Public Enforcement of Securities Laws in Weak Institutional Environments: Evidence from China*

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Abstract: China serves as a quasi-natural experiment to gain insights into the efficacy of public enforcement of securities laws when private enforcement is largely absent. Using a hand-collected sample of comment letters (CLs) on annual reports issued by the Shanghai Stock Exchange, we first show that the price reaction to CL announcements is negative and significant, and that targeted firms are more likely to amend their annual reports compared to firms not in receipt of CLs. However, we find no significant effect of the Exchange's increased enforcement on targeted firms' disclosure quality, nor do we find any evidence of market discipline in terms of higher costs of capital for those firms. Finally, we show that firms in receipt of more severe CLs are more likely to receive CLs in the future and are also more likely to be sanctioned by the regulator. We conclude that an increase in public enforcement does not achieve its intended objective in weak institutional environments.

***Keywords*:** public enforcement, private enforcement, institutional environment, comment letters, disclosure, bid-ask spread, cost of equity, sanction

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Abstract

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I. Introduction

Understanding the role of securities laws and their enforcement in stock market development has been a long-standing research topic in accounting, economics, and finance (see, for example, Coase 1960; Stigler 1964, 1971; Becker and Stigler 1974; La Porta, Lopez-De-Silanes, and Shleifer 1997, 2006; Jackson and Roe 2009; Christensen, Hail, and Leuz 2013, 2016). Prior work based on cross-country evidence highlights the greater importance of enforcement than securities laws themselves in stock market development (Bhattacharya and Daouk 2002; Christensen, Hail, and Leuz 2013, 2016), while reaches different conclusions regarding the efficacy of public versus private enforcement (La Porta, Lopez-de-Silanes, and Shleifer 2006; Jackson and Roe 2009). In this paper, we fill a void in the literature by using China as a quasi-natural experiment to gain insights into the efficacy of public enforcement of securities laws when private enforcement is largely absent (Jiang, Lee, and Yue 2010; Jiang and Kim 2015; Ke, Lennox, and Xin 2015; Huang and Ke 2018).

China presents a great learning opportunity for the following reasons. China's two stock exchanges—the Shanghai Stock Exchange and the Shenzhen Stock Exchange were founded in early 1990s, and its securities regulatory framework largely mimics that of the U.S. with the same missions of protecting investors, maintaining fair, orderly, and efficient markets, and facilitating capital formation.[1] The securities regulator, including the China Securities Regulatory Commission and two domestic stock exchanges, has played a direct and prominent role in developing China's stock markets. However, private enforcement in the forms of securities litigation, shareholding voting, and strong-form price efficiency is largely absent in China without a strong presence of sophisticated market participants (Jackson and Roe 2009; Jiang and

[1] See the mission statement at the China Securities Regulatory Commission' website: http://www.csrc.gov.cn/pub/csrc_en/.

Kim 2015) and/or an effective private securities litigation system (Hutchens 2003; Layton 2008). China thus provides a clean setting to examine the efficacy of U.S. style public enforcement without its concomitant private enforcement mechanisms.

In this paper, we use the comment letter (CL) review process as an example of U.S. enforcement actions replicated in China. The CL review process, as in practice now, was introduced by the Securities and Exchange Commission (SEC) as part of the Sarbanes-Oxley Act of 2002 (SOX). SOX 408 requires the SEC to review financial statements of publicly listed firms to ensure that they are in compliance with applicable financial reporting requirements. If there are any questions or concerns, a comment letter is issued and firm responses are required. Prior work based on U.S. evidence find that the review process leads to material improvement in firms' disclosure and information environment (see, for example, Bozanic, Dietrich, and Johnson 2017; Johnston and Petacchi 2017; Cunningham, Johnson, Johnson, and Lisic 2018).

The Chinese CL review process was strengthened in 2014 as part of a major reform on regulatory oversight of mandatory disclosure with a focus on disclosure quality and standards. After the reform, approval for filing mandatory disclosures was no longer required, but corporate disclosures are subject to regulatory scrutiny via the CL review process. Specifically, less-than-complete filings will receive a CL from the stock exchange, requesting additional information and, whenever applicable, resulting in changes to disclosures. The then-Chairman of the China Securities Regulatory Commission, Mr. Xiao Gang described the reform as "*necessary to strengthen the monitoring of firms' information disclosure, with a focus to reduce fraudulent financial reporting, … to ensure the proper functioning of stock markets*".[2]

[2] See the full speech by Mr. Xiao Gang (in Chinese) at: http://www.gov.cn/gzdt/2014-01/22/content_2573256.htm.

Although effectively implemented in the U.S., adopting similar enforcement action in China might not achieve its intended objective. On the one hand, the absence of a culture of class action lawsuits or other market mechanisms in China (see, for example, Hutchens 2003; Layton 2008; Jiang and Kim 2015) may undermine the efficacy of CL process as market discipline may not be strong enough to provide firms with incentives to work actively and along with the regulator to improve their disclosure quality. On the other hand, in weak institutional environments like China, the regulator is the last line of defense in policing financial reporting practices, and has the potential to make up for the lack of market discipline. The efficacy of public enforcement in China is ultimately an empirical question.

We employ a hand-collected data set on CLs in China to shed light on the effectiveness of public enforcement of securities laws when private enforcement is largely absent. To the best of our knowledge, our study is one of the first to use CLs outside the U.S. as an example of public enforcement and examine its efficacy in a weak institutional environment.

To benchmark with U.S. CLs, we first examine the determinants of Chinese firms receiving CLs. Based on a sample of 731 CLs on annual reports issued by the Shanghai Stock Exchange to 483 listed firms over the period 2013-2017, we find that firms with modified audit opinion, auditor turnover, older firms, loss-making firms, fast-growing firms, firms doing acquisition deals, firms engaged in related party transactions, and firms providing loan guarantees to related parties are more likely, whereas firms with large market capitalization, state owned enterprises (SOEs), and special treatment firms are less likely, to receive CLs. Moreover, firms with modified audit opinion, older firms, loss-making firms, fast-growing firms, firms engaged in related party transactions, and firms providing loans to related parties, are associated with longer CLs, more questions in CLs, and a higher likelihood of CLs involving revenue

recognition-related issues, whereas SOEs are associated with shorter CLs, fewer questions, and a lower likelihood of receiving CLs involving revenue recognition-related issues. All these findings suggest that CLs in China are effectively employed by the regulator to identify firms that are more likely not to meet the disclosure standards.

Prior U.S. studies show that the news of CL resolutions has no market-price implications (Dechow, Lawrence, and Ryans 2016; Johnston and Petacchi 2017). One explanation is that CL resolutions signal poor reporting quality (a negative signal) as well as (offsetting) improvement in future disclosure (a positive signal).[3] Different from the U.S. setting, Chinese CLs are disclosed before firms' responses and remedies (if there is any) take place, and thus it is important for us to examine how the market perceives the news of a firm in receipt of a CL. On the one hand, if the CL review process is simply a formality or a side show, or investors are unable to differentiate good news from bad news (Ryans 2018), there will be no price reaction to the announcement of a firm in receipt of a CL. On the other hand, if the regulator is effective at identifying disclosure irregularities as investors in China are unable to monitor themselves and/or have no other sources of information (Jackson and Roe 2009), there will be a negative price reaction, signaling worse firm quality than reported and/or compliance costs.

We show that the mean five-day announcement period return is -2.2%, and is statistically different from zero. In terms of economic significance, given that the average market capitalization of firms receiving CLs is 11.4 billion CNY (1.87 billion USD), the average drop in market capitalization is 250.8 million CNY (41.10 million USD), which is economically significant. We further show that CL firms are more likely to amend their annual reports

[3] Another potential explanation is that most of the U.S. CLs involve relatively trivial issues. This explanation is, however, inconsistent with post-CL improvement in firms' disclosure quality and reduction in information asymmetry between insiders and outsiders as documented by Bozanic, Dietrich, and Johnson (2017) and Johnston and Petacchi (2017).

compared to firm-years not in receipt of CLs. We conclude that the Chinese market perceives firms receiving CLs as significantly bad news (in contrast to the U.S. evidence).

It remains to be seen whether the CL process improves targeted firms' reporting practices going forward (as shown in the U.S.). To explore this, we take a multi-pronged approach. Using two different measures of disclosure quality, we first show that CL firms do not significantly improve their disclosure quality in response to CLs. In contrast, using U.S. data, Bozanic, Dietrich, and Johnson (2017), and Cunningham et al. (2018) document a significant improvement in disclosure quality and a significant drop in earnings management upon firms in receipt of CLs. We then examine the effect of CLs on the degree of information asymmetry between insiders and outsiders, proxied by two measures of bid-ask spreads. Different from Johnston and Petacchi (2017), we find no significant change in bid-ask spreads in the period after CLs. Taken together, we conclude that the changes to financial reporting triggered by the CL review process in China are transitory.

One possible explanation for our findings is that the regulator in China is ineffective in discipling firms with poor reporting practices. On the one hand, we show that within CL firms, firms receiving more severe CLs are more likely to receive CLs in the future, and are also more likely to be sanctioned in the future. On the other hand, we show that across all firms, targeted firms are less likely to receive CLs in the future.

Another possible explanation for our findings is that the institutional framework in China is not well developed to help enforce the continuation of good disclosure practices. To test our conjecture directly, we examine whether private enforcement fills a void when public enforcement does not achieve its intended goal. We find that neither the presence of high institutional ownership nor being located in regions with a high marketization score helps

achieve the efficacy of CL review. Moreover, we show that CL firms do not experience a significant increase in their costs of capital, suggesting a lack of market discipline of targeted firms.

In summary, in the U.S. where both public and private enforcements are present, it is difficult, if not impossible, to disentangle the role of each enforcement in improving financial reporting practices. In China where there is not much private enforcement, we show that an increase in public enforcement of mandatory disclosure is limited in its capacity to change firms' behavior. We conclude that an increase in public enforcement does not fully achieve its intended objective when acting alone.

Our paper makes two contributions to the literature. First, by using China as a quasi-natural experiment where private enforcement of securities laws is largely lacking, our paper contributes to a long strand of the literature examining the pros and cons of public versus private enforcement and complex interactions between the two forms of enforcement (Stigler 1964, 1971; Becker and Stigler 1974; Landes and Posner 1975; Shleifer 2005; Segal and Whinston 2006). Our paper has an unambiguous message, at least from the perspective of enforcing securities laws, both forms of enforcement complement each other to achieve efficacy.

Second, by examining the determinants and consequence of the CL review process using data outside the U.S., our paper contributes to the literature on disclosure regulation and enforcement (see Leuz and Wysocki 2016 for a review) and highlights the incomplete role of improving disclosure regulation and enforcement when public enforcement is the only game in town. As such, our paper complements Bhattacharya and Daouk (2002) and Christensen, Hail, and Leuz (2013, 2016) who highlight the greater importance of public enforcement than

securities laws themselves in stock market development; we show that public enforcement in and of itself is not enough.

