional offices and select a random sample of the self-assessment reports for closer examination. During this stage the CSRC required the listed firms to remediate any identified corporate governance noncompliance problems. In addition, the CSRC may also publicize exemplary cases of listed firms that have significantly improved their compliance with the Corporate Governance Code. In the third stage (October-November 2002), the CSRC regional offices were required to submit to the CSRC headquarters their reports summarizing the results of the special examination in stage two. In the meantime, the CSRC regional offices were required to follow

up with the listed firms to ensure the timely remediation of identified corporate governance noncompliance problems.

The CSRC Notice also states that if a listed firm and its controlling shareholder fail to truthfully and timely submit the self-assessment report or refuse to remediate identified governance noncompliance problems, the CSRC would deal with the firm according to the relevant laws and publicize the firm's name.

Because the CSRC didn't require the listed firms to publicly disclose the self-assessment reports and other relevant data, we cannot directly assess the efficacy of the 2002 public enforcement campaign.

2.2. The 2007 public enforcement campaign

The requirements for the 2007 public enforcement campaign are outlined in the CSRC's Notice on the Public enforcement campaign for Strengthening the Corporate Governance of Publicly Listed Firms (CSRC [2007] No. 28). The CSRC Notice indicates that the 2007 public enforcement campaign was launched in response to the perceived persistent weaknesses in many listed firms' corporate governance systems. Similar to the 2002 campaign, the 2007 public enforcement campaign targeted all the critical corporate governance areas, including:

(1) Matters related to controlling shareholders, such as the independence of the listed firm's management from the controlling shareholder, related party transactions between the listed firm and the controlling shareholder, and direct product market competition between the listed firm and the controlling shareholder;[1]

(2) Matters related to the shareholders' meeting, such as shareholders' participation rate, the availability of the online voting and cumulative voting, and the shareholders' meeting procedures and records;

[1] The CSRC issued "The Notice on Improving the Cleaning-Up of Controlling Shareholders' Expropriation of Listed Companies' Funds" taking effect on November 7, 2006. Since this notice is also an example of the CSRC's public enforcement (but only targeting inter-corporate loans examined in Jiang et al. 2010), we don't attempt to distinguish the effect of this special notice from the effect of the broad public enforcement campaign.

(3) Matters related to the board of directors and the supervisory board, such as the establishment and responsibilities of board committees, board meeting procedures, board meeting attendance, board meeting records, and director training;

(4) Matters related to management's responsibilities, such as working protocols, training, and insider trading policy;

(5) Matters related to the listed firm's internal control, such as policy on the use of proceeds from external financing, staff training, internal control policy, internal audit, risk management, and financial reporting internal control;

(6) Matters related to management's compensation and accountability, such as policy on managerial evaluation and incentive compensation, and policy on the board's supervision of managerial compensation;

(7) Matters related to the listed firm's disclosure, such as investor relations, and disclosure policy; and

(8) Matters related to all other miscellaneous governance issues.

Similar to the 2002 campaign, the 2007 public enforcement campaign was implemented in *sequential* stages, which were publicly announced to all firms in advance, and must be finished no later than October 31, 2007, but there were no specific deadlines for each of the first two stages. The first stage is self-reporting. During this period all listed firms were required to perform a self-assessment of the firms' compliance with the Corporate Governance Code of 2002, propose remedial solutions to the self-confessed noncompliance problems, including the remediation timetable, and then publicly disclose the relevant information in a board-approved *self-assessment report* submitted to the CSRC. The self-assessment report must contain a detailed description of the identified governance problems and suggested remedial solutions, including whether the identified problems have been corrected or not by the time of the self-assessment report. It is important to note that the first stage self-reporting is not voluntary because it is the CSRC that forced the firms to identify and disclose significant corporate governance noncompliance problems. In addition, the firms knew at stage one that the regional offices of the CSRC would send their own staff to conduct independent on-site inspections of the firms' self-reporting quality in the second stage.

The second stage is public comments and independent assessment by the CSRC's regional offices. During this period listed firms were required to establish dedicated phone lines and internet-based communication channels to allow investors and the general public to make comments and suggestions on the listed firms' investor protection. The CSRC's regional offices also conducted their own independent assessment of the listed firms' compliance with the aforementioned regulations, based on site visits and the CSRC regional office's previously collected information. After gathering all the information from the listed firms' self-assessment reports, public comments, and the CSRC's own independent assessments, the CSRC's regional offices were required to perform an overall evaluation of each listed firm's noncompliance with the specified corporate governance regulations and propose remedial solutions to the identified problems beyond the listed firms' self-assessment reports. No public disclosures by either the listed firms or the CSRC were made during this period.

The third stage is implementation. During this period the listed firms were required to implement the suggested remedial solutions to all identified problems. In addition, the listed firms were required to submit to the CSRC a board-approved and publicly disclosed *remediation report*. The remediation report must disclose the corporate governance noncompliance problems identified by the firm, the public, the stock exchange, and the CSRC separately. For each identified problem, the remediation report needs to provide a summary of the identified governance problem and discuss the suggested remedial solutions, including whether the identified problem has been corrected or not by the time of the remediation report.

The 2002 and 2007 public enforcement campaigns share some similarities. First, both enforcement activities are conducted in sequential stages. Second, both require listed firms to self-confess their corporate governance noncompliance problems in stage one.

However, the 2007 campaign differs from the 2002 campaign in several important aspects. First, even though both 2002 and 2007 public enforcement activities targeted the same Corporate Governance Code, the 2007 campaign provides a much more detailed check list than the 2002 campaign by asking more specific questions about a firm's corporate governance status that are difficult for firms to dodge. More specifically, we find that only approximately 40% of the check list questions included in the 2007 campaign, representing approximately 73% of the check list questions included in the 2002 campaign,

are also mentioned in the 2002 campaign and the remaining 60% are new to the 2007 campaign. In addition, most of the check list questions new to the 2007 campaign are routine corporate governance status questions rather than questions about new corporate governance problems arising subsequent to the 2002 campaign.

Second, the 2007 campaign required listed firms to publicly disclose both the self-assessment report from the first stage and the remediation report from the third stage. The CSRC explicitly requested investors and the general public to make comments on the two reports. To make sure the listed firms had fully complied with the requirements of the campaign, the CSRC also issued another Notice (CSRC 2008) on June 20, 2008 that further required listed firms to publicly issue a board-approved follow-up report about the status of the previously issued remediation report no later than July 20, 2008.[2] This follow-up report should disclose whether the remedial solutions enclosed in the remediation report are fully implemented before the end of the previously proposed timetable. If certain remedial solutions fail to be implemented on time, the firms need to explain the reasons for the failure and discuss any follow-up plans, including the punishment for the responsible parties. Such disclosure requirements could have increased the pressure for the firms to disclose and correct their governance noncompliance problems.

Third, the 2007 campaign required the local CSRC offices to conduct their own independent on-site inspection of corporate governance noncompliance for *all* publicly listed firms within their jurisdictions. In contrast, the 2002 campaign required the local CSRC offices to select only a small percentage of the listed firms for detailed inspection.

Finally, the listed firms were not allowed to submit managerial stock incentive schemes to the CSRC for approval before they complete all three stages of the 2007 campaign. For firms that have serious governance problems and refuse to correct them, the CSRC would not accept the firms' applications for stock incentive schemes.[3] This is a significant binding constraint because mainland

[2] To the extent that certain proposed remedial solutions are not implemented by the time of the follow-up report, listed firms are required to continuously update the progress of the unfinished remedial solutions proposed in the remediation report in the 2008, 2009, and 2010 annual reports.

[3] Our research of news reports and company announcements indicates that the CSRC strictly enforced this requirement. See http://app.finance.ifeng.com/data/stock/ggzw.php?id=13460291&symbol=000010 (in Chinese) for an example.

Chinese listed firms were allowed to use equity-based executive compensation only since 2005 and therefore many firms were interested in proposing equity incentive schemes around the 2007 campaign period. For firms that have corporate governance noncompliance problems, the CSRC's regional offices may also request to meet the firms' top executives, and issue attention letters or criticism letters internally circulated among listed firms. In addition, the CSRC may deny a firm's applications for seasonal equity offerings, share transfers, and mergers and acquisitions if the firm has serious uncorrected governance problems, such as lack of independence from the controlling shareholder and tunneling by the controlling shareholder.

3. Sample selection procedures and descriptive statistics

We limit our sample to the Chinese firms that are listed on the main boards of the two domestic stock exchanges, Shanghai and Shenzhen. Since the 2007 public enforcement campaign was launched in March 2007 and finished by July of 2008, we test the impact of the public enforcement campaign using the pre-period 2004-2006 and post-period 2008-2010. We exclude year 2007 in the main analysis because it is a transition year. We require each firm to have data for at least one year in both the pre-period and post-period in order to avoid the possibility that our inferences are due to changing mix of sample firms over time. To avoid IPO-related complications, we further require our sample firms' IPO dates to be no later than December 31, 2003. Due to their unique business and special government regulation, we also delete firms in the financial industry. These sample restrictions result in a sample of 1,200 unique firms. We further exclude 13 unique firms because, for unknown reasons, we could not find the information related to the 2007 public enforcement campaign. Our final sample contains 1,187 unique firms, representing approximately 90% of the stocks listed on the main boards of the two stock exchanges. Due to missing values on control variables, the actual number of unique firms could be slightly smaller than 1,187 for some regression results.

We first provide some descriptive statistics on our sample firms' degree of compliance with the public enforcement campaign. Figure 1 shows the frequency distribution of the announcement dates for each of the three key reports associated with the public enforcement campaign (i.e., the self-assessment report, the remediation report, and the follow-up report). Recall that both the self-assessment report and

the remediation report were required to be completed no later than October 31, 2007 while the follow-up report was required to be completed no later than July 20, 2008. It is clear from Figure 1 that a sizeable portion of the firms failed to announce the remediation reports before October 31, 2007, but most firms finished the required tasks mandated by the public enforcement campaign by the end of 2007.[4]

Panels A and B of Table 1 report the frequency distributions of our sample firms' corporate governance noncompliance problems identified by the firms in the self-assessment report and the CSRC in the remediation report, respectively, across the eight corporate governance categories mentioned in Section 2.2. Appendix A also shows representative examples of the corporate governance problems identified by the campaign and their remedial solutions by corporate governance category. While both the public and the two stock exchanges could identify additional corporate governance problems, in reality this rarely occurs.[5] Hence, to avoid unnecessary complications, we only focus on the problems identified by either the firms themselves or the CSRC. Inferences are qualitatively the same if the problems identified by the public and the stock exchanges are controlled for in our subsequent regression analysis (untabulated).

While the mandatory Corporate Governance Code took effect in 2002, it is clear from Table 1 that many listed firms hadn't fixed many governance noncompliance problems as of the beginning of the 2007 campaign. The listed firms were forced to identify a total of 5,785 corporate governance problems by themselves during the 2007 campaign. The CSRC identified additional 5,856 corporate governance problems. These results suggest that the CSRC played a significant role in exposing the listed firms' degree of noncompliance with the Corporate Governance Code.

Among the 5,785 self-confessed problems, 5.60% are related to controlling shareholders, 3.89% related to shareholders' meeting, 26.43% related to the board of directors, 7.07% related to

[4] We find no evidence in untabulated analysis that the subsequent regression results differ for the firms that disclosed the remedial reports on time versus those that delayed the disclosure.

[5] In fact, the 85th percentile of the number of problems identified by either the public or by the two stock exchanges as a percentage of the total combined number of problems identified by the firms and the CSRC is zero. However, this statistic doesn't imply that the general public and the two stock exchanges played no role in forcing listed firms to disclose and correct corporate governance noncompliance problems. It is possible that the mere opportunity to make comments could deter listed firms from hiding their noncompliance problems.

management's responsibilities, 30.61% related to internal control, 5.22% related to executive compensation and accountability, 19.20% related to corporate disclosure, and 1.97% related to the miscellaneous category. Among the 5,856 CSRC-identified problems, 10.37% are related to controlling shareholders, 10.83% related to shareholders' meeting, 30.77% related to the board of directors, 6.06% related to management's responsibilities, 29.80% related to internal control, 1.38% related to executive compensation and accountability, 9.90% related to corporate disclosure, and 0.89% related to the miscellaneous category.

Both the 2002 and 2007 public enforcement campaigns required all firms to follow a detailed check list when reporting their corporate governance status. Hence, we also classify the identified governance problems from the 2007 campaign reported in Panels A and B of Table 1 into the following three types: (i) problems targeted by both the 2002 and 2007 check lists; (ii) problems targeted by only the 2007 check list; and (iii) problems targeted by neither list. Panels C and D of Table 1 show the distributions of these three types for the same self-confessed problems and CSRC-identified problems, respectively. There are a few interesting findings. First, the small percentages of type (iii) problems in both Panels C and D suggest that publicly listed Chinese firms have little incentive to voluntarily acknowledge their governance problems without the explicit prodding by the CSRC. Second, the majority of the governance problems identified by the 2007 campaign are type (ii) campaign-2007 problems. The percentage is 64.4% for self-confessed problems and 63.1% for CSRC-identified problems. These results suggest the importance of the check list in forcing firms to disclose their governance problems. Third, there are significant percentages of type (i) problems in both Panels C and D (23.3% for self-confessed problems and 32.8% for CSRC-identified problems), suggesting that despite the explicit targeting by the 2002 campaign, a material number of governance problems still failed to be fixed until the 2007 campaign.