II. Institutional Background

A. CLs in the U.S.

In the U.S., Section 408 of the Sarbanes-Oxley Act of 2002 requires that the Securities and Exchange Commission (SEC) review, at least once every three years, the disclosures of all companies reporting under the Exchange Act. According to the SEC's annual report (SEC 2018a), "These reviews help improve the information available to investors and may identify possible violations of the federal securities laws."

The review is conducted by one of the eleven Division of Corporate Finance's (DCF) offices organized by industry, each led by an assistant director. On the DCF website (SEC 2018b), it notes, "In its filing reviews, the Division concentrates its resources on critical disclosures that appear to conflict with Commission rules or the applicable accounting standards and on disclosure that appears to be materially deficient in explanation or clarity…" and describe the review process as a "dialogue with a company about its disclosures."

The dialogue starts with the SEC issuing a CL when it deems a filing to be materially deficient or when it requires further clarification. The registrant's response is required within ten days. The registrant's responses could generate one or more follow-up letters from the SEC. Typical responses from the registrant include providing supplemental information requested by the CL, making amendments to current filings, making additional disclosures in future filings, and only in rare cases, making a restatement of the reviewed filings (Cassell, Dreher, and Myers

2013). Ultimately, the SEC closes its review and issues a "no further comment" letter. Since August 1, 2004, CLs and responses are released to the public once the review is completed.

B. CLs in China

On December 19, 1990 and July 3, 1991, the Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE) were launched, respectively. The China Securities Regulatory Committee (CSRC), akin to the SEC, was formed in October 1992. However, it was not until the adoption of the 1998 Securities Law that formally established the CSRC as China's primary securities markets regulator. According to the Securities Law (last updated on August 31, 2014), the mandate of the CSRC is to promote stock market development, protect investors, prevent securities fraud, and support economic development.[4] According to the earliest available version of Stock Exchanges Regulations (1996), one of the mandates of the two exchanges (subordinates to the CSRC) is to review corporate filings (annual reports and semi-annual reports) to ensure compliance, and to report their findings to the CSRC.[5]

On January 21, 2014, Mr. Xiao Gang, the CSRC Chairman, made a speech at the Annual Futures Market Conference which launched a major reform of regulatory oversight.[6] In his speech, Mr. Xiao emphasized that regulatory oversight is not just about conducting administrative review prior to a corporate event when issuers are not incentivized to provide disclosure that is closely tied to firm value, but a new system of supervision and enforcement

[4] Source (in Chinese): http://www.csrc.gov.cn/pub/newsite/tzzbh1/tbtzzjy/tbjczs/201310/t20131017_236454.html.
[5] Given that there is no law or regulation that we are aware of requiring the disclosure of those letters and their responses prior to 2014, the beginning of our sample period, we identify a very limited number of cases where firms have received comment letters from corporate announcements when it is disclosed that supplemental filings are made due to receiving a letter.
[6] Source (in Chinese): http://politics.people.com.cn/n/2014/0121/c70731-24187370.html.

during and following a corporate event when issuers are benchmarked with their industry peers and disclose both industry- and firm-specific risk factors that help investor decision making.

One important means of such regulatory oversight is the CL review process. Subsequent implementation of the new regime emphasizes strengthening the protection of investors, minority investors in particular, and promoting disclosure that is most relevant to investor decision making (Shanghai Securities News 2014).[7] Appendix A provides a comparison of key institutional features of the CL review process in China versus that in the U.S.

Disclosure of CLs and their responses has also improved over time. In 2015, the SSE required listed firms to disclose the content of CLs related to annual reports for the fiscal year 2014. About 90% of those firms complied. Since 2016, the SSE has disclosed a subset of CLs on its website.

C. Private enforcement in China and in the U.S.

Despite similarities in securities regulatory framework, companies listed on China's stock exchanges operate in a very different institutional environment than companies listed on the NYSE or Nasdaq: 1) most Chinese investors are individuals, not institutions; 2) most listed companies are reformed SOEs, not private firms; 3) government approval requirements are ubiquitous, including initial public offerings or secondary offerings; 4) courts are weak and judges are constrained; and 5) there is no history of private securities litigation in China (Hutchens 2008).

In the U.S., private enforcement includes securities litigation, shareholder voting, and strong-form price efficiency (via trading shares) (Jackson and Roe 2009). In contrast, private

[7] Source (in Chinese): http://money.163.com/14/0510/03/9RRT6P9P00253B0H.html#from=keyscan.

enforcement is largely absent in China without a strong presence of sophisticated market participants (Jackson and Roe 2009; Jiang and Kim 2015)[8] and/or an effective private securities litigation system (Hutchens 2003; Layton 2008).[9, 10] China thus provides a clean setting to examine the efficacy of U.S. style public enforcement without its concomitant private enforcement mechanisms. Our findings will be of great relevance to countries around the world with a similar level of institutional development as China that want to implement US style public enforcement practice.

III. Literature Review and Hypothesis Development

A. Public versus private enforcement of securities laws

Prior work based on cross-country evidence highlights the greater importance of enforcement than securities laws themselves in stock market development (Bhattacharya and

[8] According to Liu, Stambaugh, and Yuan (2019), as of 2015, individual investors hold 88% of all free-floating shares in the Chinese stock markets.

[9] Hutchens (2003) examines private securities litigation in China and finds a number of daunting obstacles confronting plaintiffs: 1) plaintiffs must sue SOEs in state-controlled courts; 2) the ability to leverage claims through class actions is limited; 3) relief can only be sought for disclosure fraud, not insider trading or market manipulation; 4) no private securities litigation can be adjudicated by a Chinese court unless an administrative penalty or a criminal penalty has already been imposed; and 5) jurisdictional requirements likely to favor defendants. Given these obstacles, Hutchens (2003) concludes that the institutional setting in China does not allow U.S.-style private securities litigation to flourish. Not surprisingly, Huang (2013) finds only sixty-five securities civil cases related to misrepresentation have been launched during the first decade after such cases were first allowed in 2002, whereas there were 253 eligible criminal/administrative sanctions which may have led to securities civil suits, suggesting that about a quarter of all cases which could have been bought ended up in securities civil suits..

[10] Here is a case study of the very first securities lawsuit in China where investors won a compromised victory in Chen Lihua v. Daqing Lianyi, Inc. (Dai 2006). The plaintiffs were twenty-three individual investors in the defendant Daqing Lianyi Corporation ("Daqing Lianyi"). Daqing Lianyi had its initial public offering (IPO) on the SSE in May 1997. On April 27, 2000, the CSRC issued its Letter of Administrative Penalty to Daqing Lianyi claiming that Daqing Lianyi committed fraud in its IPO prospectus and its 1997 Annual Report. The twenty-three plaintiffs brought suit against Daqing Lianyi at Ha'erbin Intermediate People's Court after the issuance of the CSRC Letter. These plaintiffs had started trading Daqing Lianyi stock in May 1997 and sold or held the stock around April 27, 2000. The plaintiffs sought 960,063 CNY (120,007 USD) in damages under the false statement doctrine. The court awarded the plaintiffs their actual loss of 425,388 CNY (53,173 USD). The award was about half of the plaintiffs' claimed damages because the court's loss calculation was based on its finding of the revelation date and the correction date.

Daouk 2002; Christensen, Hail, and Leuz 2013, 2016). Using a sample of 103 countries where insider trading laws exist in 87 of them, but enforcement as evidenced by prosecutions has taken place in only 38 of them, Bhattacharya and Daouk (2002) find that enforcement, not the establishment of insider trading laws, is associated with a reduction in the cost of equity. Examining the capital-market effects of reporting under International Financial Reporting Standards (IFRS) that became mandatory in many countries, Christensen, Hail, and Leuz (2013) show that significant effects only take place in five European Union countries that concurrently improved reporting enforcement. Christensen, Hail, and Leuz (2016) study the liquidity effects of changes made in securities regulation in the European Union aimed at reducing market abuse and increasing transparency. They find significant increases in market liquidity, and the effects are stronger in countries with stricter implementation and more stringent securities regulation.

There is a long strand of the literature arguing the pros and cons of public versus private enforcement and complex interactions between the two forms of enforcement (see, for example, the seminal work by Stigler 1964, 1971; Becker and Stigler 1974; Landes and Posner 1975; and the survey by Segal and Whinston 2006). Recent studies in accounting, economics, and finance have empirically examined the effect of public versus private enforcement of securities law on the development of financial markets around the world. La Porta, Lopez-de-Silanes, and Shleifer (2006) find little evidence that public enforcement benefits stock markets, whereas laws mandating disclosure and facilitating private enforcement through liability rules benefit stock markets. Results in Jackson and Roe (2009) confirm the relevance of laws mandating disclosure, but find conflicting results on the relevance of both liability standards and public enforcement. Using a resource-based measure to proxy for public enforcement, they conclude that public enforcement correlates with the development of the financial market, whereas liability standards,

not so much. It is worth noting that none of prior studies could cleanly delineate the role of public versus private enforcement as in many countries around the world, both forms are present.

B. Hypothesis development

Scholars including Coase (1960), Stigler (1964), and La Porta, Lopez-de-Silanes, and Shleifer (2006) argue that enforcement of securities laws should be delegated to market participants. However, China's legal and institutional environments as reviewed above preclude private enforcement from playing a significant role (see a similar argument made by Hay and Shleifer (1998) in the case of Russia and some general arguments by Segal and Whinston (2006)). Therefore, a more viable strategy for China would be to strengthen public enforcement. However, there is a lack of evidence on whether and how implementing U.S. style enforcement works in China.

We first investigate whether the Chinese CL process represents indeed an increase in public enforcement or it is simply a formality, a side show. On the one hand, securities law and regulations change all the time in China, so the review process could be one of many "fads" pursued by the regulator and hence has no real consequences. Since its founding in the early 1990s, the stock market in China has experienced some of the most dramatic rises and falls[11] and a number of major reforms including performance requirements for firms to make rights offers (Jian and Wong 2010), and the split share structure reform during 2005-2007 whereby non-tradable shares become tradeable after compensating holders of tradeable shares (Li, Wang, Cheung, and Jiang 2011). Furthermore, public regulators have mixed and often weak incentives

[11] See, for example, in the early years since its founding, between December 1990 to May 1992, the SSE index increased from 100 to 1,429; then between May 1992 to November 1992, the same index dropped to 386. More recently, between November 2014 to June 2015, the SSE index increased from 2,488 to 5,178; then between June 2015 to August 2015, the same index dropped to 3,210.

to do their job well (Coase 1960; Stigler 1964; La Porta, Lopez-de-Silanes, and Shleifer 2006), especially when the state still plays a prominent role in the economy. As such, there is no high expectation from market participants that the reform of regulatory oversight in 2014 governing the CL review process will be any different. If this is the case, there will be no price reaction to the announcement of a firm in receipt of a CL.

On the other hand, there are a number of reasons for market participants to expect that the CL review process is more than simply a formality. The review process is a key component of the reform on regulatory oversight of mandatory disclosure in 2014 (the beginning of our sample period) with a focus on disclosure quality and standards that is different from previous regulatory effort. Moreover, prior work has shown that the CSRC is not a toothless tiger in China's legal and institutional environments (Chen, Firth, Gao, and Rui 2005; Hung, Wong, and Zhang 2015). If the regulator is effective at identifying disclosure irregularities as investors are unable to monitor themselves and/or have no other sources of information (Jackson and Roe 2009), there will be a negative price reaction to the announcement of CLs, signaling poor disclosure quality and potentially more serious offenses by targeted firms. One could even argue that CLs may lead to a positive price reaction if targeted firms react strongly to regulatory oversight by (over-) improving disclosure and firm information environment. Different from lack of price reaction to announcements of CL resolutions in the U.S. (see, for example, Dechow, Lawrence, and Ryans 2016; Johnston and Petacchi 2017), our first hypothesis is as follows:

H1: There is a significantly negative price reaction to CLs.

A significant price reaction to CLs will be consistent with the Chinese CL process representing indeed an increase in public enforcement of mandatory disclosure.[12] We next turn our attention to the real effect of CLs on Chinese firms' financial reporting practices.

Prior literature provides little guidance for our predictions. Cross-country studies provide mixed evidence on the value of public enforcement of securities law (La Porta, Lopez-de-Silanes, and Shleifer 2006; Djankov, La Porta, Lopez-de-Silanes, and Shleifer 2008, Jackson and Role 2009, Christensen et al. 2016). U.S. studies provide evidence consistent with regulatory oversight of mandatory disclosure enhancing firms' information environment (Bozanic, Dietrich, and Johnson 2017; Johnston and Petacchi 2017; Cunningham et al. 2018), in the presence of strong private enforcement mechanisms. The question is whether and how public and private enforcements work all by themselves.

We hypothesize that CLs are effective in improving firms' disclosure practices in China. In the absence of a culture of class action lawsuits or other market mechanisms in China (see, for example, Layton 2008; Jiang and Kim 2015), the CSRC and two stock exchanges are the last line of defense in policing financial reporting practices, and have the potential to make up for the lack of market discipline. Chen, Firth, Gao, and Rui (2005) examine the impact of the CSRC's enforcement actions against financial misrepresentation. They show that enforcement actions have a negative impact on stock prices with average wealth losses of around 1–2% in the five days surrounding the event, and that targeted firms experience greater rates of auditor turnover and CEO turnover, are more likely to receive modified audit opinions, and have wider bid-ask spreads. Hung, Wong, and Zhang (2015) show that when firms are sanctioned by the CSRC for

[12] No price reaction to CL receipts does not necessarily mean that the Chinese CL process is simply a formality. Similar to the U.S. CL process, it could be a result of two opposing effects (a negative signal from revealing a disclosure failure and a positive signal from a potential future improvement in reporting practices).

financial misrepresentation, their value drops by 4.6% over the two-month window centered at the announcement.

Our second null hypothesis is thus as follows:

H2: There is a real effect of CLs on corporate disclosure practices.

On the other hand, a cost-benefit analysis from the perspective of CL recipients suggest otherwise. The cost of not changing behavior is the sum of regulatory penalties and costs from market discipline. The former is a maximum of 600,000 CNY for financial misrepresentation (The Securities Law of China, Article 193, 2014) plus future compliance costs if caught again. In a world with no effective securities litigation system against insider trading or market manipulation (Hutchens 2003; Huang 2013), or effective shareholder voting given that most of the listed firms in China have controlling shareholders, and institutional ownership is low (Huang and Zhu 2015; Jiang and Kim 2015), the latter is close to zero. The benefit of not changing behavior is to maintain the same (potentially inflated) valuation and to raise capital at lower costs. As such, we expect limited real effects of CLs on Chinese firms' disclosure practices.[13] Our second alternative hypothesis is thus as follows:

H2: There is no real effect of CLs on corporate disclosure practices.

[13] Huang and Ke (2018) examine the same reform from a different angle focusing on that after the reform, approval for filing mandatory disclosure is no longer required, and find that contrary to the intent of the reform, disclosure quality as measured by timeliness and misstatements deteriorates after the reform, suggesting that private institutions in China are not strong enough to fill the void induced by the reform.

IV. Sample Overview

A. Sample formation

Given that there is no disclosure requirement of CLs or their responses, we take a two-pronged approach to form our sample of CLs received by listed firms on the SSE.

For the period 2015-2017 (in fiscal years; all Chinese firms' fiscal year ends on December 31), we download CLs from the SSE's website, and supplement it with a search on the website of Shanghai Securities News (www.cnstock.com) – the official source of corporate news for firms listed on the SSE.

For the period from January 1, 2014 to July 31, 2018 (covering fiscal years 2013 to 2017), we download all corporate announcements from the website www.cnstock.com so we could conduct keyword search for CLs and/or their responses. There are 600,081 announcements over the period. We first impose the filter that the title of an announcement contains the word "annual report" (年报 or 年度报告), resulting in 23,949 announcements. We then read each title of an announcement to determine whether a CL or a response to a CL is issued. In some cases where we cannot locate the original CL, we can still determine that a CL is issued based on the announcement of a response to the letter. In those cases, very often, from the response, we can capture the content of the CL as firms typically list a question from the letter before responding. Finally, we also read the opening paragraph of "supplemental announcement related to a firm's annual report" (年报补充公告) to determine that a CL is issued if the beginning of the announcement says, "This supplemental announcement is made in response of receiving a comment letter…."

B. Sample overview

Table 1 Panel A provides an overview of CLs used in our analysis together with different data sources. For the period 2015-2017 (in fiscal years), we obtain 326 CLs directly from the SSE's website. For the period 2013-2017 (in fiscal years), we obtain 156 CLs, 204 responses, and the existence of a CL for 45 firms from corporate announcements and supplemental announcements related to annual reports, available from Shanghai Securities News.

To ensure that we capture almost all the CLs issued by the SSE, we read press releases by the CSRC (on June 2, 2015) and by the SSE (on June 3, 2016, June 2, 2017, and May 18, 2017) after the completion of annual report reviews. The numbers of CLs issued by those dates are: about 130 CLs in 2014, about 130 CLs in 2015, about 160 CLs in 2016, and about 170 CLs in 2017, and fairly comparable to the numbers reported in column (5) in Table 1 Panel A. We are reasonably confident that our hand-collected sample is close to be complete.[14,15]

The last row of Table 1 Panel A shows that the average frequency of firms receiving comment letters each year is about 13 percent. Cassell, Dreher, and Myers (2013) show that for the period 2004-2009, between 67 to 77 percent of firms over a three-year window receive at least one CL; dividing those numbers by three, the average yearly frequency of U.S. firms receiving a CL is between 22 percent to 26 percent. Compared to U.S. firms, it appears that Chinese firms are less likely to receive CLs. Overall, our sample consists of 731 CLs issued to

[14] We could not locate any press releases regarding the review of annual reports or the number of CLs issued for fiscal year 2013. Based on the fraction of CLs issued to SSE firms (at 10.95%) for that year which is close to the fraction for any other years over the sample period, and given the fact that the fiscal year 2013 is the first year after the regulatory reform, we opt to include the fiscal year 2013 in our analysis.

[15] When we repeat the same process to construct a sample of CLs for firms listed on the SZSE, and cross-check our numbers of CLs with the Exchange's press releases, we realize that we are unable to capture most of the CLs issued by the SZSE.

483 unique firms: 306 firms only receive one CL, 126 firms receive two CLs in different fiscal years, and 51 firms receive three or more CLs in different fiscal years.[16]

Table 1 Panel B presents the summary statistics of key characteristics of Chinese CLs. We show that the mean (median) number of pages of CLs is 4.5 (4). The mean (median) number of questions is 10 (10).[17] About three quarters of Chinese CLs have questions related to applications of revenue recognition policies – one of the most serious forms of concerns that could be raised by the regulator in the review process, in contrast to about 20 percent of U.S. CLs with questions about revenue recognition (Dechow, Lawrence, and Ryans 2016).[18]

For firm characteristics, we obtain data from various sources including the GuoTaiAn's (GTA) China Stock Market & Accounting Research (CSMAR) database, the Thomson One Banker SDC database, the WIND database, and the DiBo (DIB) database. Detailed variable definitions and data sources are provided in Appendix B.

Table 2 Panel A presents the summary statistics for the sample used to examine the determinants of receiving a CL and CL characteristics. We compare mean and median values for companies that receive an annual report CL during a given fiscal year (*comment letter* = 1) with those for companies that do not receive a CL (*comment letter* = 0). These descriptive statistics show that CL firms exhibit poorer internal control, higher volatility, poorer governance practices, and are less likely to be SOEs, than firms not receiving CLs.

[16] Different from the U.S., rarely do we see multiple iterations of letters and responses. Over our sample period 2013-2017 (in fiscal years), only nine firms receive follow-up CLs: two firms in 2013, none in 2014, two firms in 2015, two firms in 2016, and three firms in 2017.

[17] The difference in sample size between these two variables is due to the fact that for about 200 observations, we only have responses to CLs and from those responses, we could back out the CL questions. As a result, for those observations, we would know the questions raised in a CL, but not its length.

[18] One potential explanation for the difference in frequency is that we do not have Audit Analytics' classification scheme; instead, we classify earnings recognition relying on its definition in the data appendix. The other top issues raised in CLs are: accounts receivable & cash reporting issues (72% of our sample), inventory, vendor and/or cost of sales issues (58%), financial statement segment reporting (FAS 131 subcategory) issues (50%), and results of operations (MD&A) issues (42%).

Panel B presents the correlation matrix of the variables. The correlation matrix suggests little concern about multicollinearity. Given that omitted variable bias in univariate correlations can mask the true relations between the variables, we employ multiple regressions to examine the factors associated with firms receiving CLs.

C. CL outcome variables

Our first set of outcome measures intends to capture the impact of the review process on firms' disclosure quality.[19] We focus on the numerical and textual content of annual reports. According to Lundholm, Rogo, and Zhang (2014), numbers represent hard and more precise information than words. They document that firms listed in the U.S. provide more numbers when facing investor biases. We measure the numerical content of annual reports using *Number of numbers*, which is the number of numbers in the management discussion and analysis (MD&A) section of an annual report. We measure the textual content of annual reports using *Length of disclosure*, which is the natural logarithm of the number of words in the MD&A section of an annual report. Duro, Heese, and Ormazabal (2018) document an increase in the length of annual reports in periods after CLs in the U.S.