The 2007 campaign appears to be a huge success based on the high *claimed* correction rates of the identified problems by the time of the follow-up report. For example, as shown in Panels A and B of Table 1, the listed firms claimed that 90.8% of the self-confessed problems and 93.8% of the CSRC-identified problems had been corrected by the time of the follow-up report. The comparable percentages are also very high (usually above the 70% threshold) for each of the eight categories of corporate

governance problems. The only outlier is that only 34.8% of the self-confessed problems related to management's compensation and accountability were corrected by the time of the follow-up report. However, the total number of self-confessed problems in this category is only 302, representing 5.22% of the total number of self-confessed problems.

To provide another perspective on the correction rates of identified corporate governance problems, Table 2 shows the distribution of the correction rates, at the individual firm level, for the self-confessed problems (Panel A) and the CSRC-identified problems (Panel B) separately, by the time of each of the three key report dates. For our sample of 1,182 firms that disclosed at least one self-confessed problem, the mean firm claimed to have corrected 90.69% of the identified problems by the time of the follow-up report. For our sample of 1,101 firms that disclosed at least one CSRC-identified problem, the mean firm claimed to have corrected 93.35% of the identified problems by the time of the follow-up report.

Overall, the statistics from Tables 1 and 2 suggest that the 2007 public enforcement campaign is a success, at least at face value. Because firms' and regulators' claims could be just cheap talks, we next use independent empirical analyses to assess whether the 2007 campaign has resulted in a genuine improvement in managerial behavior and net shareholder value.

4. The effect of the 2007 public enforcement campaign on net shareholder value

4.1. Hypothesis development

We use operating accounting performance to capture the impact of the 2007 public enforcement campaign on net shareholder value. We use operating earnings rather than net income to mitigate the potential influence of earnings management on accounting performance. While the 2007 campaign applies to all publicly listed firms, the effect of the campaign depends on the quality of a firm's existing corporate governance system. If a firm had fully complied with the Corporate Governance Code prior to 2007, the 2007 public enforcement campaign should have little impact on the firm's governance and therefore net shareholder value. On the other hand, if a firm had significant noncompliance with the Code prior to 2007 and the 2007 public enforcement campaign significantly altered the firm's corporate governance system, we should expect the firm's net shareholder value to increase, provided that such

corporate governance changes are beneficial to net shareholder value. Ke and Zhang (2015) find that firms with weaker corporate governance systems were more likely to disclose and correct corporate governance noncompliance problems during the 2007 public enforcement campaign. Hence, we use the number of corrected corporate governance noncompliance problems forced by the 2007 public enforcement campaign as a proxy for the shock to a firm's corporate governance system.

For the sake of facilitating the following hypothesis development only, we classify our sample firms into two broad types based on the number of forced corrections of corporate governance noncompliance problems resulting from the 2007 campaign (see Table 3). Type One firms are those that had relatively strong corporate governance quality prior to 2007 and therefore disclosed and corrected very few corporate governance noncompliance problems during the public enforcement campaign. Type Two firms are those that had relatively weak corporate governance quality prior to 2007 and therefore were forced to disclose and correct a significant number of corporate governance noncompliance problems during the public enforcement campaign. Later in Section 4.2.2 we will also consider two complications other than Type One and Type Two firms and discuss how such complications may affect our research design and inferences.

If weaker corporate governance reduces shareholder value, we should expect Type Two firms to have lower operating accounting performance than Type One firms in the period prior to the public enforcement campaign, ceteris paribus. Since Type One firms' corporate governance quality doesn't change significantly before versus after the public enforcement campaign, we don't expect these firms' operating accounting performance to change significantly in the post period. That is, the 2007 campaign is a no event to Type One firms and therefore Type One firms can be used as a control for Type Two firms.

The impact of the 2007 campaign on the operating performance of Type Two firms versus Type One firms is difficult to determine ex ante and therefore an empirical question. On one hand, we expect correcting Type Two firms' corporate governance noncompliance problems may help increase net shareholder value due to several innovative aspects of the 2007 campaign discussed in Section 2. On the other hand, the forceful nature of the 2007 campaign may backfire and result in unintended consequences. First, the 2007 campaign could be just ineffective. The high reported correction rates of

the identified problems per se raise a certain degree of suspicion on the quality of public enforcement. It is possible that corporate insiders may simply have checked the box declaring they have complied with the relevant corporate governance provisions without fundamentally changing their incentives to increase shareholder value. In addition, given that the 2007 campaign is only a one-off event, one may legitimately question its long term benefit.

Second, even if the 2007 campaign is effective in improving investor protection in certain targeted areas, its impact on net shareholder value may not be positive. The reason is that controlling shareholders may resort to alternative and less visible tunneling channels that could be more costly to shareholder value (i.e., unintended negative consequences). This concern is legitimate in emerging markets like China where a firm's overall investor protection environment is weak and therefore corporate insiders may have sufficient leeway in counterbalancing the positive impact of partial improvement in corporate governance.

Third, China's investor protection laws were enacted hastily over a fairly short period of time and therefore the quality of China's investor protection laws could be low (i.e., bad laws from shareholders' perspective). As a result, the strict enforcement of such laws may cause a reduction in shareholder value.

As noted in Section 3, the 2007 campaign could result in the correction of both self-confessed and CSRC-identified corporate governance noncompliance problems. Hence, in the subsequent empirical analyses, we examine the effects of correcting the self-confessed noncompliance problems and CSRC-identified noncompliance problems separately. However, it is difficult to make any ex ante predictions on the differential effects of correcting these two types of noncompliance problems. On one hand, the effect of correcting the self-confessed noncompliance problems could be stronger because our sample firms knew in advance that the CSRC would conduct its own independent inspection following firms' self-reporting and therefore the firms may have an incentive to report the most severe corporate governance noncompliance problems in their own self-assessment reports. On the other hand, the effect of correcting the self-confessed noncompliance problems could be weaker because the listed firms could view the 2007 public enforcement campaign as another farce similar to past public enforcement activities and therefore may have little incentive to self-confess and correct the corporate governance

noncompliance problems and therefore the most severe corporate governance noncompliance problems are more likely to be identified by the CSRC than by the firms themselves.

To better understand how the 2007 public enforcement campaign impacts net shareholder value, we also examine the specific channels through which the 2007 public enforcement campaign affects shareholder value. The extant corporate governance literature indicates that controlling shareholders' tunneling and low-quality financial reporting are two major challenges facing investors in emerging markets, including China (Hung 2000; Leuz et al. 2003; Jian and Wong 2010; Jiang et al. 2010). Hence, we examine the effect of the 2007 public enforcement campaign on controlling shareholders' tunneling via inter-corporate loans (Jiang et al. 2010) and earnings quality measured by the earnings response coefficient (ERC) (Hackenbrack and Hogan 2002).

4.2. Research design

4.2.1. The regression models

We use the following regression model for the dependent variables inter-corporate loans (*OREC*) and operating accounting performance (*OROA*):

$$OREC_{it} \text{ or } OROA_{it} = \beta_1 \ln(SOLVED\_SELF + 1)_i + \beta_2 \ln(SOLVED\_CSRC + 1)_i + \beta_3 AFTER + \beta_4 \ln(SOLVED\_SELF + 1)_i \times AFTER + \beta_5 \ln(SOLVED\_CSRC + 1)_i \times AFTER + \beta_6 CONTROLS_{it-1} + \beta_7 CONTROLS_{it-1} \times AFTER + \mu_t + \mu_i + \varepsilon_{it} \quad (1)$$

where *i* and *t* are firm and year indicators, respectively. See Appendix B for all variable definitions. The unit of observation is a firm year. The sample includes the firm years 2004-2006 and 2008-2010.

Prior research shows that weaker corporate governance (e.g., weaker internal controls) is associated with reduced informativeness of reported earnings measured by the earnings response coefficient (Ashbaugh-Skaife et al. 2009). Hence, we use the following standard earnings response coefficient model to test the effect of the public enforcement campaign on the earnings response coefficient (ERC), our earnings quality proxy:

$$CAR_{it} = \beta_1 \text{UE} + \beta_2 \text{UE} \times AFTER + \beta_3 \text{UE} \times \ln(SOLVED\_SELF + 1)_i + \beta_4 \text{UE} \times \ln(SOLVED\_CSRC + 1)_i + \beta_5 \text{UE} \times \ln(SOLVED\_SELF + 1)_i \times AFTER + \beta_6 \text{UE} \times \ln(SOLVED\_CSRC + 1)_i \times AFTER + \beta_7 UE \times CONTROLS_{it-1} + \beta_8 UE \times CONTROLS_{it-1} \times AFTER + \beta_9 AFTER + \mu_t + \mu_i + \varepsilon_{it} \quad (2)$$

where *i* and *t* are firm and time indicators, respectively. See Appendix B for all variable definitions. The unit of observation is a firm quarter because Chinese listed firms report earnings quarterly. The sample includes the firm-quarters over 2004-2006 and 2008-2010.

For the sake of convenience, the hypothesis development in Section 4.1 divides our sample firms into Type One and Type Two based on the number of corrected corporate governance noncompliance problems. However, it is empirically difficult to determine the appropriate cutoff we should use to classify the firms into Type One and Type Two. Hence, regression models (1) and (2) use a continuous variable *SOLVED* instead (*SOLVED_SELF* for correcting self-confessed problems and *SOLVED_CSRC* for correcting CSRC-identified problems), but, as shown later, inferences are similar if we use dichotomous versions of *SOLVED_SELF* and *SOLVED_CSRC*. Firms with lower (higher) values of *SOLVED* correspond to Type One (Two) firms.[6]

We will discuss the time-variant *CONTROLS* for both models in the later sections. We allow the coefficients on *CONTROLS* to vary with *AFTER* because China adopted a set of new accounting standards in 2007 that is substantially converged with the International Financial Reporting Standards (IFRS) and therefore the relation between the three dependent variables and *CONTROLS* could have changed post the public enforcement campaign.

We include time fixed effects to control for time trends and firm fixed effects to control for unobservable time-invariant determinants of the dependent variables (e.g., whether a firm is state-controlled or not). Including firm fixed effects is important because firms with low versus high *SOLVED* (i.e., Type One versus Type Two firms) differ systematically as noted by Ke and Zhang (2015). Because we include year fixed effects, the coefficient on *AFTER* is subsumed by the time fixed effects. Similarly,

[6] The definition of *SOLVED* implicitly assumes that the effect of the 2007 campaign increases monotonically with the number of corrected corporate governance problems. We believe this is a reasonable though imperfect assumption.

since both *ln(SOLVED_SELF)* and *ln(SOLVED_CSRC)* are firm fixed effects, their coefficients are subsumed by the firm fixed effects. For this reason, we also estimate an industry fixed effects regression of model (1) in order to show the coefficients on *ln(SOLVED_SELF)* and *ln(SOLVED_CSRC)*.

Our key variables of interest are *ln(SOLVED_SELF+1)×AFTER* and *ln(SOLVED_CSRC+1)×AFTER* in model (1) and *UE×ln(SOLVED_SELF+1)×AFTER* and *UE×ln(SOLVED_CSRC+1)×AFTER* in model (2). These interaction variables capture the differences in *OREC*, *OROA* or the *ERC* for low *SOLVED* firms (i.e., Type One firms) versus high *SOLVED* firms (i.e., Type Two firms) in the pre versus post periods. As discussed in Section 4.1's hypothesis development, if the forced correction of identified corporate governance noncompliance problems during the 2007 public enforcement campaign results in a genuine increase in shareholder value, we should expect the coefficients on *ln(SOLVED_SELF+1)×AFTER* and *ln(SOLVED_CSRC+1)×AFTER* in model (1) to be negative when the dependent variable is *OREC* and positive when the dependent variable is *OROA*. Similarly, to the extent that the 2007 public enforcement campaign results in an increase in earnings quality, we should expect the coefficients on *UE×ln(SOLVED_SELF+1)×AFTER* and *UE×ln(SOLVED_CSRC+1)×AFTER* in model (2) to be positive. If the presence of corporate governance noncompliance problems facilitates tunneling, reduces earnings quality and shareholder value in the pre-period, we should expect the coefficients on both *ln(SOLVED_SELF)* and *ln(SOLVED_CSRC)* to be positive in the *industry fixed effects* regression of *OREC* and negative in the *industry fixed effects* regression of *OROA*. Similarly, we should also expect negative coefficients on *UE×ln(SOLVED_SELF+1)* and *UE×ln(SOLVED_CSRC+1)* in the firm fixed effects regression of ERC.

4.2.2. Two complications

The preceding discussions in Section 4.1 and Section 4.2.1 classify our sample firms into Type One (i.e., firms with low *SOLVED*) and Type Two (i.e., firms with high *SOLVED*) only. However, as we will show in Table 4 below, a small number of our sample firms disclosed some corporate governance noncompliance problems but failed to correct them during the 2007 campaign (referred to as Type Three firms). Similar to Type One firms, Type Three firms would be classified as low *SOLVED*

firms under our definition of *SOLVED*. Because Type Three firms' corporate governance quality doesn't change significantly after 2007, we expect the effect of the 2007 campaign to be no event for both Type Three firms and Type One firms. Hence, the presence of Type Three firms in our sample should not affect our inferences for the interaction variables (i.e., *ln(SOLVED_SELF+1)×AFTER* and *ln(SOLVED_CSRC+1)×AFTER* in model (1) and *UE×ln(SOLVED_SELF+1)×AFTER* and *UE×ln(SOLVED_CSRC+1)×AFTER* in model (2)). However, the presence of Type Three firms in the sample would bias against finding the previously discussed predictions for *ln(SOLVED_SELF)* and *ln(SOLVED_CSRC)* in the *industry fixed effects* regression model (1) and *UE×ln(SOLVED_SELF+1)* and *UE×ln(SOLVED_CSRC+1)* in regression model (2). The reason is that the low *SOLVED* firms contain a mix of Type One firms, firms that had relatively *strong* corporate governance quality prior to 2007, and Type Three firms, firms that had relatively *weak* corporate governance quality prior to 2007. However, this bias should be relatively small because most of the disclosed corporate governance problems were fixed by the date of the follow-up report (see Tables 1 and 2) and therefore there are very few Type Three firms.