Our second set of outcome measures intends to capture the impact of the review process on narrowing the information gap between insiders and outsiders. CLs are intended to help improve information available to outsiders. Prior literature consistently shows that there is a significant drop in information asymmetry after U.S. CL resolutions (Johnston and Petacchi 2017; Duro, Heese, and Ormazabal 2018). Our two low-frequency estimators of bid-ask spreads

[19] We do not examine measures of earnings management due to the institutional setting in China, i.e., the use of bright-line accounting-based rules (see, for example, to issue equity, a firm must have reported a profit in each of the past three years) by the CSRC creates strong incentives for firms to engage in earnings management (He, Wong, and Young 2012). As such, earnings management measures developed outside of China are not appropriate outcome variables to capture the effectiveness of CL review process.

are *Bid-ask spread_CS* (Corwin and Schultz, 2012) and *Bid-ask spread_AR* (Abdi and Ranaldo, 2017) based on the average of daily bid-ask spreads in the last quarter of a fiscal year.[20]

Our third set of outcome variables capture forms of further public enforcement – CLs and sanction. Our conjecture is that if the review process does not change targeted firms' financial reporting practices, in a world without strong private enforcement, the regulator might follow up with more CLs and sanctions.

Our final set of outcome measures intends to capture the impact of the review process on a firm's cost of capital. If the capital market is sophisticated enough to discipline firms receiving regulatory scrutiny, these firms will be penalized with more costly financing. Our measures of a firm's cost of capital are: *Cost of debt* computed as the ratio of interest expenses in year t scaled by the average interest-bearing debt outstanding during years between t and t-1 following Francis, LaFond, Olsson, and Schipper (2005), *Cost of equity_GLS* as derived from the residual income valuation model following Gebhardt, Lee, and Swaminathan (2001), and *Cost of equity_PEG* based on the abnormal earnings growth valuation model following Easton (2004).

Table 2 Panel C presents the summary statistics for outcome variables subsequent to firms in receipt of a CL. We find that CL firms are significantly more likely to amend their annual reports, exhibit poorer disclosure quality, have larger bid-ask spreads, and have higher costs of debt compared to non-CL firms. Moreover, CL firms are significantly more likely to be sanctioned by the regulator in the future compared to their non-CL counterparts.

[20] Due to data availability for Chinese firms, we limit our attention to low-frequency estimators of bid-ask spreads.

V. The Determinants and Consequences of CLs in China

A. Determinants of firms receiving CLs

To examine the determinants of firms receiving CLs, we estimate the following model:

$$CL_{it} = \beta_0 + \beta_1 InternalControlWeakness_{it} + \beta_2 HighVolatility_{it} + \beta_3 Prioryearstockreturn_{it} + \beta_4 lnMarketCap_{it} + \beta_5 ModifiedAuditorOpinion_{it} + \beta_6 Big4_{it} + \beta_7 AuditorTenure_{it} + \beta_8 AuditorTurnover_{it} + \beta_9 CEO/COBDuality_{it} + \beta_{10} BoardIndependence_{it} + \beta_{11} BoardSize_{it} + \beta_{12} InstitutionalOwnership_{it} + \beta_{13} ManagementOwnership_{it} + \beta_{14} SOE_{it} + \beta_{15} FirmAge_{it} + \beta_{16} Loss_{it} + \beta_{17} SpecialTreatment_{it} + \beta_{18} SalesGrowth_{it} + \beta_{19} M\&A_{it} + \beta_{20} RelatedPartyTransaction_{it} + \beta_{21} LoanGuarantee_{it} + \beta_{22} ForeignListing_{it} + \beta_{23} MarketizationIndex_{it} + \beta_j IndustryFE_{it} + \beta_k YearFE_{it} + \varepsilon_{it}, \quad (1)$$

where the dependent variable, *Comment letter* (*CL*), is an indicator variable that take the value of one if a firm receives an annual report CL in fiscal year t, and zero otherwise. Table 3 Panel A presents the logistic regression results as well as results from a linear probability model.

In terms of Section 408 Criteria (in the U.S.), we show that firms with higher market capitalization are less likely to receive a CL, which is consistent with prior literature that finds that larger companies have higher financial reporting quality, but is opposite to U.S. studies and the intent of Section 408 Criteria that larger firms call for more scrutiny. Moreover, for two other criteria—internal control weakness and stock return volatility, we find no significant association between them and the likelihood of a firm receiving a CL. In terms of auditor characteristics, we show that the presence of modified audit opinion is positively and significantly associated with the likelihood of a firm receiving a CL.

The Chinese Independent Auditing Standards (CIAS) specify four types of audit opinions: unqualified, qualified, disclaimer, and adverse. *Modified audit opinion* is an indicator variable that takes the value of one if a firm is issued a modified opinion by its auditor, and zero otherwise. An audit opinion is considered modified if it is classified as unqualified with explanatory notes, qualified, disclaimer, or adverse, following Wang, Wong, and Xia (2008). According to Chen et al. (2016), modified audit opinions impose significant regulatory costs on Chinese companies that receive such opinions, including requirement by the CSRC to explain the underlying reasons for such opinion in annual reports, not conducting seasoned equity offerings, and delisting. Our findings are consistent with the notion that the regulator is seriously concerned about modified audit opinions when they see one and would like to follow up with a CL.

In terms of corporate governance characteristics, we first show that none of the board characteristics is significantly associated with the likelihood of a firm receiving CLs, consistent with the literature showing that boards of listed Chinese firms tend to be ineffective (Jiang and Kim 2015). We also note that neither institutional ownership nor management ownership is significantly associated with the likelihood of a firm receiving CLs. Prior work finds that institutional ownership in China in general is quite low compared to that in the U.S. (see Table 2 Panel A showing that the overall institutional ownership in China is less than 10%) and most institutional investors are compromised with the exceptions of qualified foreign institutional investors (QFII) (Huang and Zhu 2015).[21] Our finding on institutional ownership is consistent with this observation. We further show that SOEs, known to have poor earnings and disclosure quality (Fan and Wong 2002; Wang, Wong, and Xia 2008; Jian and Wong 2010), are less likely to receive CLs.

[21] In unreported analysis, we find that there is no significant association between QFII ownership and the likelihood of a firm in receipt of a CL.

In terms of other firm controls, older firms proxying for complexity of a firm's operations, loss-making firms, fast-growing firms are more likely to receive CLs. Special treatment (ST) is a unique feature in China whereby when a listed firm reports two consecutive years of losses, it is labeled a "special treatment" (ST) firm; and if a ST firm again reports a loss in the year after, it will be delisted (He, Wong, and Young 2012). We find that ST firms are less likely to receive CLs, possibly due to the fact that they are under major restructuring and also under a tight leash of the regulator. We further show that firms doing major M&As, and firms engaged in related party transactions and/or providing loan guarantees to related parties are more likely to receive CLs. Finally, we show that firms headquartered in provinces with well-developed market-oriented institutions are less likely to receive CLs.

B. Determinants of severity of CLs

Table 3 Panel B presents the OLS regression results where the dependent variables are different measures of CL severity including the number of pages, the number of questions raised, and whether a CL raises issues related to revenue recognition (Dechow, Lawrence, and Ryans 2016).

We first show that none of the Section 408 Criteria matters for the three measures of CL severity. On the other hand, the presence of modified audit opinion is associated with longer CLs, more questions raised in a CL, and the likelihood that a CL is related to revenue recognition. We further note that being an SOE is associated with shorter CLs and CLs with fewer questions and a lower likelihood that a CL is related to revenue recognition. Chaney, Faccio, and Parsley (2011) and Piotroski, Wong, and Zhang (2015) find that politically connected firms tend to have worse accounting quality. Our results suggest that a lack of regulatory oversight could potentially contribute to SOEs' poor accounting quality.

In terms of other firm controls, we find that older and loss-making firms are associated with more severe CLs. Moreover, firms engaged in related party transactions, or providing loan guarantee to affiliated firms are associated with more scrutiny by the SSE. In contrast, firms headquartered in provinces with well-developed market-oriented institutions are associated with less severe CLs.

In summary, the evidence in Table 3 suggests that the Chinese regulators are targeting a similar set of firms in their CL review process as the U.S. regulators are.

C. Price reaction to CL announcements

We next examine the price reaction to announcements of firms receiving CLs as a direct measure of the effectiveness of regulatory oversight. We also estimate the following model relating CL and firm characteristics to the price reaction:

$$CAR(-3,+1)_{it} = \beta_0 + \beta_1 CLCharateristics_{it} + \beta_2 LnMarketCap_{it} + \beta_3 M/B_{it} + \beta_4 Leverage_{it} + \beta_5 CFO_{it} + \beta_6 InstitutionalOwnership_{it} + \beta_7 SOE_{it} + \beta_8 Loss_{it} + \beta_9 Big4_{it} + \beta_{10} ForeignListing_{it} + \beta_{11} ForeignListing_{it} + \beta_{12} MarketizationIndex_{it} + \beta_j IndustryFE_{it} + \beta_k YearFE_{it} + \varepsilon_{it}, \quad (2)$$

where *CAR(-3, +1)* is the five-day cumulative abnormal return from three days before to one day after the CL announcement day (day 0). Daily abnormal return is the difference between daily return and the value-weighted market return on the SSE. We manually check whether the announcement of CLs coincides with the announcement of other major corporate events including earnings announcements, management turnover, acquisitions, restructurings, dividends, and stock repurchases, in the event window examined, and drop those with contemporaneous major event announcements. Our CL announcement sample consists of 389 observations by 321 SSE-listed firms.

Table 4 Panel A presents average daily abnormal returns for the ten-day window centered around CL announcement (day 0). We show that daily abnormal returns are significantly negative starting three days before to one day after the announcement. The average five-day CAR (-3, +1) is -2.2%, which is statistically different from zero. In terms of economic significance, given that the average market capitalization of firms receiving CLs is 11.4 billion CNY (1.87 billion USD), the average drop in market capitalization is 250.8 million CNY (41.10 million USD), which is economically significant.[22] Figure 1 presents the average buy-and-hold (abnormal) return on CL firms over the period from five days before to twenty days after the CL announcement date. We show that there is a drop in returns around the announcement date and that drop sustains up to one month later. Clearly the stock market views receiving CLs as bad news for targeted firms. The wealth loss to shareholders signals the targeted firm is worse than reported and also captures some of the compliance costs that include the time and effort involved in responding to the CL and/or potential future sanctions.

Panel B presents the OLS regression results relating different measures of CL severity to announcement period returns. We show that all three measures of CL severity are negatively and significantly associated with CAR (-3, +1), suggesting that the market perceives more severe letters as significantly more negative news. We also note that both large firms and loss-making firms are positively associated with announcement period returns.

We next examine whether CLs lead to any improvement in disclosure by relating the receipt of a CL to amendment to annual reports in question:

[22] In untabulated analyses, we find that there is no significant difference between the price reaction to the first letter and that to the subsequent letter(s).

$$Amendment_{it} = \beta_0 + \beta_1 CL_{it} + \beta_2 lnMarketCap_{it} + \beta_3 M/B_{it} + \beta_4 Leverage_{it} + \beta_5 CFO_{it} + \beta_6 InstitutionalOwnership_{it} + \beta_7 SOE_{it} + \beta_8 Loss_{it} + \beta_9 Big4_{it} + \beta_{10} ForeignListing_{it} + \beta_{11} MarketizationIndex_{it} + Firm\ and\ Year\ fixed\ effects + \varepsilon_{it}, \quad (3)$$

where the dependent variable is the indicator variable *Amendment,* that takes the value of one if a firm revises financial statement or non-financial statement parts of an annual report, provides new information, or addresses editorial or legal technicalities in an annual report, and zero otherwise, following Johnston and Petacchi (2017). Our variable of interest is *CL*, which is an indicator variable that takes the value of one if a firm receives a comment letter on its annual report in fiscal year t, and zero otherwise.

Table 5 presents both the logistic and OLS regression results where the dependent variable is the indicator variable *Amendment.* We show that across all specifications, the coefficient on *CL* is positive and significant, suggesting that CL firms are indeed more likely to amend their annual reports compared to firm-years not in receipt of a CL.

In summary, in contrast to U.S. evidence whereby there is no price reaction to the resolution of CLs, we show that receiving CLs in China is perceived as bad news, and CL firms are more likely to amend their annual reports than those not in receipt of CLs. We interpret this finding as evidence consistent with the notion that the Chinese CL review process is more than a side show like some past reforms, but has significant information content.

We next examine whether the CL process helps improve targeted firms' disclosure quality subsequent to their receipt of CLs.

D. Disclosure quality after firms receiving CLs

If regulatory oversight is effective, one would expect targeted firms to improve their disclosure to market participants after being scrutinized by the regulator, resulting in less information asymmetry between insiders and outsiders.

To examine the impact of the review process on targeted firms' disclosure quality, we run the following OLS regression:

$$Outcome_{it} = \beta_0 + \beta_1 CL_{it-1} + \beta_2 lnMarketCap_{it-1} + \beta_3 M/B_{it-1} + \beta_4 Leverage_{it-1} + \beta_5 CFO_{it-1} + \beta_6 InstitutionalOwnership_{it-1} + \beta_7 SOE_{it-1} + \beta_8 Loss_{it-1} + \beta_9 Big4_{it-1} + \beta_{10} ForeignListing_{it-1} + \beta_{11} MarketizationIndex_{it-1} + Firm\ and\ Year\ fixed\ effects + \varepsilon_{it}, \quad (4)$$

where the dependent variables are different measures of disclosure quality as defined in Section IV.C. Our variable of interest is *CL*, which is an indicator variable that takes the value of one if a firm receives a comment letter on its annual report in fiscal year t-1, and zero otherwise. Following Bertrand and Mullainathan (2003), we include firm and year fixed effects, the former fully controlling for time-invariant differences between CL (treated) firms and non-CL (untreated) firms. We also present regression results including industry fixed effects as opposed to firm fixed effect to rule out concerns related to over-differencing.

Table 6 Panel A presents the regression results for outcome measures related to disclosure quality. We show that the coefficient on *CL* is not significantly different from zero across all specifications, which means that, there is no significant change in the amount of numerical (textual) content in annual reports in the year following a CL receipt for targeted firms.

Panel B presents the OLS regression results for outcome measures related to information asymmetry. We show that the coefficient on *CL* is not significantly different from zero across most specifications (with the exception when the dependent variable is *Bid-ask spread_CS* and we include industry and year fixed effects), which means that, there is no significant change in the degree of information asymmetry between insiders and outsiders in the year following a CL receipt for targeted firms.

We conduct a robustness check on our main findings in Table 6. We replace the indicator variable *CL* with a new indicator variable *CL2*, that takes the value of one for the fiscal year t-1 when a CL is received as well as the fiscal year after, and zero otherwise. The new specification allows us to examine the impact of CLs for a two-year window (instead of only for the year after receiving a CL as in Equation (4)). Appendix C Panels C1-C2 presents the results. We show that for a longer window, we largely do not find significant improvement in accounting reporting quality for targeted firms (with the exception when the dependent variable is *Length of disclosure* and we include industry and year fixed effects); in a few cases, we find the opposite: There is a significant increase in the degree of information asymmetry between insiders and outsiders in the years following a CL receipt for targeted firms.

So far, we compare different outcome variables in the year after a firm's receipt of a CL against years before and after for the same firm and all years of firms not in receipt of a CL, controlling for year and industry or firm fixed effects. One concern of our findings is that there may be systematic differences between firms that receive a CL and firms that do not. Another concern is that years of a CL firm not in receipt of a CL are also used as control to detect CL-induced changes. Hence, to ensure the robustness of our results, we construct a propensity-score-

matched control sample and employ a difference-in-differences (DID) specification, which help narrow down both the control group and post-CL period.

A firm's propensity score is the probability of it receiving a CL conditional on its observable characteristics. We estimate each firm's propensity score based on the specification in Table 3. The treatment group is the sample of firms that are in receipt of their first CL over the sample period. The control firms are chosen from those that have never received a CL over the sample period. We select a control firm that has the closest propensity score to each CL firm without replacement. We exclude CL cases where there is not a sufficiently close propensity score match, and/or with missing data problem. Each control firm has a hypothetical CL period based on its matching CL firm. The indicator variable, *Post*, takes the value of one for the years after receiving a CL, and zero otherwise. The indicator variable, *CL_Post*, takes the value of one for CL firms in the years after receiving a CL, and zero otherwise. The coefficient on *CL_Post* captures the change in reporting practices of CL firms relative to those of the matched control firms.

Panels C3-C4 present the results from this DID specification using propensity-score-matched control firms. We show that our main findings remain unchanged.[23]

Taken together, the evidence in Table 5 and various robustness checks suggests that the CL review process in China only triggers more amendments to annual reports by targeted firms, but has a very limited effect on these firms' disclosure quality and information environment. We next examine why the CL process fails to achieve its intended goal.

[23] In untabulated analyses, we find that our main findings remain unchanged if we only flag the most serious CLs using the top quartile as the cut-off.

VI. Why Is the CL Process Ineffective in China?

A. Regulatory oversight and sanctions after firms receiving CLs

One possible explanation for our findings is that the regulator in China is ineffective in discipling firms with poor reporting practices. We take a two-pronged approach.

First, within our CL firm sample, we relate CL characteristics to subsequent receipt of CL and CL-triggered sanction. Our conjecture is that, if public enforcement is ineffective, we would not expect any systematic association between the severity of a CL and subsequent enforcement in the form of another letter and/or sanction.

To test this prediction, we estimate the following logistic and OLS regressions:

$$CL_{it} = \beta_0 + \beta_1 CLCharateristics_{it-1} + \beta_2 LnMarketCap_{it-1} + \beta_3 M/B_{it-1} + \beta_4 Leverage_{it-1} + \beta_5 CFO_{it-1} + \beta_6 InstitutionalOwnership_{it-1} + \beta_7 SOE_{it-1} + \beta_8 Loss_{it-1} + \beta_9 Big4_{it-1} + \beta_{10} ForeignListing_{it-1} + \beta_{11} MarketizationIndex_{it-1} + Industry\ and\ Year\ fixed\ effects + \varepsilon_{it}, \quad (5)$$

where *CL* is an indicator variable that takes the value of one if a firm receives a comment letter on its annual report in fiscal year t, and zero otherwise.

$$CL - triggeredSanction_{it} = \beta_0 + \beta_1 CLCharateristics_{it-1} + \beta_2 LnMarketCap_{it-1} + \beta_3 M/B_{it-1} + \beta_4 Leverage_{it-1} + \beta_5 CFO_{it-1} + \beta_6 InstitutionalOwnership_{it-1} + \beta_7 SOE_{it-1} + \beta_8 Loss_{it-1} + \beta_9 Big4_{it-1} + \beta_{10} ForeignListing_{it-1} + \beta_{11} MarketizationIndex_{it-1} + Industry\ and\ Year\ fixed\ effects + \varepsilon_{it}, \quad (6)$$

where *CL-triggered sanction* is an indicator variable that takes the value of one if the CSRC or SSE launches enforcement actions triggered by a firm in receipt of a CL, and zero otherwise.

Second, using the sample of SSE firms over the period 2013-2017, we examine whether past CLs trigger future CLs given that we have shown that CLs are not effective. Our conjecture

is that, targeted firms are more likely to be subject to another CL or to be sanctioned by the regulator in the future.

To examine the recurrence of CLs, we run the following OLS regressions:

$$CL_{it} = \beta_0 + \beta_1 CL_{it-1} + \beta_2 CL_{it-2} + \beta_3 lnMarketCap_{it-1} + \beta_4 M/B_{it-1} + \beta_5 Leverage_{it-1} + \beta_6 CFO_{it-1} + \beta_7 InstitutionalOwnership_{it-1} + \beta_8 SOE_{it-1} + \beta_9 Loss_{it-1} + \beta_{10} Big4_{it-1} + \beta_{11} ForeignListing_{it-1} + \beta_{12} MarketizationIndex_{it-1} + Firm\ and\ Year\ fixed\ effects + \varepsilon_{it}, \quad (7)$$

where our variables of interest are two indicator variables that take the value of one if a firm receives a CL in the prior year (CL_{it-1}) or two years before (CL_{it-2}), and zero otherwise.

Table 7 Panel A presents both the logistic and OLS regression results relating different measures of CL severity to CLs in next year. We show that *No. of pages* and *No. of questions* are positively and significantly associated with the likelihood of receiving a *CL* in the following year, suggesting that firms receiving more severe letters are more likely to receive another CL in the near future.

Panel B presents both the logistic and OLS regression results relating different measures of CL severity to subsequent CSRC or SSE enforcement actions. We show that *No. of pages* and *No. of questions* are positively and significantly associated with the likelihood of *CL-triggered sanction*, suggesting that the regulator are more likely to launch enforcement actions when firms receiving more severe CLs.