So far we have implicitly assumed that our sample firms fully disclosed their material corporate governance noncompliance problems during the 2007 campaign. We believe this is a reasonable assumption because the targeted corporate governance regulatory provisions were clearly identified and the 2007 campaign was thorough as evidenced by the huge number of identified problems shown in Table 1. Supporting this assumption, Ke and Zhang (2015) find that firms with weaker corporate governance systems were more likely to disclose corporate governance noncompliance problems during the 2007 campaign. Nevertheless, we next discuss how the presence of firms that failed to fully disclose material corporate governance noncompliance problems during the 2007 campaign may affect our inferences in models (1) and (2). It is reasonable to argue that firms that failed to disclose corporate governance noncompliance problems (referred to as Type Four firms) should face no pressure to correct them during the 2007 campaign. Hence, Type Four firms are similar to Type Three firms in nature. That is, these firms' corporate governance quality is similar (i.e., lower) in both the pre-period and post-period. Therefore, the presence of Type Four firms would bias against finding the predicted effects in the pre-period. More importantly, the presence of Type Four firms should not affect our inferences on

the interaction variables (i.e., the coefficients on *ln(SOLVED_SELF+1)×AFTER* and *ln(SOLVED_CSRC+1)×AFTER* in model (1) and the coefficients on *UE×ln(SOLVED_SELF+1)×AFTER* and *UE×ln(SOLVED_CSRC+1)×AFTER* in model (2)).

4.3. The effect of 2007 public enforcement campaign on tunneling

We first examine whether the 2007 public enforcement campaign helps reduce the controlling shareholder's tunneling via inter-corporate loans. Following Jiang et al. (2010), we use *OREC* as a proxy for inter-corporate loans by the listed firm to its controlling shareholder. Following Jiang et al. (2010), we include the following control variables: *SIZE*, *LAYER*, *ROA*, *LARGEHLD*, and *MARKETIZATION*.

Panel A of Table 4 shows the descriptive statistics of the regression variables. Both the median *SOLVED_SELF* and median *SOLVED_CSRC* are four but the values of both variables vary significantly across our sample firms, with a minimum of zero and a maximum of 18 and 28 for *SOLVED_SELF* and *SOLVED_CSRC*, respectively. This evidence suggests that the impact of the 2007 public enforcement campaign varies significantly across our sample firms, thus creating an exogenous variation that allows us to identify the effect of the 2007 campaign on our three dependent variables for the affected firms. The untabulated Pearson correlation between *ln(SOLVED_SELF+1)* and *ln(SOLVED_CSRC+1)* is 0.038, significant but not large, suggesting the CSRC's targets of interest differ from the governance problems self-confessed by the firms.

Panel B of Table 4 shows the firm fixed effects regression results of *OREC*. The coefficient on *ln(SOLVED_SELF+1)×AFTER* is significantly negative (two-tailed p=0.083) but the coefficient on *ln(SOLVED_CSRC+1)×AFTER* is insignificant. These results suggest that correcting self-confessed corporate governance problems results in a significant decline in inter-corporate loans, but there is no evidence that correcting CSRC-identified corporate governance problems results in any positive or negative effect. In terms of economic magnitude, the coefficient on *ln(SOLVED_SELF+1)×AFTER*

implies that a one standard deviation increase in *ln(SOLVED_SELF+1)×AFTER* is associated with a decrease of *OREC* in the post period by 0.005, which is approximately 9.62% of the average *OREC*.[7]

The coefficients on *CONTROLS* are consistent with the findings in Jiang et al. (2010). The only exceptions are the coefficients on *SIZE* and *MARKETIZATION*. However, this difference in results is due to the inclusion of firm fixed effects. We obtain qualitatively similar inferences as Jiang et al. (2010) for *SIZE* and *MARKETIZATION* when we replace firm fixed effects with industry fixed effects (see table 4).

Because the firm fixed effects regression cannot estimate the coefficients on *ln(SOLVED_SELF+1)* and *ln(SOLVED_CSRC+1)*, we also report the industry fixed effects regression results of *OREC* in Panel B of Table 4. The inferences for *ln(SOLVED_SELF+1)×AFTER* and *ln(SOLVED_CSRC+1)×AFTER* remain unchanged. More importantly, the coefficient on *ln(SOLVED_SELF+1)* is positive but two-tailed p value is only 0.134, suggesting weak evidence that firms with a greater number of corporate governance noncompliance problems were associated with more tunneling in the pre-period. The coefficient on *ln(SOLVED_CSRC+1)* is insignificant (two-tailed p=0.561), suggesting that the CSRC-identified corporate governance problems are not important.

4.4. The effect of 2007 public enforcement campaign on earnings quality

[7] The Chinese government issued rules in both 2004 and 2005 trying to solve the outstanding inter-corporate loans with a target finish date of December 2006. Jiang et al. (2010) claim that these regulatory interventions eliminated these loans for almost all Chinese companies by the end of 2006 except for 17 companies that still had these loan balances as of December 31, 2006. To test whether our cross-sectional regression results in Table 4 are simply a disguise of the effect of these competing rules, we include in the *OREC* regression *ln(SOLVED_SELF+1)×YEAR2006* and *ln(SOLVED_CSRC+1)×YEAR2006*, where *YEAR2006* is a year fixed effect for 2006. If the effect of the 2007 campaign is systematically correlated with the effects of these confounding rules, we should expect the coefficients on *ln(SOLVED_SELF+1)×YEAR2006* and *ln(SOLVED_CSRC+1)×YEAR2006* to be significantly negative. We find in untabulated results that the coefficient on *ln(SOLVED_SELF+1)×YEAR2006* is not significant but the coefficient on *ln(SOLVED_CSRC+1)×YEAR2006* is marginally significantly negative (two-tailed p value=0.059). More importantly, the coefficient on *ln(SOLVED_SELF+1)×AFTER* remains significantly negative and the coefficient on *ln(SOLVED_CSRC+1)×AFTER* is still insignificant. Overall, we find no evidence that the coefficient on *ln(SOLVED_SELF+1)×AFTER* in Table 4 is a disguise of the confounding effect of the competing rules in 2004 and 2005. In addition, we also rerun the regression results of Table 4 after removing the 17 firms noted above and find similar inferences (we thank Guohua Jiang for supplying the list of the 17 firms). This latter result suggests that the documented effects in Table 4 are unlikely a disguise of the effect of the 2004 and 2005 regulations shown in Jiang et al. (2010).

The *CAR* for the earnings response coefficient model (2) is market-adjusted three-trading day cumulative abnormal return centered on the quarterly earnings announcement date.[8] Because Chinese analysts don't disclose quarterly earnings forecasts, *UE* is defined relative to the earnings of the same quarter in the previous year. Following Hackenbrack and Hogan (2002) and Francis and Ke (2006), we control for *MB*, *LNMV*, *LEV*, *STDRET*, *LOSS*, |*UE*|, *FQTR4*, *RESTRUCTURE*, and a set of industry dummies. Inferences are unaffected if we exclude the industry dummies.

Table 5 shows the descriptive statistics and firm fixed effects regression results. To benchmark with the findings from Francis and Ke (2006, Table 3), we first run a basic ERC model with control variables without firm and time fixed effects (untabulated). The regression coefficients are generally consistent with Francis and Ke (2016) and significant. Panel B of Table 5 shows the results of the full interaction model with firm and time fixed effects. The coefficient on *UE*×*ln(SOLVED_SELF+1)*×*AFTER* is significantly positive (two-tailed p value=0.007) but the coefficient on *UE*×*ln(SOLVED_CSRC+1)*×*AFTER* is insignificant. These results suggest that correcting self-confessed governance noncompliance problems helps improve earnings quality but there is no evidence of a similar effect from correcting CSRC-identified governance noncompliance problems. In terms of economic magnitude, the coefficient on *UE*×*ln(SOLVED_SELF+1)*×*AFTER* implies that a one standard deviation increase in *ln(SOLVED_SELF+1)* is associated with an increase of the earnings response coefficient in the post period by 0.085, which is approximately 16.3% of the average earnings response coefficient.

We find evidence that the insignificant coefficient on *UE*×*ln(SOLVED_CSRC+1)*×*AFTER* is due to the fact that the CSRC-identified corporate governance problems are not as important as the self-confessed corporate governance problems. Specifically, the coefficient on *UE*×*ln(SOLVED_SELF+1)* is significantly negative, suggesting that the presence of self-confessed governance noncompliance problems is associated with reduced earnings quality in the pre-period. In contrast, the coefficient on *UE*×*ln(SOLVED_CSRC+1)* is insignificant, suggesting no evidence that the presence of CSRC-

[8] A small percentage of our sample Chinese listed firms experienced prolonged stock trading suspensions that coincided with the earnings announcement window. To avoid potential confounding events, we require the number of calendar days between trading day -1 and trading day +1 to be no more than 11, the 95th percentile cutoff.

identified governance noncompliance problems is associated with reduced earnings quality in the pre-period. This latter finding suggests that the CSRC-identified noncompliance problems are not very important.

As a robustness check and consistent with Table 4, we also report the full interaction model with industry fixed effects rather than firm fixed effects. As shown in Panel B of Table 5, we find similar inferences.

4.5. The effect of 2007 public enforcement campaign on future accounting performance

Because the 2007 public enforcement campaign could affect the listed firms through multiple channels, many of which are unobservable, we next examine the effect of the 2007 public enforcement campaign on the listed firms' future operating accounting performance (*OROA*) in order to capture the overall effect of the public enforcement campaign on net shareholder value. Inferences are similar if we use *ROA* (defined as net income attributable to shareholders of the parent divided by total assets) or operating cash flows (defined as operating cash flows divided by total assets) instead. Following Fan et al. (2007) and Core et al. (1999), we include the following control variables: *SIZE*, *MB*, *LEV*, *LARGEHLD*, and *STDOROA*.

Table 6 shows the descriptive statistics and firm fixed effects regression results. The coefficient on *ln(SOLVED_SELF+1)×AFTER* is significantly positive (two-tailed p=0.013) but the coefficient on *ln(SOLVED_CSRC+1)×AFTER* is insignificant. Hence, there is evidence that correcting self-confessed corporate governance problems leads to higher future accounting performance but there is no evidence of a similar effect from correcting CSRC-identified corporate governance problems.[9] In terms of economic magnitude, the coefficient on *ln(SOLVED_SELF+1)×AFTER* implies that a one standard deviation increase in *ln(SOLVED_SELF+1)* is associated with an increase of *OROA* in the post period by 0.005, which is approximately 24.9% of the average *OROA*.

[9] It is unlikely that the positive coefficient on *ln(SOLVED_SELF+1)×AFTER* in Table 6 is due to greater earnings management by the high *SOLVED_SELF* firms in the post period. If this were the case, we should also expect the coefficient on *UE×ln(SOLVED_SELF+1)×AFTER* in Table 5 to be negative rather than positive.

Because the firm fixed effects regression cannot estimate the coefficients on *ln(SOLVED_SELF+1)* and *ln(SOLVED_CSRC+1)*, we also report the industry fixed effects regression results of *OROA* in Panel B of Table 6 as well. The inferences for *ln(SOLVED_SELF+1)×AFTER* and *ln(SOLVED_CSRC+1)×AFTER* remain unchanged. More importantly, the coefficient on *ln(SOLVED_SELF+1)* is significantly negative (two-tailed p=0.000), suggesting that firms with a greater number of self-confessed corporate governance noncompliance problems were associated with lower operating accounting performance in the pre-period. The coefficient on *ln(SOLVED_CSRC+1)* is also negative but only marginally significant (two-tailed p=0.075). In addition, the coefficient on *ln(SOLVED_CSRC+1)* is much smaller in magnitude than the coefficient on *ln(SOLVED_CSRC+1)*.

Taken together, the regression results from Tables 4-6 suggest that the governance problems identified by the CSRC are not as severe as the governance problems self-confessed by the firms themselves. This finding is consistent with two non-mutually exclusive explanations. The first explanation is that the CSRC is not capable of identifying material corporate governance noncompliance problems due to lack of motivation and information advantage. The second explanation is that the 2007 public enforcement campaign was conducted in sequential stages known to the firms in advance and therefore the firms could have already disclosed the most severe governance problems in their self-assessment reports. Unfortunately, we are not able to distinguish between these two competing explanations based on available data.

4.6. The effects of correcting different types of corporate governance problems

The reported regression analyses so far do not distinguish among the different categories of corporate governance problems shown in Table 1. However, it is possible that the effects of correcting different types of corporate governance problems on OREC, ERC, and OROA could be different. Hence, we also assess the differential impacts of correcting the eight different categories of corporate governance problems for the three dependent variables. The regression results are shown in Table 7. As there are so many specific cases of corporate governance problems with unknown significance, we view this analysis as exploratory and do not make any ex ante predictions.