Table 8 presents the OLS regression results relating past CLs to future CLs, controlling for firm fixed effects. We show that when the dependent variable is *Comment letter*, the coefficients on CL_{it-1} and CL_{it-2} are negative and significant, suggesting that targeted firms are less likely to receive another CL in the near future even though that they have not made

sufficient improvements in their disclosure upon receiving CL for the first time (as shown in Table 5). When the dependent variable is *Sanction*, we show that there is no significant association between past CLs and future sanction.

Taken together, we conclude that future CLs do target firms with more severe letter beforehand, but past letters are not followed up with more future letters, suggesting that there is some limit to regulatory oversight in China.

B. Market discipline after firms receiving CLs

Another possible explanation for our findings is that the institutional framework in China is not well developed to help enforce the continuation of good disclosure practices. To test our conjecture, we examine whether private enforcement fills a void when public enforcement does not achieve its intended goal by running the following OLS regressions:

$$Outcome_{it} = \beta_0 + \beta_1 CL_{it-1} + \beta_2 HighIO_{it-1} + \beta_3 CL_{it-1} \times HighIO_{it-1} + \beta_4 lnMarketCap_{it-1} + \beta_5 M/B_{it-1} + \beta_6 Leverage_{it-1} + \beta_7 CFO_{it-1} + \beta_8 SOE_{it-1} + \beta_9 Loss_{it-1} + \beta_{10} Big4_{it-1} + \beta_{11} ForeignListing_{it-1} + \beta_{12} MarketizationIndex_{it-1} + Firm\ and\ Year\ fixed\ effects + \varepsilon_{it}, \quad (8)$$

and

$$Outcome_{it} = \beta_0 + \beta_1 CL_{it-1} + \beta_2 HighMarketization_{it-1} + \beta_3 CL_{it-1} \times HighMarketization_{it-1} + \beta_4 lnMarketCap_{it-1} + \beta_5 M/B_{it-1} + \beta_6 Leverage_{it-1} + \beta_7 CFO_{it-1} + \beta_8 InstitutionalOwnership_{it-1} + \beta_9 SOE_{it-1} + \beta_{10} Loss_{it-1} + \beta_{11} Big4_{it-1} + \beta_{12} ForeignListing_{it-1} + Firm\ and\ Year\ fixed\ effects + \varepsilon_{it}, \quad (9)$$

where the dependent variables are *Number of numbers* and *Length of disclosure* as defined in Section IV.C.

Table 9 Panel A presents the regression results where the dependent variables are measures of disclosure quality, and the variables of interest are an indicator variable, *High IO*, and its interaction term with *Comment letter*. *High IO* is an indicator variable, equal to one if a firm's institutional ownership is in the top quartile among its industry peers in a year, and zero otherwise. We show that the coefficient on the interaction term *CL* × *High IO* is not significantly different from zero, suggesting that the presence of high institutional ownership does not help CLs to change firms' behavior.

Panel B repeats the same exercise exploiting the regional development disparity in China. *High marketization* is an indicator variable, equal to one for firms headquartered in provinces whose marketization index is in the top quartile in a year, and zero otherwise. We show that better regional development in market-oriented institutions does not help CLs to change firms' behavior.

Panel C presents the OLS regression results where the dependent variables are measures of cost of debt and cost of equity. We show that the coefficient on *CL* is not significantly different from zero across almost all specifications (with the exception when the dependent variable is *Cost of debt* and we include industry and year fixed effects): There is no significant change in cost of debt and cost of equity in the year following a CL receipt for targeted firms. This is our strongest evidence suggesting that there is lack of market discipline of firms targeted by the regulator for poor disclosure practices.

Our conversations with independent directors of listed firms in China provide further support for our findings. According to these directors, firms are typically "panicking" when receiving CLs from the SSE. They will spend a lot of time and effort in compiling their reply with the simple goal of "making the comment letter go away" instead of changing their reporting

practices.[24] The Internet Appendix IA1 provides an example of CL dialogues to illustrate the Chinese CL process and firms' effort in responding. We further investigate changes in disclosure in response to CLs by comparing sections of the annual report reviewed by the Exchange with the same sections in the next year's annual report (see the Internet Appendix IA2). For the sake of brevity, we focus on Item 2 of the CL as shown in the Internet Appendix IA1, and note that the same conclusion applies to other comments of the letter as well.

Item 2 of the CL requests clarifications for related-party non-operating funds transactions, specifically, explanations for the transactions and also for significant changes in receivables related to particular firms. The response letter provides (see our Internet Appendix IA1) detailed answers to the question. In the following year, transactions of similar nature and significance took place with a different set of firms, but no detailed explanation was ever provided in the annual report.[25] This behavior is consistent with firms taking a passive role and waiting for requests from the Exchange for more information, given that investors are unlikely to act on the lack of disclosure (as shown in our Table 9 Panel C).

In summary, in stark contrast to U.S. evidence whereby there is significant improvement in firms' information environment upon the resolution of CLs (see, for example, Bozanic et al. 2017; Cunningham et al. 2018), we show that receiving CLs in China does not lead to changes in targeted firms' disclosure quality. This set of results is consistent with our earlier findings on the

[24] In contrast, through their private conversations with Big 4 audit partners, Dechow, Lawrence, and Ryans (2016, p. 403) note, "executives are deeply concerned with investor perceptions of comment letters and will change their reporting practices to reduce the probability of receiving a comment letter."

[25] We read all amendments made by CL firms to identify CL-triggered amendments. We also require those amendments to have available original annual reports on which CLs were issued, amended annual reports based on CL queries, and next year's annual reports. We end up with 49 cases. By comparing both the numerical and textual contents across these annual reports, we find that there is significant improvement in disclosure quality between the original and amended reports, suggesting that firms do improve their reporting practices, whereas there is no significant improvement in disclosure quality between the original and next year's annual reports, suggesting that changes in reporting practices are transitory.

negative price reaction to CL announcements in China as the CL signals the firm is worse than it appears to be. More broadly, the findings in our paper highlight for the first time in the literature that public enforcement is ineffective when acting alone.

VI. Conclusions

Prior work based on cross-country evidence reaches different conclusions regarding the efficacy of public versus private enforcement of securities laws (La Porta, Lopez-de-Silanes, and Shleifer 2006; Jackson and Roe 2009). China serves as a quasi-natural experiment to gain insights into the efficacy of public enforcement of securities laws when private enforcement is largely absent.

Using a hand-collected sample of comment letters on annual reports issued by the Shanghai Stock Exchange, we first show that the price reaction to CL announcements is negative and significant, suggesting that the market views material deficiency in firms' mandatory disclosure as bad news. However, we find no evidence of significant improvement in targeted firms' financial reporting practices after receiving CLs, as captured by different measures of disclosure quality and information asymmetry, nor do we find any evidence of market discipline in terms of higher costs of capital for those firms. Instead, we show that targeted firms with more severe CLs are more likely to be subject to another CL as well as to be sanctioned by the regulator in the near future.

By taking advantage of the unique setting in China whereby private enforcement is largely absent, we provide clean evidence that public enforcement in and of itself is limited in scope and efficacy. The policy and regulatory implication of our findings is that when implementing U.S. style enforcement, developing and emerging economies need to foster their

own institutions such as government regulation, legal system, and the bureaucracy, to achieve intended goal.

Appendix A. The institutional background for CLs in China versus in the U.S.

	China	U.S.
Regulatory body	China Securities Regulatory Commission (CSRC), Shanghai Stock Exchange (SSE), Shenzhen Stock Exchange (SZSE)	U.S. Securities and Exchange Commission (SEC)
Regulatory mandate	to promote stock market development; to protect investors; to prevent securities fraud; to support economic development	to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation
Regulatory mandate specific to CLs	to strengthening the protection of minority shareholders	to enhance compliance with "the applicable disclosure and accounting requirements" On its website, the SEC (2018b) describes the objective of CL reviews as follows: "Much of the Division's review involves evaluating the disclosure from a potential investor's perspective and asking questions that an investor might ask when reading the document. When the staff identifies instances when it believes a company can improve its disclosure or enhance its compliance with the applicable disclosure requirements, it provides the company with comments."
Staffing	The SSE assigns the review process to seven different industry groups. Each group has about ten professionals and each staff member is responsible to review about 25 companies. In addition, there is the annual report review support team that assist the industry groups to review the annual filings of public companies. (https://dedicated.wallstreetcn.com/qq/articles/3330880).	The DCF performs its primary review responsibilities through 11 offices/industry groups. The members of these 11 offices have specialized industry, accounting, and disclosure expertise. Generally, the Division has staffed the offices with 25 to 35 professionals, primarily accountants and lawyers. (https://www.sec.gov/divisions/corpfin/cffilingreview.htm).
Frequency of CLs	at least once every three years, done by the two exchanges (SSE, SZSE); the response is typically required within seven days	Section 408 of the SOX requires the Division of Corporate Finance (DCF) to review U.S. listed-firm filings at least once every three years; the response is typically required within ten days

Factors affecting scrutiny	not applicable	(1) issuers that have issued material restatements of financial results; (2) issuers that experience significant volatility in their stock price as compared to other issuers; (3) issuers with the largest market capitalization; (4) emerging companies with disparities in price-to-earnings ratios; (5) issuers whose operations significantly affect any material sector of the economy; and (6) any other factors that the Commission may consider relevant.
First CL	2000	1998
Major regulatory changes	On January 21, 2014, Xiao Gang, the CSRC Chairman, made a speech at the Annual Futures Market Conference calling on major reforms of regulatory oversight (people.cn, assessed on June 8, 2018). The principle of oversight should be shifted from ex ante approval to ex post oversight.	On June 24, 2004, the SEC announced the public release of comment and responses related to 10-Ks filed after August 1, 2004. The SEC began to publish CLs on EDGAR on May 12, 2005 with a delay between the end of a review and dissemination of 20 business days.

Appendix B. Variable definitions and data sources

All continuous variables are winsorized at the 1% and 99% levels. The base year is 2013.

Variable	Definition	Source
Dependent variables		
Comment letter-related variables		
Comment letter (CL)	An indicator variable that takes the value of one if a firm receives a comment letter on its annual report in fiscal year t, and zero otherwise.	Hand-collected
CL2	An indicator variable that takes the value of one for fiscal year t when a comment letter is received as well as the fiscal year after, and zero otherwise	
Post	An indicator variable that takes the value of one for the years after receiving a comment letter, and zero otherwise.	
CL_post	An indicator variable that takes the value of one for comment letter recipient firms in the years after receiving a comment letter, and zero otherwise.	
CL_lag1	An indicator variable that takes the value of one if a firm receives a comment letter on its annual report in fiscal year t-1, and zero otherwise.	
CL_lag2	An indicator variable that takes the value of one if a firm receives a comment letter on its annual report in fiscal year t-2, and zero otherwise.	
No. of pages	The number of pages of a comment letter.	Hand-collected
No. of questions	The number of questions in a comment letter.	Hand-collected
Revenue recognition	An indicator variable that takes the value of one if a comment letter has questions related to applications of revenue recognition policies (including a wide range of topics from misapplication of recognition policies, deferred revenue and contract advance payments to segment reporting and reliance on top five customers), and zero otherwise.	Hand-collected
Price reaction variable		
CAR(-3, +1)	The five-day cumulative abnormal return from three days before to one day after the comment letter announcement day (day 0) where daily abnormal return is the difference between daily return and the value-weighted market return on the SSE.	CSMAR
Amendment variable		
Amendment	An indictor variable that takes the value of one if a firm revises financial statement or non-financial statement parts of an annual report, provides new information, or addresses editorial or legal technicalities in an annual report, and zero otherwise, following Johnston and Petacchi (2017).	DIB
Disclosure quality variables		
Number of numbers	The natural logarithm of the number of numbers in the MD&A section of an annual report following Lundholm, Rogo, and Zhang (2014).	Hand-collected
Length of disclosure	The natural logarithm of the number of words in the MD&A section of an annual report following Lundholm, Rogo, and Zhang (2014).	Hand-collected
Information asymmetry variables		
Bid-ask spread_CS	The average of daily bid-ask spreads in the last quarter of a fiscal year following Corwin and Schultz (2012). Adjusted by multiplying 100. Daily bid-ask spread $= \frac{2(e^{\alpha}-1)}{1+e^{\alpha}}$ where $\alpha = \frac{\sqrt{2\beta}-\sqrt{\beta}}{3-2\sqrt{2}} - \sqrt{\frac{\gamma}{3-2\sqrt{2}}}$, $\beta = E\left\{\sum_{j=0}^{1}\left[ln\left(\frac{H_{t+j}}{L_{t+j}}\right)\right]^2\right\}$,	CSMAR

	$\gamma = \left[ln\left(\frac{H_{t,t+1}}{L_{t,t+1}}\right)\right]^2$, H_t is the high price on day t; L_t is the low price on day t; $H_{t,t+1}$ is the high price over the two days t and t+1; and $L_{t,t+1}$ is the low price over the two days t and t+1.	
Bid-ask spread_AB	The average of daily bid-ask spreads in the last quarter of a fiscal year following Abdi and Ranaldo (2017). Adjusted by multiplying 100. Daily bid-ask spread = $2\sqrt{E[(c_t - \eta_t)(c_t - \eta_{t+1})]}$ where c is daily close log-price; and η is the average of daily high and low log-prices.	CSMAR
Market discipline variables		
Cost of debt	Interest expenses in year t scaled by the average interest-bearing debt outstanding during years between t and t-1 following Francis, LaFond, Olsson and Schipper (2005). The interest-bearing debt outstanding is computed by long-term debt and debt in current liabilities. The debt in current liabilities include long-term debt due within one year and short-term debt.	CSMAR
Cost of equity_GLS	Implied cost of equity derived from the residual income valuation model following Gebhardt, Lee, and Swaminathan (2001). We solve for cost of equity using the following finite horizon (twelve-year-ahead) estimate of stock price for each firm: $P_t = B_t + \sum_{i=1}^{11} \frac{FROE_{t+i} - r_{GLS}}{(1+r_{GLS})^i} B_{t+i-1} + \frac{FROE_{t+i} - r_{GLS}}{r_{GLS}(1+r_{GLS})^{11}} B_{t+11}$ where P_t is fiscal-year end closing price; B_t is book value of equity scaled by the number of shares outstanding at the fiscal-year end; $FROE_{t+i}$ is forecasted ROE in year $t+i$; B_{t+i-1} is $B_{t+i-2} + FEPS_{t+i-1} \times (1- k)$, where k is dividend payout ratio, computed as dividend payout scaled by EPS; and r_{GLS} is the implied GLS cost of equity. For the first two years, we compute $FROE_{t+i}$ as $FEPS_{t+i}/B_{t+i-1}$, where $FEPS_{t+i}$ is average analyst forecasted EPS in year $t+i$ within 90 days before the release of annual reports when actual annual earnings is disclosed, and B_{t+i-1} is book value per share in year $t+i-1$. For the three-year-ahead $FEPS_3$, it is calculated as $FEPS_2 \times (1 + growth\ ratio)$ due to poor data available for third-year-ahead analyst forecasted EPS.[26] Beyond the third year, we forecast *FROE* using a linear interpolation to the industry median ROE.[27]	CSMAR
Cost of equity_PEG	Implied cost of equity derived from the abnormal earnings growth valuation model following Easton (2004) is the square root of the inverse of the price-earnings-growth ratio: $r_{PEG} = \sqrt{\frac{FEPS_{t+2} - FEPS_{t+1}}{P_t}}$ where r_{PEG} is the implied PEG cost of equity; $FEPS_{t+2}$ is two-year-ahead average analyst forecasted EPS; $FEPS_{t+1}$ is one-year-ahead average analyst forecasted EPS, both forecasted EPS within 90 days before the release of annual reports when actual annual earnings is disclosed; and P_t is fiscal-year end closing price.	CSMAR
Sanction-related variables		
Sanction	An indicator variable that takes the value of one if the CSRC or the SSE launches enforcement actions including public criticisms/condemnations, warnings, fines, or other penalties in a given year, and zero otherwise, following Jiang, Wan, and Zhao (2015).	CSMAR

[26] The growth ratio is computed as the ratio of $FEPS_2$ to $FEPS_1$ given that forecasted long-term growth rate is not available in China.

[27] Following Gebhardt, Lee, and Swaminathan (2001), industry ROE is the median ROE across all A-share firms listed on the SSE in the same CSRC industry over the past five years. We exclude firms with negative ROEs on the basis that the population of profitable firms better captures long-term industry equilibrium rates of return.

CL-triggered sanction	An indicator variable that takes the value of one if the CSRC or the SSE launches enforcement actions triggered by a firm in receipt of a CL, and zero otherwise. To construct the variable, we start from firms receiving sanctions after receiving CLs in a given year. We then read the description of the sanction, the CL, and the reply to determine whether the main cause of the sanction is also raised in either the CL or the reply, or both. If so, we classify the sanction as triggered by the CL.	Hand-collected
Section 408 criteria		
Internal control weakness	An indicator variable that takes the value of one if the internal control audit opinion is qualified for a material weakness, and zero otherwise.	CSMAR
High volatility	An indicator variable that takes the value of one if the volatility of abnormal monthly stock returns (i.e., the monthly return minus the value-weighted market return) is in the highest quartile, and zero otherwise. Return volatility is calculated as the standard deviation of monthly stock returns in a fiscal year.	CSMAR
Prior year stock return	The annualized compounded monthly stock return in a year.	CSMAR
Market cap (100 Million CNY)	Share price at the fiscal year-end times the total number of shares outstanding at the fiscal year-end, in 100 million CNY. The base year is 2013 using the fiscal year-end CPI.	CSMAR
Log (market cap)	The natural logarithm of market capitalization.	CSMAR
Auditor characteristics		
Modified audit opinion	An indicator variable that takes the value of one if a firm is issued a modified opinion by its auditor, and zero otherwise. An audit opinion is considered modified if it is classified as unqualified with explanatory notes, qualified, disclaimer, or adverse, following Wang, Wong, and Xia (2008).	CSMAR
Big4	An indicator variable that takes the value of one if a firm is client of one of the Big 4 auditors, and zero otherwise.	CSMAR
Auditor tenure	The number of consecutive years during which the same auditor has audited a firm.	CSMAR
Auditor turnover	An indicator variable that takes the value of one if there is an auditor turnover in a year, and zero otherwise.	CSMAR
Corporate governance characteristics		
CEO/COB duality	An indicator variable that takes the value of one if the CEO is also Chairman of the Board (COB), and zero otherwise.	CSMAR
Board independence	The fraction of independent directors on a board.	CSMAR
Board size	The number of directors on a board.	CSMAR
Institutional ownership	The number of shares held by qualified foreign institutional investors (QFII), mutual funds, insurance firms, financial firms, securities companies, social securities funds, supplementary pension (additional funds set up by some firms for their employees; incidentally, regular pension funds are not allowed to own stocks in China), trust companies, financial products of securities companies, private funds managed by trust companies, banks, non-financial listed firms, scaled by the total number of shares outstanding.	WIND
High IO	An indicator variable that takes the value of one if a firm's institutional ownership is in the top quartile among its industry peers in a year, zero otherwise.	WIND
Management ownership	The number of shares held by top management team scaled by the total number of shares outstanding.	CSMAR
SOE	An indicator variable that takes the value of one if the controlling shareholder is the state or state affiliated entity, and zero otherwise. The term "controlling shareholder" shall refer to a person that satisfies any of the following conditions: (1) the person, acting alone or in concert with others, has the power to elect more than half of the directors; 2) the person, acting alone or in concert with others, has the power to exercise or control the exercise of 30% or more of the company's voting rights; (3) the person, acting alone or in concert with others, holds 30% or more of the shares of the company; or (4) the person, acting alone or in concert with others, actually controls the company in any other manner (CSMAR User Guideline 2018).	CSMAR

Other firm controls		
Firm age	The number of years since a firm's founding.	CSMAR
Loss	An indicator variable that takes the value of one if basic EPS is negative, and zero otherwise.	CSMAR
Special treatment	An indicator variable that takes the value of one if a listed firm reports two consecutive years of losses, and zero otherwise	CSMAR
Sales growth	The change in sales from year t-1 to year t.	CSMAR
Related party transaction	Net accounts receivables scaled by total assets, following Jiang, Wan, and Zhao (2015).	CSMAR
Loan guarantee	The amount of loan guarantees a firm provides for its subsidiaries and affiliates during a year scaled by equity, following Jiang, Wan, and Zhao (2015).	CSMAR
M&A	An indicator variable that takes the value of one if a firm has completed a merger or an acquisition in a year, and zero otherwise.	SDC
Foreign listing	An indicator variable that takes the value of one if a firm also issues shares traded on U.S. stock exchange, or issues B-shares (shares traded on Chinese stock exchanges for foreign accounts) or H-shares (shares traded on the Hong Kong Stock Exchange), and zero otherwise.	CSMAR
Marketization index	The institutional development of the province where a firm's headquarters are located. The index is comprised of five sub-indices: 1) the relationship between the government and the market, 2) the development of non-state economic sectors, 3) the developmental level of the product market, 4) the developmental level of the factor market, and 5) the development of the intermediary market organization and the legal environment. The index ranges from 0 to 10, and its base year is 2008.	Wang, Fan, and Hu (2019)
High marketization	An indicator variable that takes the value of one if the marketization index of a firm's headquarters province is in the top quartile among all provinces in a year, and zero otherwise.	Wang, Fan, and Hu (2019)
Tables 4-9 controls		
M/B	Market capitalization scaled by book value of equity.	CSMAR
Leverage	Total liabilities scaled by total assets.	CSMAR
CFO	Operating cash flow scaled by lagged total assets	CSMAR