Since our significant results shown in Tables 4-6 are concentrated in self-confessed governance problems, we also focus on the coefficients on the self-confessed problems in Table 7. With regard to the OREC model, we find that only the coefficients on *AFTER x ln(SOLVED_SELF1+1)* (matters related to the controlling shareholders) and *AFTER x ln(SOLVED_SELF5+1)* (matters related to internal controls) are significant and negative. These results make common sense, suggesting that correcting corporate governance problems related to controlling shareholders and internal controls helps reduce tunneling. With regard to the ERC model, we find that only the coefficients on *AFTER x ln(SOLVED_SELF1+1)* (matters related to the controlling shareholders), *AFTER x ln(SOLVED_SELF5+1)* (matters related to internal controls), *AFTER x ln(SOLVED_SELF7+1)* (matters related to corporate disclosure) and *AFTER x ln(SOLVED_SELF8+1)* (miscellaneous category) are significant. The positive coefficients on *AFTER x ln(SOLVED_SELF5+1)* and *AFTER x ln(SOLVED_SELF7+1)* appear to be consistent with disclosure theory that predicts a positive relation between a firm's information disclosure quality and the ERC (e.g., Holthausen and Verrecchia 1988). However, the negative coefficient on *AFTER x ln(SOLVED_SELF1+1)* would imply that correcting the governance problems related to controlling shareholders is associated with reduced ERC. With regard to the OROA model, we only find a significantly positive coefficient on *AFTER x ln(SOLVED_SELF8+1)* (the miscellaneous category). This latter result is hard to interpret because category 8 contains a variety of different kinds of governance problems.

We find little evidence that correcting any of the eight categories of corporate governance problems identified by the CSRC has a significant impact on OREC, ERC, or OROA.

5. Alternative explanations

In this section we perform a variety of robustness checks to rule out potential alternative explanations for our reported results in Tables 4-6.

5.1. Competing regulatory changes around 2007

The 2007 public enforcement campaign took place during a period when China's securities market experienced some potential confounding regulatory changes. We identified the following potential confounding regulatory events that occurred in our sample period 2004-2010:

(a) The split share structure reform that started in 2005 and largely finished by the end of 2006: the reform made previously non-tradable shares owned by controlling shareholders publicly tradable (see Li et al. 2011 for a detailed discussion of the reform).

(b) The revised Securities Law that took effect on January 1, 2006;

(c) The CSRC's Notice on Promulgating the Measures for the Administration of Listed Companies' Equity Incentive Plans (Trial Implementation) that took effect on January 1, 2006;

(d) The Circular jointly issued by the CSRC and the China Banking Regulatory Commission on Regulating Third-Party Guarantees Provided by Listed Companies that took effect on January 1, 2006;

(e) The Notice jointly issued by the State-Owned Assets Supervision and Administration Commission and the Ministry of Finance on the Trial Measures for Implementing Equity Incentive Plans by State-Controlled Domestically-Listed Companies that took effect on September 30, 2006;

(f) The New Accounting Standards that are substantially converged with the International Accounting Standards that took effect on January 1, 2007; and

(g) A massive RMB four trillion economic stimulus plan implemented in November 2008 by the Chinese central government in response to the 2008 global financial crisis.

Because we use a difference-in-differences regression approach, the afore-mentioned confounding regulatory changes are credible competing explanations for the significant cross-sectional regression results shown in Tables 4-6 only if the effects of these competing regulatory changes are positively correlated with *ln(SOLVED_SELF+1)* but not with *ln(SOLVED_CSRC+1)*. However, we find no reason to believe that any of the aforementioned confounding regulatory changes would result in similar corporate governance changes to those effected by the 2007 campaign. With this important strength of our research design in mind, we now directly assess the impact of each alternative regulatory event on our inferences.

5.1.1. Confounding event (a)

Our first test assesses the impact of the split share structure reform (confounding event (a)) following Chen et al.'s (2013) methodology. Increased share tradability resulting from the reform should induce insiders to have a stronger incentive to pursue shareholder value maximization. Chen et al. (2013) argue that the impact of the split share structure reform should be stronger for firms with a larger percentage of previously non-tradable shares. Hence, we include *NONTRADE_OWN*×*AFTER_SSSR and AFTER_SSSR* as control variables in model (1) and *UE*×*NONTRADE_OWN*, *UE*×*NONTRADE_OWN*×*AFTER_SSSR* and *UE*×*AFTER_SSSR* as control variables in model (2). For each firm, *AFTER_SSSR* is one for the years after the firm completes the split share structure reform and zero otherwise. *NONTRADE_OWN* is a firm fixed effect that is equal to the stock ownership of all non-tradable shareholders as of the end of the fiscal year prior to the split share structure reform. As shown in Panel A of Table 8, we find no evidence that our previous inferences are affected after including these additional controls in models (1) and (2).

One could argue that the effect of the split share structure reform should be greater for firms that suffered from greater agency conflicts in the pre-2007 campaign period. Since high *ln(SOLVED_SELF+1)* firms are likely to be firms with greater agency conflicts in the pre-period, our regression results in Tables 4-6 could be due to the split share structure reform rather than the 2007 campaign. To rule out this alternative explanation, we also estimate the *OREC*, *ERC* and *OROA* regression models by allowing the coefficients of interest to change with *AFTER_SSSR* (see Panel B of Table 8). Untabulated descriptive statistics show that our sample firms finished their split share structure reform in various time points starting from 2005 but close to 90% of our sample firms finished the reform by December 31, 2016. Hence, we also include year 2007 in Panel B of Table 8 to reduce potential collinearity between *AFTER* and *AFTER_SSSR*.[10] With the exception of the OREC regression

[10] Because most of our sample firms finished the 2007 campaign in the last calendar quarter of 2007, we set *AFTER* equal zero for 2007. The Pearson correlations between *AFTER* and *AFTER_SSSR* for the regressions in Panel B of Table 8 are around 0.55.

results, our inferences for the ERC and OROA regressions continue to hold. Hence, we conclude that it is unlikely that the split share structure reform is a credible competing explanation for our results.

5.1.2. Confounding events (b) and (d)

The regulatory events (b) and (d) are unlikely to explain our results for several reasons. First, both confounding events are minor revisions of the same regulations. Event (b) is a revision of the Securities Law and contains only a few new provisions relevant to listed firms, such as the introduction of the insider trading short swing rule and increased minimum holding period for company stock acquisition during takeover. Similarly, the minor new provisions contained in event (d) mainly apply to financial institutions, which are excluded from this study. Second, both events (b) and (d) are about revisions of regulations while the 2007 campaign is about the enforcement of regulations. We find no evidence to suggest that the two confounding regulations were strictly enforced. Hence, we doubt they would result in similar cross-sectional impacts on the listed firms' governance and firm performance as those documented in Tables 4-6.

5.1.3. Confounding events (c) and (e)

Our next test examines the impact of events (c) and (e). While 10.19% (121 unique firms) of our sample firms announced equity-based incentive schemes by the end of 2012, the majority of our sample firms didn't implement equity-based incentives during our sample period due to the steep drop of the overall Chinese stock market index over the period October 2007 to October 2008. Therefore, it is unlikely these two events would be credible competing explanations for our results. Nevertheless, we rerun our regression analyses after excluding the 42 firms that implemented equity-based incentives during our sample period. None of our inferences are significantly affected (untabulated).

5.1.4. Confounding event (f)

We don't believe that the mere adoption of a new set of accounting standards (i.e., event (f)) alone in a weak investor protection country like China can explain our regression results. The reason is that prior accounting research finds no evidence that switching to a set of higher quality accounting

standards alone would result in a significant improvement in financial reporting quality without a corresponding improvement of enforcement (Ball et al. 2003; He et al. 2012). In addition, we have considered the effect of event (f) in our research design by allowing the coefficients on all regression variables to vary with *AFTER* in models (1) and (2) in addition to the adoption of a difference-in-differences design.

5.1.5. Confounding event (g)

We don't believe that the 2008 stimulus plan (i.e., event (g)) can explain our cross-sectional regression results shown in Tables 4-6. To the contrary, in the absence of the significant corporate governance improvement resulting from the 2007 campaign, we would expect the opposite results for the OREC, ERC and OROA models. The reason is that as explained in Section 4.1, firms with high *SOLVED_SELF* are firms with greater agency conflicts in the pre-2007 campaign period. Hence, the sudden availability of cheap bank credits resulting from the 2008 stimulus plan would be bad news for shareholders because the insiders of these firms will more likely squander the available free cash flows for personal gains.

To control for the effect of the 2008 stimulus plan directly, we also create a dummy variable *FOURTRILLION*, a firm fixed effect, indicating the firms directly targeted by the stimulus plan, including firms in the environmental industry, firms in the high-tech industry, firms in the infrastructure industry, firms in the agriculture industry, firms in the health care and culture industries, real estate firms, and the firms in the 2008 Sichuan earthquake disaster zone. Then, we include as controls *AFTER*×*FOURTRILLION* in regression model (1) and *UE*×*FOURTRILLION* and *AFTER*×*UE*×*FOURTRILLION* in regression model (2). None of our inferences are affected (see Panel C of Table 8).

5.2. Evaluating the parallel trends assumption

We identify the effect of the 2007 public enforcement campaign using a difference-in-differences research design. The treatment firms (i.e., high *SOLVED_SELF* firms) are those more significantly affected by the 2007 public enforcement campaign while the control firms (i.e., low

SOLVED_SELF firms) are those less significantly affected by the 2007 public enforcement campaign. Inferences from our difference-in-differences specification rely on the maintained identifying assumption that, absent the treatment (i.e., the 2007 public enforcement campaign), both treatment firms and control firms would have continued to exhibit similar trends. To test the validity of this assumption, we next examine whether relatively high *SOLVED_SELF* firms and relatively low *SOLVED_SELF* firms exhibit parallel trends before the announcement of the 2007 public enforcement campaign. Specifically, we use the same sample firms to rerun the firm-fixed effects regression models (1) and (2) over 2003-2006 except that *AFTER* equals one for 2005-2006 and zero for 2003-2004. Table 9 shows the regression results of *OREC*, ERC, and *OROA* for the pseudo period 2003-2006. For brevity, we only report the coefficients on the interaction variables of interest. The coefficients on all the interaction terms are not significant at the 5% significance level. If anything, the coefficient on *ln(SOLVED_SELF)×AFTER* in the *OROA* model is marginally negative, which is opposite to the significantly positive coefficient on the same interaction term in Table 6. Overall, we find little evidence of violation of the parallel trends assumption for our difference-in-differences specification.

5.3. Endogeneity of SOLVED_SELF

One potential concern of our regression results in Tables 4-6 is that *SOLVED_SELF* could be endogenous. For example, one may argue that high *SOLVED_SELF* firms may be better governed firms and therefore they are more willing to self-confess and correct their governance problems in the self-assessment reports. We wish to emphasize that the self-assessment report was not an act of voluntary corporate disclosure but instead was forced by the CSRC and therefore can be taken as exogenous from an individual firm's perspective. More importantly, Ke and Zhang (2015) find that it is the firms with *weaker* corporate governance systems that were more likely to disclose and correct corporate governance noncompliance problems during the 2007 public enforcement campaign. This latter finding is not surprising because, as argued by Ke and Zhang (2015), better governed firms have an incentive to bond to good corporate governance *prior to* the CSRC's intervention in 2007. Hence, it is unlikely that the high *SOLVED_SELF* firms are voluntary adopters of strong corporate governance.

One may also argue that high *SOLVED_SELF* firms happen to expect better future firm performance and therefore they are more willing to self-confess and correct their governance problems in the self-assessment reports, especially those minor and easy-to-fix governance problems. We wish to indicate first that the corrected problems in the self-assessment reports are not minor problems (see tables 4-6). It is also unclear why firms that expect better future firm performance are more willing to self-confess and correct their governance problems. Furthermore, even if this alternative explanation can explain our accounting performance results in Table 6, it cannot explain our tunneling and ERC results in Tables 4 and 5. Hence, taken as a whole, our results are consistent with the effect of the 2007 public enforcement campaign rather than this second alternative explanation.

To further reduce the endogeneity concern of *SOLVED_SELF*, we also rerun the regression results in Tables 4-6 using a propensity score matching approach (see Table 10). To do so, we first convert both *SOLVED_SELF* and *SOLVED_CSRC* into dummies using the 75th percentile cutoffs (6 for both cases) of the full sample (denoted as *SOLVED_SELFD* and *SOLVED_CSRCD*, respectively). Then we use the propensity scores from the regression of *SOLVED_SELFD* detailed in the notes to Table 10 to match with replacement the *SOLVED_SELFD*=1 firms with the *SOLVED_SELFD*=0 firms. Panel A of Table 10 shows the descriptive statistics of the firm characteristics before versus after the propensity score matching. After the matching, none of the firm characteristics are significantly different for the *SOLVED_SELFD*=1 firms and the *SOLVED_SELFD*=0 firms. Panel B of Table 10 replicates the firm fixed effects regression results of Tables 4-6 for the full sample and Panel C of Table 10 shows the firm fixed effects regression results of Tables 4-6 for the propensity score matched sample. The inferences in Panel B using *SOLVED_SELFD* and *SOLVED_CSRCD* are similar to those in Tables 4-6. More importantly, the regression results for the propensity score matched sample in Panel C of Table 10 continue to hold. The only exception is that the coefficient on *SOLVED_SELFD*×*AFTER* is no longer significant at the 10% level in the OREC regression, though the magnitude of the coefficient is still comparable to that in Table 4.

6. Conclusion

A widely held view in the finance literature is that investor protection in general and law enforcement in particular are vital for financial reporting, corporate financing, financial market development and economic growth. While it is relatively easy to propose investor protection regulations, the enforcement of such regulations is often ineffective in less developed economies. The objective of this study is to better understand how to enforce investor protection laws in weak investor protection countries. Specifically, we examine the efficacy of one unique public enforcement campaign in 2007 undertaken by the China Securities Regulatory Commission (CSRC) to enforce China's first mandatory Corporate Governance Code issued in January 2002.

The 2007 public enforcement campaign is interesting to study because it differs from past public enforcement activities in three crucial aspects. First, the 2007 campaign provides a very detailed check list asking a lot of specific questions about a firm's corporate governance status. Second, the 2007 campaign is much more transparent with regard to the disclosure of identified corporate governance noncompliance problems and the subsequent correction of the problems. Third, the 2007 campaign required the CSRC regional offices to be more involved than before in monitoring publicly listed firms' implementation of the public enforcement campaign. Finally, the 2007 campaign imposed more binding penalties for firms that fail to timely correct the identified governance noncompliance problems.

Judging by the number of identified and corrected corporate governance noncompliance problems, the 2007 campaign appears to be a huge success. Specifically, we find that the 2007 public enforcement campaign forced our sample of 1,187 unique listed firms to disclose more than 11,600 corporate governance noncompliance problems. Approximately half of the problems were identified by the firms themselves prompted by the public enforcement campaign while the other half were identified by the CSRC's regional offices in the subsequent independent assessment. The most common problems relate to the board of directors and internal control. More importantly, we find that the affected firms claimed to have corrected more than 90% of the disclosed problems by the end of the public enforcement campaign in late 2008.

We find that correcting the corporate governance problems self-confessed by the firms themselves resulted in a significant reduction in controlling shareholders' tunneling via inter-corporate loans (Jiang et al. 2010), an increase in earnings quality measured by the earnings response coefficient,

and a significant improvement in net shareholder value measured by future accounting performance. We also find that the presence of self-confessed governance noncompliance problems is associated with higher tunneling, reduced earnings quality, and lower operating performance in the period prior to the public enforcement campaign. In contrast, we find no evidence of similar effects for the CSRC-identified governance noncompliance problems, consistent with the hypothesis that the CSRC-identified governance noncompliance problems are not as significant as those identified by the firms themselves. This latter finding may not be surprising because our sample firms were given the first opportunity to self-report their governance noncompliance problems during the public enforcement campaign. In addition, all firms knew in advance that the CSRC would perform its own independent assessment of the firms' governance law compliance record and therefore may have voluntarily reported the most significant governance noncompliance in their self-assessment reports.

Taken as a whole, the regression results for the 2007 campaign suggest that public enforcement, if appropriately implemented, still matters in helping improve investor protection and ultimately shareholder value in weak investor protection countries. Our results are significant because we are the first study to directly test the effect of public enforcement on shareholder value in weak investor protection countries.

Since our study is limited to one specific example of public enforcement, we don't rule out the possibility that other types of public enforcement may be as effective in protecting investors. We call for more research to better understand the economic consequences of public enforcement on shareholder value, especially in weak investor protection countries, where effective law enforcement matters the most.

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Appendix A. Examples of the corporate governance problems identified in the 2007 campaign

Category	Sub-category	Problems	Remedial Solutions
1. Controlling Shareholders	Direct product market competition	There is direct product market competition between the listed firms and the controlling shareholders.	The listed firms will avoid direct product market competition by acquiring shares or assets or by repositioning of relevant products.
	Property rights	The listed firms' property ownership/operating system is not independent of the controlling shareholders. The transfer of ownership of the property, brand, lands or shares is not fully completed.	The formalities for transfer of ownership of the property, brand, or shares have been completed. The authorization from controlling shareholders on the use of related assets, such as market platform or land, has been achieved.
	Independence in staff from the controlling shareholders	The listed firms' board members or senior managers concurrently hold positions (such as chairman of the board) in the controlling shareholders' company and receive compensation from the controlling shareholders. The internal audit department or legal affairs department is not independent of the controlling shareholders. The recruitment of board members or senior managers, such as independent directors, are intervened by the controlling shareholders.	The relevant institutions and personnel have been adjusted to maintain complete independence from the controlling shareholders.
	Tunneling	The listed firms fail to establish a long-term mechanism to prevent misusing funds by the controlling shareholders. Or the proposal has not been approved by the shareholders' meeting.	The efficient mechanisms have been approved to prevent the controlling shareholders from misusing funds of the company.
2. Shareholders' meeting	Participation	The shareholders' participation rate is low. The listed firms never adopt an online-voting mechanism to improve participation rate.	Online voting will be used at general shareholders' meeting as an alternative measure to improve shareholders' participation rate.
	Cumulative voting system	The listed firms fail to adopt a cumulative voting system in the board election. The voting related rules in Article of Association need to be revised according to updated regulations.	Cumulative voting will be adopted in shareholders' meetings for the election of directors. Cumulative voting rules have been revised.
	Proxy voting	The proxy voting documents/procedures are incomplete. e.g., the authorized duties are not detailed in the statement.	The proxy voting procedures have been improved. Appropriate proxy statements are required to be re-submitted by the shareholders.
	Record/filings	The discussion details of general meetings are not appropriately recorded. The board of directors does not sign on the meetings' report. The filings are not appropriately preserved.	The listed firms will strengthen the training of related personnel and will ensure that the records are complete and the filings are appropriately preserved.

	Attendance of independent directors	Independent directors fail to report their duties in shareholders' meeting. Board members or senior managers fail to attend shareholders' meeting.	The independent directors are required to report their duties in the annual general meetings. The listed firms will strengthen the training of related directors and senior managers and require them to attend general meetings.
	Rules of shareholders' meeting	Articles in the shareholders' meeting principle are inconsistent with relevant regulations and need to be revised.	The board of directors has made amendments to the rules of shareholders' general meetings.
3. Board of Directors	Responsibilities	The specialized board committees perform their duties poorly. Independent directors do not issue an independent opinion for important proposal/transactions. The board of supervisors does not participate actively in board meetings.	The listed firms will strengthen the functions of the specialized board committees. Independent directors are required to provide independent opinions and constructive advice to the companies. The supervisors are required to make relevant resolutions.
	Establishment	The listed firms fail to set up specialized board committees. The ratio of independent directors is lower than one-third. The supervisors are disqualified. For example, they don't have professional knowledge or working experience in law or accounting.	The specialized board committees have been set up. The number of independent directors has met the regulatory requirements. Qualified supervisors have been appointed.
	Board meeting procedures	The listed firms fail to establish rules on board meeting procedures or independent directors' duties. The relevant rules are incomplete and need to be revised.	The rules for the board meeting or independent directors have been established or revised, and the rules have been approved by the board of directors.
	Record	The discussion details of board meetings are not appropriately recorded. The board of directors does not sign on the meetings' report. The relevant filings are not appropriately preserved.	The listed firms will strengthen the training of related personnel and ensure that the records are complete and the filings are appropriately preserved.
	Board meeting attendance	The ratio of authorized attendance is high. The rate of attendance in person is low.	The directors are required to perform their duties as required by relevant regulations.
	Training	There is a lack of law/regulation-related training for board members.	The listed firms will further strength the training of relevant laws and regulations to the directors and the board members are required to attend the training organized by the CSRC or the stock exchanges.
4. Management's Responsibilities	Working protocols for senior managers	The listed firms fail to establish/revise working protocols for the senior managers. The listed firms do not establish rules to specify senior managers' duties/responsibilities.	The board of directors had revised the working protocols. The company has specified senior managers' duties and responsibilities in its articles of association.
	Training	There is a lack of law/regulation-related training for senior managers	The listed firms will strength the training of relevant laws and regulations by requiring the senior managers to participate the training events organized by the CSRC or stock exchanges.
	Insider trading	The listed firms fail to establish the policy as required by the Shares Holding and Trading Regulation for directors, supervisors and senior managers in order to regulate their stock trading behavior.	The policies required by the Shares Holding and Trading Regulation for directors, supervisors and senior managers has been established and has been approved by the board.

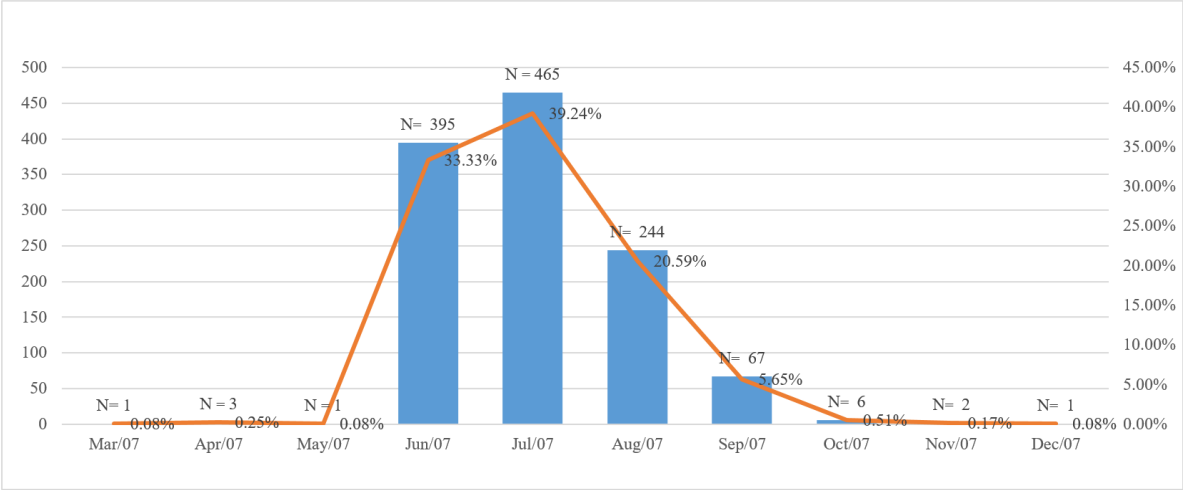
5. Internal control	Policies on the use of proceeds from external financing	The listed firms fail to establish policies on the use of proceeds from external financing.	The policies on the use of proceeds from external financing have been established and have been approved by the board.
	Staff training	There is a lack of operation-related training for the staff.	The listed firms have provided more training to related staff in order to enhance their functions.
	Internal control policies	Internal control policies are incomplete and need to be revised. The listed firms fail to establish a legal affairs department or a securities affairs department.	The internal control system has been updated and improved. The legal affairs department or a securities affairs department has been established.
	Internal audit	The listed firms fail to establish an internal audit department. The staff in the internal audit department concurrently hold positions in other departments.	An internal audit department has been established. The problem of dual positions has been solved.
	Risk management	The transfer of ownership of the property, brand, or other assets is not fully completed. The amount of guarantee for outside parties is high.	The formalities for transferring the ownership of property, brand, or other assets have been completed. The amount of guarantee for outside parties has been reduced.
	Related party transactions (RPT)	The relevant procedures for approval, evaluation and disclosure of RPT are incomplete.	The RPT rules haven been improved to ensure that relevant procedures for approval, evaluation and disclosure of RPT comply with relevant policies.
	Subsidiary Companies	The listed firms failed to establish internal control policies related to subsidiary companies. The management or control of the subsidiary companies is weak.	The policies related to subsidiary companies have been established. The listed firms strengthen the management over subsidiary companies by stringently following related policies.
6. Executive Compensation and Accountability	Incentive mechanism	The listed firms fail to establish or improve a long-term incentive mechanism.	The incentive mechanism has been established or improved.
	Supervision of managerial Compensation	The compensation contract of senior managers has not been approved by board meeting or shareholders' meeting.	The compensation contract has been approved by the board of directors and the general shareholders' meeting.
7. Corporate Disclosure	Investor relations	The listed firms have a poor management over investor relations or fail to establish relevant policies on investor reception. The listed firms fail to communicate effectively with investors or to update the information on the websites on a timely basis.	The investor relation policies have been established. The investor relations system has been improved by appointing full-time staff responsible for investor relations, setting up hotlines and designated website modules for investors in order to exchange information and interact with investors on a timely basis.
	Information disclosure policy/functions	Information disclosure policy is incomplete and needs to be revised based on the relevant regulations. Information disclosure functions need to be improved.	The information disclosure policies have been improved. The listed firms require relevant personnel to gain a better understanding of the information disclosure regulations in order to improve information disclosure quality.
	Information disclosure record	The listed firms fail to disclose information timely, completely and accurately. The listed firms are penalized by the stock exchanges or the CSRC for poor information disclosure practices.	The listed firms require relevant personnel to gain a better understanding of the information disclosure regulations in order to disclose information timely, completely and accurately.

Appendix B. Variable definitions

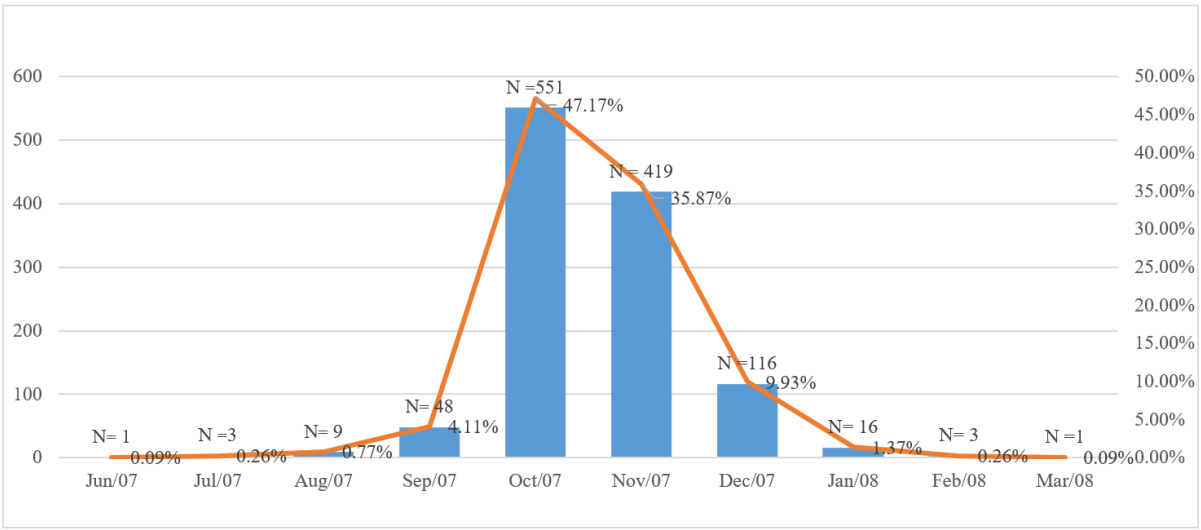
Variable		Definition
OREC	=	Net other receivables deflated by total assets (Jiang et al. 2010);
OROA	=	Total operating income divided by total assets;
CAR	=	The market-adjusted three-trading day cumulative abnormal return centered on the quarterly earnings announcement date;
SOLVED	=	The number of corporate governance noncompliance problems which were identified by the 2007 public enforcement campaign and had been solved by the filing date of the follow-up report; *SOLVED* is the sum of *SOLVED_SELF* and *SOLVED_CSRC*;
SOLVED_SELF	=	The number of corporate governance noncompliance problems which were identified by firms themselves and had been solved by the filing date of the follow-up report;
SOLVED_CSRC	=	The number of corporate governance noncompliance problems which were identified by the CSRC and had been solved by the filing date of the follow-up report;
AFTER	=	1 for the years 2008-2010, and zero for years 2004-2006;
SIZE	=	Natural log of total assets;
LAYER	=	The number of intermediate layers between a listed firm and its ultimate controller through the longest pyramidal chain;
ROA	=	Net income divided by total assets;
LARGEHLD	=	Percentage of shares held by the listed firm's largest shareholder;
UE	=	Quarterly unexpected earnings, which is defined as reported earnings before extraordinary items minus the earnings of the same quarter in the previous year, scaled by the stock price at the beginning of the *CAR* measurement period (i.e., the closing stock price of trading day -2);
MB	=	The ratio of market value of equity to book value of equity;
LNMV	=	Natural log of market value of equity;
STDRET	=	The standard deviation of daily stock returns in quarter t, with a required minimum of 10 non-missing daily returns;
LEV	=	Total liabilities divided by total assets;
LOSS	=	1 if the quarterly earnings before extraordinary items is negative, and zero otherwise;
|UE|	=	The absolute value of UE;
FQTR4	=	1 if the observation quarter is fiscal quarter four, and zero otherwise;
RESTRUCTURE	=	1 if the extraordinary item as a percentage of total assets in the quarter is less than or equal to –5%, and zero otherwise;
STDOROA	=	Standard deviation of OROA in the prior three years (t-3, t-1).

Figure 1. The frequency distribution of the announcement dates of the self-assessment report (Panel A), the remediation report (Panel B), and the follow-up report (Panel C)

Panel A. The announcement dates of the self-assessment report



Panel B. The announcement dates of the remediation report



Panel C. The announcement dates of the follow-up report

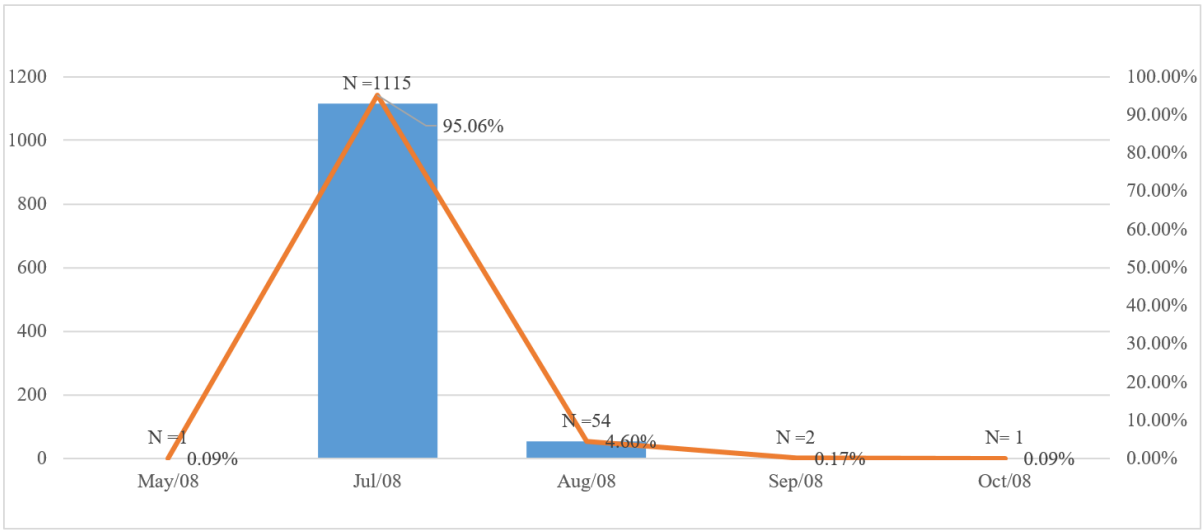


Table 1. The frequency distribution of the corporate governance noncompliance problems identified by firms themselves in the self-assessment report and by the CSRC in the remediation report, respectively, across the eight corporate governance categories.

Panel A. Noncompliance problems identified by firms themselves

Categories	IDENTIFY_SELF	%IDENTIFY_SELF	SOLVED_SELF	%SOLVED_SELF	%CORRECTION
1. Controlling shareholders	324	5.60%	254	4.84%	78.4%
2. Shareholders' Meeting	225	3.89%	219	4.17%	97.3%
3. Board of Directors	1529	26.43%	1462	27.84%	95.6%
4. Management's Responsibilities	409	7.07%	387	7.37%	94.6%
5. Internal Control	1771	30.61%	1656	31.54%	93.5%
6. Executive Compensation and Accountability	302	5.22%	105	2.00%	34.8%
7. Corporate Disclosure	1111	19.20%	1088	20.72%	97.9%
8. Other Miscellaneous Governance Issues	114	1.97%	80	1.52%	70.2%
Total	5785	100.00%	5251	100.00%	90.8%

Panel B. Noncompliance problems identified by the CSRC

Categories	IDENTIFY_CSRC	%IDENTIFY_CSRC	SOLVED_CSRC	%SOLVED_CSRC	%CORRECTION
1. Controlling shareholders	607	10.37%	501	9.12%	82.5%
2. Shareholders' Meeting	634	10.83%	631	11.49%	99.5%
3. Board of Directors	1802	30.77%	1750	31.87%	97.1%
4. Management's Responsibilities	355	6.06%	328	5.97%	92.4%
5. Internal Control	1745	29.80%	1619	29.48%	92.8%
6. Executive Compensation and Accountability	81	1.38%	55	1.00%	67.9%
7. Corporate Disclosure	580	9.90%	571	10.40%	98.4%
8. Other Miscellaneous Governance Issues	52	0.89%	36	0.66%	69.2%
Total	5856	100.00%	5491	100.00%	93.8%

Panel C. Distribution of self-confessed problems classified using the check lists from the 2002 and 2007 campaigns

Categories	IDEN_SELF0207	IDEN_SELF07	NEITHER_SELF	IDEN_SELF	IDEN_SELF0207%	IDEN_SELF07%	NEITHER_SELF%
1. Controlling shareholders	220	93	11	324	67.9%	28.7%	3.4%
2. Shareholders' Meeting	43	182	0	225	19.1%	80.9%	0.0%
3. Board of Directors	322	949	258	1529	21.1%	62.1%	16.9%
4. Management's Responsibilities	2	154	253	409	0.5%	37.7%	61.9%
5. Internal Control	654	1022	95	1771	36.9%	57.7%	5.4%
6. Executive Compensation and Accountability	80	222	0	302	26.5%	73.5%	0.0%
7. Corporate Disclosure	28	1083	0	1111	2.5%	97.5%	0.0%
8. Other Miscellaneous Governance Issues	0	22	92	114	0.0%	19.3%	80.7%
Total	1349	3727	709	5785	23.3%	64.4%	12.3%

Panel D. Distribution of CSRC-identified problems classified using the check lists from the 2002 and 2007 campaigns

Categories	IDEN_CSRC0207	IDEN_CSRC07	NEITHER_CSRC	IDEN_CSRC	IDEN_CSRC0207%	IDEN_CSRC07%	NEITHER_CSRC%
1. Controlling shareholders	330	273	4	607	54.4%	45.0%	0.7%
2. Shareholders' Meeting	273	361	0	634	43.1%	56.9%	0.0%
3. Board of Directors	575	1121	106	1802	31.9%	62.2%	5.9%
4. Management's Responsibilities	0	275	80	355	0.0%	77.5%	22.5%
5. Internal Control	642	1097	6	1745	36.8%	62.9%	0.3%
6. Executive Compensation and Accountability	21	60	0	81	25.9%	74.1%	0.0%
7. Corporate Disclosure	77	503	0	580	13.3%	86.7%	0.0%
8. Other Miscellaneous Governance Issues	0	6	46	52	0.0%	11.5%	88.5%
Total	1918	3696	242	5856	32.8%	63.1%	4.1%

IDENTIFY_SELF is the total number of identified corporate governance noncompliance problems. %IDENTIFY_SELF is IDENTIFY_SELF for a particular category divided by the total number of self-confessed noncompliance problems from all categories. SOLVED_SELF is the number of self-confessed noncompliance problems that are solved as of the filling date of the follow-up report. % SOLVED_SELF is SOLVED_SELF for a particular category divided by the total number of self-confessed noncompliance problems that are solved as of the filling date of the follow-up report. IDENTIFY_CSRC is the number of CSRC-identified corporate governance noncompliance problems. %IDENTIFY_CSRC is IDENTIFY_CSRC for a particular category divided by the total number of CSRC-identified noncompliance problems from all the categories. SOLVED_CSRC is the number of CSRC-identified corporate governance noncompliance problems that are solved as of the filling date of the follow-up report. %

SOLVED_CSRC is SOLVED_CSRC for a particular category divided by the total number of CSRC-identified noncompliance problems that are solved as of the filling date of the follow-up report. %CORRECTION is SOLVED_SELF divided by IDENTIFY_SELF in Panel A and SOLVED_CSRC divided by IDENTIFY_CSRC in Panel B. IDEN_SELF0207 is the number of self-confessed problems targeted by both the 2002 and 2007 check lists. IDEN_SELF07 is the number of self-confessed problems targeted by only the 2007 check list. NEITHER_SELF07 is the number of self-confessed problems targeted by neither list. IDEN_SELF0207% is defined as IDEN_SELF0207 divided by IDEN_SELF. IDEN_SELF07% is defined as IDEN_SELF07 divided by IDEN_SELF. NEITHER_SELF% is defined as NEITHER_SELF divided by IDEN_SELF. IDEN_CSRC0207 is the number of CSRC-identified problems targeted by both the 2002 and 2007 check lists. IDEN_CSRC07 is the number of CSRC-identified problems targeted by only the 2007 check list. NEITHER_CSRC is the number of CSRC-identified problems targeted by neither list. IDEN_CSRC0207% is defined as IDEN_CSRC0207 divided by IDEN_CSRC. IDEN_CSRC07% is defined as IDEN_CSRC07 divided by IDEN_CSRC. NEITHER_CSRC% is defined as NEITHER_CSRC divided by IDEN_CSRC.

Table 2. The distribution of the noncompliance correction rates measured at the firm level, by the time of the self-assessment report, the remediation report, and the follow-up report, respectively, for the self-confessed and CSRC- identified corporate governance noncompliance problems.

Panel A. Correction rates for self-confessed noncompliance problems (%CORRECTION)

By the time of	N	mean	Median	Std. Dev.	Min	25%	75%	Max
Self-assessment report	1182	39.87%	40.00%	29.01%	0.00%	16.67%	61.54%	100.00%
Remediation report	1182	78.29%	83.33%	26.19%	0.00%	66.67%	100.00%	100.00%
Follow-up report	1182	90.69%	100.00%	17.65%	0.00%	83.33%	100.00%	100.00%

Panel B. Correction rates for CSRC-identified noncompliance problems (%CORRECTION)

By the time of	N	mean	Median	Std. Dev.	Min	25%	75%	Max
Remediation report	1101	74.43%	83.33%	29.90%	0.00%	57.14%	100.00%	100.00%
Follow-up report	1101	93.35%	100.00%	16.98%	0.00%	100.00%	100.00%	100.00%

%CORRECTION is defined as in Table 1 except that it is defined at the firm level. The number of unique firms in Table 2 is smaller than 1,187 because a few firms have either zero self-confessed problems or zero CSRC-identified problems.

Table 3. Predictions on the effect of the public enforcement campaign on tunneling, ERC, and accounting performance

Firm type	**Shareholder value in the pre-period**	**Shareholder value in the post-period**
Type One firms	lower tunneling higher ERC higher accounting performance	lower tunneling higher ERC higher accounting performance
Type Two firms	higher tunneling lower ERC lower accounting performance	lower tunneling higher ERC higher accounting performance

Type One firms: firms that had relatively strong corporate governance quality prior to 2007 and therefore disclosed and corrected very few corporate governance noncompliance problems during the public enforcement campaign (i.e., firms with low *SOLVED*).

Type Two firms: firms that had relatively weak corporate governance quality prior to 2007 and therefore were forced to disclose and correct a significant number of corporate governance noncompliance problems during the public enforcement campaign (i.e., firms with high *SOLVED*). The predictions (low or high) are based on the assumption that weaker corporate governance is associated with higher tunneling, lower earnings response coefficient (ERC), and lower accounting performance while correcting the identified corporate governance noncompliance problems leads to lower tunneling, higher ERC and higher accounting performance.

Please see Appendix B for the definition of *SOLVED*.

Table 4. Regression results of inter-corporate loans (*OREC*)

Panel A. Descriptive statistics of regression variables

Descriptive statistics

Variable	N	Mean	Median	Std. Dev.	Min	25%	75%	Max
OREC	7100	0.052	0.018	0.095	0.000	0.006	0.050	0.572
SIZE	7100	21.396	21.332	1.160	14.108	20.681	22.062	27.488
LAYER	7100	2.495	2.000	0.917	1.000	2.000	3.000	9.000
ROA	7100	0.015	0.023	0.082	-0.411	0.006	0.048	0.194
LARGEHLD	7100	0.387	0.364	0.161	0.092	0.259	0.511	0.758
MARKETIZATION	7100	8.000	7.970	2.111	0.380	6.270	9.770	11.800

Descriptive statistics at the individual firm level

Variable	N	Mean	Median	Std. Dev.	Min	25%	75%	Max
SOLVED_SELF	1187	4.424	4.000	2.033	0.000	3.000	6.000	18.000
SOLVED_CSRC	1187	4.626	4.000	3.676	0.000	2.000	6.000	28.000
ln(SOLVED_SELF+1)	1187	1.616	1.609	0.406	0.000	1.386	1.946	2.944
ln(SOLVED_CSRC+1)	1187	1.519	1.609	0.681	0.000	1.099	1.946	3.367

Panel B. Regression results of OREC

	Regression A		Regression B	
	Coeff.	p-value	Coeff.	p-value
ln(SOLVED_SELF+1) × AFTER	-0.012*	0.083	-0.015**	0.024
ln(SOLVED_CSRC+1) × AFTER	-0.001	0.715	-0.001	0.733
ln(SOLVED_SELF+1)			0.011	0.134
ln(SOLVED_CSRC+1)			0.002	0.561
SIZE	-0.004	0.485	-0.021***	0.000
SIZE × AFTER	0.021***	0.000	0.012***	0.001
LAYER	-0.000	0.874	0.004	0.142
LAYER × AFTER	-0.004	0.133	-0.003	0.241
ROA	-0.306***	0.000	-0.581***	0.000
ROA × AFTER	0.262***	0.000	0.497***	0.000
LARGEHLD	-0.092***	0.000	-0.053***	0.000
LARGEHLD × AFTER	-0.012	0.408	0.038***	0.006
MARKETIZATION	0.009***	0.007	-0.001	0.518
MARKETIZATION × AFTER	0.000	0.716	0.000	0.978
Year fixed effects	YES		YES	
Firm fixed effects	YES		NO	
Industry fixed effects	NO		YES	
N	7100		7100	
Adj. R^2	0.249		0.301	

See Appendix B for variable definitions. *OREC* is measured at the end of year t while *SIZE*, *LAYER*, *ROA*, *LARGEHLD*, and *MARKETIZATION* are measured at the end of year t-1. ***, **, * denote statistical significance at the 1%, 5%, 10% levels (two-tailed), respectively. Two-tailed robust p values are clustered at the firm level. To reduce the influence of outliers, we winsorize all the continuous ratio variables at the top and bottom one percentiles.

Table 5. Regression results of the earnings response coefficient model (*ERC*)

Panel A. Descriptive statistics of regression variables

Descriptive statistics

Variable	N	Mean	Median	Std. Dev.	Min	25%	75%	Max
CAR	20243	-0.002	-0.004	0.052	-0.139	-0.033	0.027	0.172
UE	20243	-0.000	0.000	0.021	-0.120	-0.004	0.004	0.090
MB	20243	3.376	2.586	3.305	-7.653	1.695	4.098	20.188
LNMV	20243	21.810	21.684	1.032	18.896	21.077	22.412	28.125
STDRET	20243	0.031	0.030	0.010	0.014	0.024	0.038	0.058
LEV	20243	0.537	0.528	0.272	0.076	0.389	0.655	2.855
LOSS	20243	0.279	0.000	0.448	0.000	0.000	1.000	1.000
|UE|	20243	0.010	0.004	0.018	0.000	0.001	0.011	0.120
FQTR4	20243	0.309	0.000	0.462	0.000	0.000	1.000	1.000
RESTRUCTURE	20243	0.006	0.000	0.079	0.000	0.000	0.000	1.000

Descriptive statistics at the individual firm level

Variable	N	Mean	Median	Std. Dev.	Min	25%	75%	Max
SOLVED_SELF	1169	4.406	4.000	2.025	0.000	3.000	6.000	18.000
SOLVED_CSRC	1169	4.614	4.000	3.648	0.000	2.000	6.000	28.000
ln(SOLVED_SELF+1)	1169	1.614	1.609	0.404	0.000	1.386	1.946	2.944
ln(SOLVED_CSRC+1)	1169	1.518	1.609	0.681	0.000	1.099	1.946	3.367

Panel B. Regression results of *ERC*

	Regression A		Regression B	
	Coeff.	p-value	Coeff.	p-value
UE × *ln(SOLVED_SELF+1)* × *AFTER*	0.260***	0.007	0.284***	0.002
UE × *ln(SOLVED_CSRC+1)* ×*AFTER*	-0.034	0.551	-0.045	0.424
UE × *ln(SOLVED_SELF+1)*	-0.211***	0.007	-0.214***	0.004
UE × *ln(SOLVED_CSRC+1)*	0.012	0.793	0.018	0.688
UE	1.434	0.101	1.365	0.120
UE ×*AFTER*	-1.833	0.11	-2.243*	0.051
UE ×*MB*	-0.003	0.795	-0.006	0.557
UE ×*LNMV*	-0.032	0.354	-0.026	0.451
UE ×*STDRET*	-1.046	0.832	-1.719	0.724
UE ×*LEV*	0.004	0.96	-0.022	0.755
UE ×*LOSS*	-0.198**	0.011	-0.119	0.115
UE ×|*UE*|	-2.287**	0.018	-2.773***	0.004
UE ×*FQTR4*	-0.068	0.334	-0.070	0.320
UE ×*RESTRUCTURE*	-0.16	0.245	-0.135	0.335
UE ×*MB* ×*AFTER*	-0.007	0.561	-0.005	0.696
UE ×*LNMV* ×*AFTER*	0.071	0.123	0.087*	0.060
UE ×*STDRET* ×*AFTER*	9.857*	0.084	10.467*	0.064
UE ×*LEV* ×*AFTER*	-0.056	0.594	-0.089	0.428
UE ×*LOSS* ×*AFTER*	-0.103	0.333	-0.075	0.463
UE ×|*UE*| ×*AFTER*	-1.65	0.202	-1.320	0.300
UE ×*FQTR4* ×*AFTER*	-0.079	0.399	-0.106	0.255
UE ×*RESTRUCTURE* ×*AFTER*	0.041	0.871	0.043	0.860
Year-quarter fixed effects	YES		YES	
Firm fixed effects	YES		NO	
Industry fixed effects	NO		YES	
N	20243		20243	
Adj. R^2	0.031		0.031	

See Appendix B for variable definitions. *CAR* is measured in quarter t. *MB* and *LEV* are measured at the end of quarter t-1 while *STDRET*, *LOSS*, *FQTR4*, and *RESTRUCTURE* are measured at the end of quarter t. ***, **, * denote statistical significance at the 1%, 5%, 10% levels (two-tailed), respectively. Two-tailed robust p values are clustered at the firm level. To reduce the influence of outliers, we winsorize all the continuous ratio variables at the top and bottom one percentiles.

Table 6. Regression results of future accounting performance (*OROA*)

Panel A. Descriptive statistics of regression variables

Descriptive statistics

Variable	N	Mean	Median	Std. Dev.	Min	25%	75%	Max
OROA	6719	0.021	0.027	0.090	-0.511	0.005	0.059	0.224
SIZE	6719	21.447	21.381	1.141	11.348	20.731	22.095	27.488
MB	6719	3.252	2.291	3.527	-6.762	1.446	3.942	21.344
LEV	6719	0.542	0.524	0.296	0.077	0.387	0.652	2.857
LARGEHLD	6719	0.387	0.364	0.162	0.094	0.259	0.513	0.750
STDOROA	6719	0.040	0.020	0.068	0.001	0.009	0.044	0.588

Descriptive statistics at the individual firm level

Variable	N	Mean	Median	Std. Dev.	Min	25%	75%	Max
SOLVED_SELF	1175	4.400	4.000	2.029	0.000	3.000	6.000	18.000
SOLVED_CSRC	1175	4.603	4.000	3.646	0.000	2.000	6.000	28.000
ln(SOLVED_SELF+1)	1175	1.612	1.609	0.406	0.000	1.386	1.946	2.944
ln(SOLVED_CSRC+1)	1175	1.515	1.609	0.682	0.000	1.099	1.946	3.367

Panel B. Regression results of OROA

	Regression A		Regression B	
	Coeff.	p-value	Coeff.	p-value
ln(SOLVED_SELF+1) × AFTER	0.013**	0.013	0.019***	0.000
ln(SOLVED_CSRC+1) ×AFTER	-0.000	0.902	0.003	0.334
ln(SOLVED_SELF+1)			-0.019***	0.000
ln(SOLVED_CSRC+1)			-0.005*	0.075
SIZE	-0.007	0.236	0.011***	0.000
SIZE × AFTER	-0.002	0.506	0.003	0.241
MB	0.002	0.249	0.001	0.314
MB × AFTER	0.002	0.188	0.002	0.140
LEV	-0.022	0.235	-0.078***	0.000
LEV × AFTER	-0.021	0.177	-0.019	0.143
LARGEHLD	0.097***	0.000	0.052***	0.000
LARGEHLD × AFTER	0.004	0.787	-0.018	0.226
STDOROA	-0.017	0.771	-0.091**	0.035
STDOROA × AFTER	0.156*	0.074	0.035	0.600
Year fixed effects	YES		YES	
Firm fixed effects	YES		NO	
Industry fixed effects	NO		YES	
N	6719		6719	
Adj. R^2	0.059		0.212	

See Appendix B for variable definitions. *OROA* is measured at the end of year t while all the control variables (*SIZE*, *MB*, *LEV*, *LARGEHLD*, and *STDOROA*) are measured at the end of year t-1. ***, **, * denote statistical significance at the 1%, 5%, 10% levels (two-tailed), respectively. Two-tailed robust p values are clustered at the firm level. To reduce the influence of outliers, we winsorize all the continuous ratio variables at the top and bottom one percentiles.

Table 7. Regression results for different categories of corporate governance problems identified by the 2007 campaign

	OREC		*ERC*		*OROA*	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
ln(SOLVED_SELF1+1) x *AFTER*	-0.014*	0.072			0.004	0.569
ln(SOLVED_SELF2+1) x *AFTER*	0.003	0.747			0.007	0.322
ln(SOLVED_SELF3+1) x *AFTER*	-0.007	0.264			0.008	0.145
ln(SOLVED_SELF4+1) x *AFTER*	-0.008	0.298			0.002	0.772
ln(SOLVED_SELF5+1) x *AFTER*	-0.018***	0.001			0.002	0.628
ln(SOLVED_SELF6+1) x *AFTER*	-0.010	0.388			0.012	0.281
ln(SOLVED_SELF7+1) x *AFTER*	0.004	0.468			0.004	0.473
ln(SOLVED_SELF8+1) x *AFTER*	0.008	0.660			0.033***	0.005
ln(SOLVED_CSRC1+1) x *AFTER*	-0.010	0.130			0.004	0.492
ln(SOLVED_CSRC2+1) x *AFTER*	0.003	0.667			-0.004	0.472
ln(SOLVED_CSRC3+1) x *AFTER*	-0.003	0.628			-0.004	0.328
ln(SOLVED_CSRC4+1) x *AFTER*	-0.010	0.252			0.005	0.517
ln(SOLVED_CSRC5+1) x *AFTER*	0.005	0.253			0.005	0.214
ln(SOLVED_CSRC6+1) x *AFTER*	-0.006	0.710			-0.016	0.111
ln(SOLVED_CSRC7+1) x *AFTER*	-0.000	0.949			-0.006	0.277
ln(SOLVED_CSRC8+1) x *AFTER*	-0.018	0.578			-0.059*	0.071
UE x ln(SOLVED_SELF1+1) x *AFTER*			-0.230*	0.080		
UE x ln(SOLVED_SELF2+1) x *AFTER*			0.101	0.518		
UE x ln(SOLVED_SELF3+1) x *AFTER*			-0.047	0.671		
UE x ln(SOLVED_SELF4+1) x *AFTER*			0.129	0.351		
UE x ln(SOLVED_SELF5+1) x *AFTER*			0.181*	0.058		
UE x ln(SOLVED_SELF6+1) x *AFTER*			0.323	0.141		
UE x ln(SOLVED_SELF7+1) x *AFTER*			0.296***	0.002		
UE x ln(SOLVED_SELF8+1) x *AFTER*			0.486**	0.041		
UE x ln(SOLVED_CSRC1+1) x *AFTER*			0.026	0.778		
UE x ln(SOLVED_CSRC2+1) x *AFTER*			-0.035	0.727		

UE x ln(SOLVED_CSRC3+1) x *AFTER*	-0.045	0.608
UE x ln(SOLVED_CSRC4+1) x *AFTER*	-0.020	0.877
UE x ln(SOLVED_CSRC5+1) x *AFTER*	0.032	0.689
UE x ln(SOLVED_CSRC6+1) x *AFTER*	-0.088	0.793
UE x ln(SOLVED_CSRC7+1) x *AFTER*	-0.103	0.307
UE x ln(SOLVED_CSRC8+1) x *AFTER*	0.104	0.692

The table shows the firm and time fixed effects regression results of models (1) and (2). SOLVED_SELFi is the number of category i corporate governance noncompliance problems which were identified by firms themselves and had been solved by the filing date of the follow-up report. SOLVED_CSRCi is the number of category i corporate governance noncompliance problems which were identified by the CSRC and had been solved by the filing date of the follow-up report. See Table 1 for the eight categories of corporate governance noncompliance problems. See Appendix B for other variable definitions. We use the same control variables as in Tables 4 to 6, but for brevity, we only report the coefficients on the interaction variables of interest. ***, **, * denote statistical significance at the 1%, 5%, 10% levels (two-tailed), respectively. Two-tailed robust p values are clustered at the firm level. To reduce the influence of outliers, we winsorize all the continuous ratio variables at the top and bottom one percentiles.

Table 8. Confounding events

Panel A. The split share structure reform-control for NONTRADE_OWN

	OREC		ERC		*OROA*	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
ln(SOLVED_SELF+1) × AFTER	-0.012*	0.097			0.013**	0.020
ln(SOLVED_CSRC+1) ×AFTER	-0.001	0.867			-0.000	0.899
NONTRADE_OWN×AFTER_SSSR	0.027	0.213			-0.005	0.787
AFTER_SSSR	-0.031**	0.035			0.009	0.377
UE× ln(SOLVED_SELF+1) × AFTER			0.249**	0.012		
UE× ln(SOLVED_CSRC+1) ×AFTER			-0.037	0.512		
UE×NONTRADE_OWN×AFTER_SSSR			-0.115	0.704		
UE×NONTRADE_OWN			0.280	0.277		
UE×AFTER_SSSR			0.086	0.618		

Panel B. The split share structure reform-control for AFTER_SSSR

	OREC		ERC		*OROA*	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
ln(SOLVED_SELF+1) × AFTER	-0.002	0.640			0.009**	0.036
ln(SOLVED_CSRC+1) ×AFTER	0.003	0.314			-0.003	0.390
AFTER_SSSR× ln(SOLVED_SELF+1)	-0.016**	0.030			0.003	0.598
AFTER_SSSR× ln(SOLVED_CSRC+1)	-0.005	0.163			0.003	0.356
AFTER_SSSR	0.020	0.176			0.003	0.802
UE× ln(SOLVED_SELF+1) × AFTER			0.407***	0.003		
UE× ln(SOLVED_CSRC+1) ×AFTER			-0.047	0.561		
UE× ln(SOLVED_SELF+1) × AFTER_SSSR			-0.134	0.369		
UE× ln(SOLVED_CSRC+1)× AFTER_SSSR			0.015	0.869		
UE×AFTER_SSSR			0.224	0.374		

Panel C. The 2008 stimulus plan

	OREC		ERC		*OROA*	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
ln(SOLVED_SELF+1) × AFTER	-0.012*	0.087			0.013**	0.013
ln(SOLVED_CSRC+1) ×AFTER	-0.001	0.739			-0.001	0.877
AFTER×FOURTRILLION	-0.004	0.374			0.004	0.411
UE× ln(SOLVED_SELF+1) × AFTER			0.276***	0.004		
UE× ln(SOLVED_CSRC+1) ×AFTER			-0.021	0.712		
UE×FOURTRILLION			-0.021	0.785		
AFTER×UE×FOURTRILLION			-0.162	0.146		

The table shows the firm and time fixed effects regression results of models (1) and (2). *AFTER_SSSR* is one for the years after the firm completes the split share structure reform and zero otherwise. *NONTRADE_OWN* is a firm fixed effect that is equal to the stock ownership of all non-tradable shareholders as of the end of the fiscal year prior to the split share structure reform. *FOURTRILLION* is a dummy variable indicating the firms directly targeted by the stimulus plan, including firms in the environmental industry, firms in the high-tech industry, firms in the infrastructure industry, firms in the agriculture industry, firms in the health care and culture industries, real estate firms, and the firms in the 2008 Sichuan earthquake disaster zone. For Panel B's models, we add back year 2007 in order to mitigate the collinearity between *AFTER* and *AFTER_SSSR*. See Appendix B for other variable definitions. We use the same control variables as in Tables 4 to 6, but for brevity, we only report the coefficients on the interaction variables of interest. ***, **, * denote statistical significance at the 1%, 5%, 10% levels (two-

tailed), respectively. Two-tailed robust p values are clustered at the firm level. To reduce the influence of outliers, we winsorize all the continuous ratio variables at the top and bottom one percentiles.

Table 9. The firm and time fixed effects regression results of *OREC*, ERC, and *OROA* for the pseudo time period 2003-2006

	OREC		ERC		*OROA*	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
ln(SOLVED_SELF+1) × AFTER	0.006	0.288			-0.010*	0.066
ln(SOLVED_CSRC+1) ×AFTER	0.002	0.573			-0.001	0.741
UE× ln(SOLVED_SELF+1) × AFTER			-0.103	0.464		
UE× ln(SOLVED_CSRC+1) ×AFTER			0.045	0.564		

The table shows the firm and time fixed effects regression results of models (1) and (2) for the sample firms over 2003-2006. *AFTER* equals one for 2005-2006 and zero for 2003-2004. See Appendix B for other variable definitions. We use the same control variables as in Tables 4 to 6, but for brevity, we only report the coefficients on the interaction variables of interest. ***, **, * denote statistical significance at the 1%, 5%, 10% levels (two-tailed), respectively. Two-tailed robust p values are clustered at the firm level. To reduce the influence of outliers, we winsorize all the continuous ratio variables at the top and bottom one percentiles.

Table 10. The firm and time fixed effects regression results of *OREC*, ERC, and *OROA* using the propensity score matching approach

Panel A. Descriptive statistics before versus after the propensity score matching

Descriptive statistics before the propensity score matching

	SOLVED_SELFD=1 N=150		SOLVED_SELFD=0 N=150		Test for differences in means and medians (p-values)	
Variable	Mean	Median	Mean	Median	Mean	Median
GROWTH	0.106	0.088	0.146	0.130	0.114	0.004
EXT_FIN	0.032	0.017	0.052	0.022	0.193	0.503
CONTROL_WEDGE	0.507	1.000	0.491	0.000	0.712	0.712
SIZE	21.100	21.000	21.400	21.300	0.002	0.003
ROA	-0.001	0.011	0.013	0.022	0.041	0.000
RESTRUCTURE	0.113	0.000	0.095	0.000	0.478	0.478
MUTUAL	0.023	0.000	0.032	0.000	0.104	0.011
BIGAUDIT	0.260	0.000	0.363	0.000	0.014	0.014
HSHARE	0.007	0.000	0.027	0.000	0.132	0.132
MARKETIZATION	0.713	1.000	0.766	1.000	0.158	0.158
OTHER_BLOCK	0.780	1.000	0.672	1.000	0.008	0.008
PRIOR_ENF	0.473	0.000	0.379	0.000	0.027	0.027
CITY_ENF	0.370	0.388	0.346	0.333	0.269	0.196
SOE	0.640	1.000	0.699	1.000	0.143	0.143

Descriptive statistics after the propensity score matching

	SOLVED_SELFD=1 N=150		SOLVED_SELFD=0 N=150		Test for differences in means and medians (p-values)	
Variable	Mean	Median	Mean	Median	Mean	Median
GROWTH	0.106	0.088	0.137	0.108	0.382	0.186
EXT_FIN	0.032	0.017	0.065	0.005	0.133	0.978
CONTROL_WEDGE	0.507	1.000	0.533	1.000	0.645	0.644
SIZE	21.100	21.000	21.000	21.000	0.475	0.321
ROA	-0.001	0.011	0.003	0.018	0.639	0.056
RESTRUCTURE	0.113	0.000	0.153	0.000	0.310	0.309
MUTUAL	0.023	0.000	0.020	0.000	0.530	0.183
BIGAUDIT	0.260	0.000	0.227	0.000	0.503	0.502
HSHARE	0.007	0.000	0.000	0.000	0.318	0.317
MARKETIZATION	0.713	1.000	0.713	1.000	1.000	1.000
OTHER_BLOCK	0.780	1.000	0.793	1.000	0.779	0.778
PRIOR_ENF	0.473	0.000	0.467	0.000	0.908	0.908
CITY_ENF	0.370	0.388	0.353	0.364	0.576	0.376
SOE	0.640	1.000	0.647	1.000	0.904	0.904

Panel B. Results using the full sample

	OREC		ERC		*OROA*	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
SOLVED_SELFD × AFTER	-0.017**	0.036			0.011*	0.099
SOLVED_CSRCD ×AFTER	-0.006	0.334			-0.007	0.210
UE× SOLVED_SELFD × AFTER			0.437***	0.000		
UE× SOLVED_CSRCD ×AFTER			-0.067	0.462		

Panel C. Results using the propensity score matched sample

	OREC		ERC		*OROA*	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
SOLVED_SELFD × AFTER	-0.013	0.150			0.016*	0.085
SOLVED_CSRCD ×AFTER	0.007	0.512			-0.002	0.817
UE× SOLVED_SELFD × AFTER			0.459***	0.002		
UE× SOLVED_CSRCD ×AFTER			0.189	0.307		

The table shows the firm and time fixed effects regression results of models (1) and (2) except that *SOLVED_SELF* and *SOLVED_CSRC* are coded into dummies (*SOLVED_SELFD* and *SOLVED_CSRCD* respectively) using the 75th percentile cutoffs of the full sample. See Appendix B for other variable definitions. We use the same control variables as in Tables 4 to 6, but for brevity, we only report the coefficients on the interaction variables of interest. ***, **, * denote statistical significance at the 1%, 5%, 10% levels (two-tailed), respectively. Two-tailed robust p values are clustered at the firm level. To reduce the influence of outliers, we winsorize all the continuous ratio variables at the top and bottom one percentiles.

To identify the propensity score matched sample used in Panel B, we run the following Probit regression of *SOLVED_SELFD* based on Ke and Zhang (2015) using the available sample firms as of 2007:

$$SOLVED\_SELFD = b0 + b1 \text{ x } TEST\_VAR + \varepsilon$$

where *TEST_VAR* contains the following list of explanatory variables:

GROWTH = The 2-year geometric average of the annual growth rate in net sales.
EXT_FIN = The difference between the firm's actual growth rate and the sustainable growth rate with retained earnings and short term and long term debt financing that maintain a constant debt-to-asset ratio. The actual growth rate is the 2-year geometric average of the annual growth rate in total assets and the sustainable growth rate is the 2-year geometric average of ROE/(1-ROE), where ROE is the return on equity.
CONTROL_WEDGE = 1 if ultimate controlling shareholder's control rights are larger than its cash flow rights in year t-1 when ultimate controllers have at least 10% control rights, and zero otherwise.
SIZE = The logarithm of average total assets during years t-3 to t-1.
ROA = The 3-year average of net income divided by total assets during years t-3 to t-1.
RESTRUCTURE = 1 if the firm has completed restructuring during years t-3 to t-1, and zero otherwise.
MUTUAL = The number of shares held by mutual funds deflated by the total number of outstanding shares in year t-1.
BIGAUDIT = 1 if a firm is audited by the ten largest domestic audit firms or the big-4 international audit firms in year t-1, and zero otherwise. The ten largest domestic audit firm is defined as one whose annual ranking measured by the total audited public clients' assets in year t-1 is in the top 10 of all domestic audit firms.
HSHARE = 1 if a firm is cross listed on the Hong Kong stock exchange in year t-1, and zero otherwise.
MARKETIZATION = 1 if the firms are domiciled in provinces with better market development in year t-1, and zero otherwise. A province is defined as more developed if its marketization index is larger than the median in year t-1. Marketization index is a comprehensive index measuring the market development of the province (see Fan et al. 2011), where higher values indicate greater regional market development.
OTHER_BLOCK = 1 if the second largest shareholder owns at least 5 percent voting rights in year t-1, and zero otherwise.
PRIOR_ENF = 1 if the firm was subject to regulatory (the CSRC or stock exchanges) enforcement actions in the past five years, and zero otherwise. If a firm issues a remediation report after the CSRC's regular inspection, or it is subjected to enforcement actions by the CSRC or the stock exchanges, it is considered to be subject to regulatory enforcement actions.
CITY_ENF = The number of the other firms (excluding the listed firm itself) that were subject to regulatory enforcement actions in the past five years in the same city, divided by the total number of the other listed firms in the city. The definition of regulatory enforcement actions is the same as PRIOR_ENF.
SOE = 1 if the ultimate controller of the firm is the government in year t-1, and zero otherwise.

We match with replacement each *SOLVED_SELFD*=1 firm with a *SOLVED_SELFD*=0 firm requiring the predicted probability scores for the two matched firms to be less than 1%. There are 151 unique *SOLVED_SELFD*=1 firms in the full sample and we successfully identified a match for 150 *SOLVED_SELFD*=1 firms.