Appendix C. Robustness checks

This table conducts robustness checks on our findings in Table 6. In Panels C1-C2, we repeat the analyses in Table 6 replacing the indicator variable *CL* with a new indicator variable *CL2*, that takes the value of one for the year and the year after receiving a CL, and zero otherwise. In Panels C3-C4, we repeat the analyses in Table 6 employing a propensity-score-matched sample as control firms. The treatment group is the sample of firms that are in receipt of their first CL. The control firms are chosen from those that have never received a CL over the sample period. A firm's propensity score is the probability of it receiving a CL conditional on its observable characteristics. We estimate each firm's propensity score based on the specification in Table 3. We then select a control firm that has the closest propensity score to each CL firm without replacement. In Panel C3, the sample consists of 261 treatment firms and 261 control firms. In Panel C4, the sample consists of 296 treatment firms and 296 control firms. For brevity, we only report coefficients on the key variable of interest. Variable definitions are provided in Appendix B. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel C1: CLs and disclosure quality

Variable	Number of numbers		Length of disclosure	
CL2	0.016	-0.008	0.030*	0.002
	(0.020)	(0.022)	(0.018)	(0.021)
Other controls	YES	YES	YES	YES
Industry fixed effects	NO	YES	NO	YES
Firm fixed effects	YES	NO	YES	NO
Year fixed effects	YES	YES	YES	YES
Adj. R^2	0.762	0.241	0.746	0.203
N	3803	3803	3803	3803

Panel C2: CLs and information asymmetry

Variable	Bid-ask spread_CS		Bid-ask spread_AB	
CL2	0.021	0.023**	0.026	0.030**
	(0.014)	(0.010)	(0.018)	(0.012)
Other controls	YES	YES	YES	YES
Industry fixed effects	NO	YES	NO	YES
Firm fixed effects	YES	NO	YES	NO
Year fixed effects	YES	YES	YES	YES
Adj. R^2	0.398	0.342	0.420	0.370
N	5452	5452	5452	5452

Panel C3: CLs and disclosure quality

Variable	Number of numbers		Length of disclosure	
Post	0.198	0.052*	0.195	0.041
	(0.211)	(0.030)	(0.054)	(0.026)
Post_CL	-0.021	-0.027	-0.009	-0.038
	(0.042)	(0.037)	(0.037)	(0.032)
Other controls	YES	YES	YES	YES
Industry fixed effects	NO	YES	NO	YES
Firm fixed effects	YES	NO	YES	NO
Year fixed effects	YES	YES	YES	YES
Adj. R^2	0.751	0.209	0.755	0.226
N	1044	1044	1044	1044

Panel C4: CLs and information asymmetry

Variable	Bid-ask spread _CS		Bid-ask spread_AB	
Post	0.115***	-0.020	0.354***	-0.023
	(0.036)	(0.018)	(0.046)	(0.024)
Post_CL	0.008	0.034*	-0.028	0.034
	(0.036)	(0.019)	(0.045)	(0.023)
Other controls	YES	YES	YES	YES
Industry fixed effects	NO	YES	NO	YES
Firm fixed effects	YES	NO	YES	NO
Year fixed effects	YES	YES	YES	YES
Adj. R^2	0.458	0.399	0.473	0.432
N	1184	1184	1184	1184

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Figure 1. Buy-and-hold returns around CL announcement date

This figure plots average buy-and-hold return (BHR) and buy-and-hold abnormal return (BHAR) on CL firms over the trading days (-5, +20) around CL announcement date. The y axis is BHR and BHAR in percentage points. The x axis is trading day relative to CL announcement date (day 0).

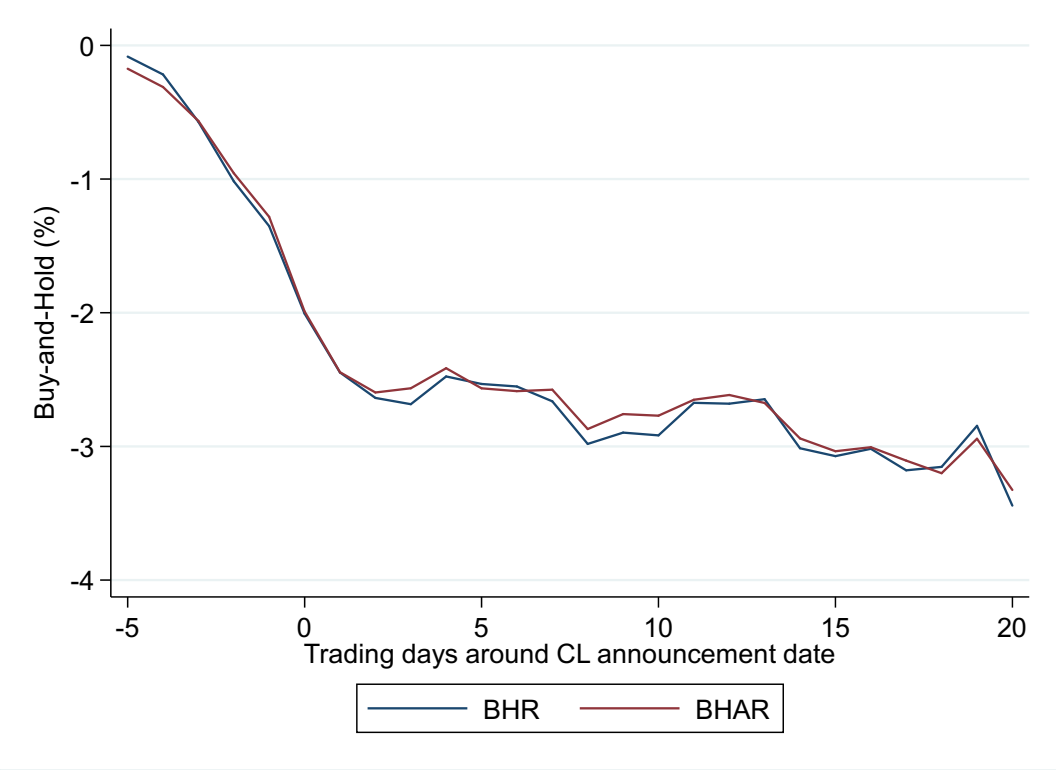

Table 1. Sample overview

This table provides an overview of our sample. Panel A describes our data collection and sources. Column (1) gives the number of firms that receive CLs identified from the SSE's website. Columns (2)-(4) gives the number of firms that receive CLs identifies from CLs, responses, and supplemental announcement, respectively, from corporate announcements on the website of Shanghai Securities News (www.cnstock.com). Columns (5)-(7) gives the number of firms receiving CLs (yes or no), the number of firms listed on the SSE, and the fraction of SSE firms receiving CLs, respectively. Panel B provides the summary statistics of CL characteristics. Variable definitions are provided in Appendix B.

Panel A: CLs over time and from different sources

Year	SSE	Corporate announcements			CLs (Yes or No)	No. of SSE firms	% of SSE firms receiving CLs
	(1) CLs	(2) CLs	(3) Responses	(4) Supplemental announcements	(5)	(6)	(7)
2013	0	3	76	25	104	950	10.95%
2014	0	1	119	14	134	1,005	13.33%
2015	76	49	9	3	137	1,077	12.72%
2016	124	31	0	3	158	1,217	12.98%
2017	126	72	0	0	198	1,404	14.10%
Total	326	156	204	45	731	5,653	12.93%

Panel B: Summary statistics of CL characteristics

Variable	N	Mean	Median	Std. Dev.	Min	Max
No. of pages	410	4.544	4.000	1.563	2.000	9.000
No. of questions	686	10.131	10.000	4.445	2.000	24.000
Revenue recognition	686	0.746	1.000	0.435	0.000	1.000

Table 2. Summary statistics

This table provides the summary statistics of sample firm characteristics. Panel A provides the descriptive statistics of determinants of a firm in receipt of a CL and CL characteristics. The last two columns present tests of differences in means and medians between the two subsamples of firm-years receiving a CL and firm-years not. Panel B presents the correlation matrix. Superscripts a, b, and c correspond to statistical significance at the 1%, 5%, and 10% levels, respectively. Panel C provides the descriptive statistics of outcome variables subsequent to a firm in receipt of a CL. The last two columns present tests of differences in means and medians between the two subsamples of firm-years receiving a CL and firm-years not. Variable definitions are provided in Appendix B. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively. Panel B provides the correlation matrix. Superscripts a, b, c represents for significance at 1%, 5%, 10% level, respectively.

Panel A: Descriptive statistics of determinants of CLs and CL characteristics

	Comment letter = 1				Comment letter = 0				Test of differences	
Variable	N	Mean	Median	Std.Dev.	N	Mean	Median	Std.Dev.	t-test	Wilcoxon test
Section 408 criteria										
Internal control weakness	731	0.506	1.000	0.500	4,922	0.464	0.000	0.450	0.042**	1.000**
High volatility	713	0.293	0.000	0.456	4,753	0.243	0.000	0.429	0.050***	0.000***
Prior year stock return	721	0.189	0.011	0.670	4,840	0.215	0.056	0.628	-0.026	-0.045***
Market cap (100 Million CNY)	721	102.506	61.018	115.228	4,840	201.182	78.460	400.972	-98.675***	-17.442***
Log(market cap)	721	18.062	17.927	0.828	4,840	18.365	18.178	1.068	-0.303***	-0.251***
Auditor characteristics										
Modified audit opinion	731	0.129	0.000	0.335	4,921	0.031	0.000	0.173	0.098***	0.000***
Big4	731	0.051	0.000	0.219	4,921	0.120	0.000	0.325	-0.070***	0.000***
Auditor tenure	731	4.599	3.000	3.621	4,921	4.611	4.000	3.636	-0.011	-1.000
Auditor turnover	731	0.150	0.000	0.358	4,921	0.109	0.000	0.312	0.041***	0.000***
Corporate governance characteristics										
CEO/COB duality	716	0.221	0.000	0.415	4,843	0.189	0.000	0.391	0.032*	0.000**
Board independence	731	0.376	0.357	0.053	4,919	0.372	0.357	0.051	0.003	0.000
Board size	731	8.653	9.000	1.778	4,919	9.053	9.000	2.001	-0.401***	0.000***
Institutional ownership	731	0.058	0.027	0.089	4,922	0.075	0.037	0.110	-0.017***	-0.010***
Management ownership	731	0.025	0.000	0.093	4,922	0.033	0.000	0.100	-0.008***	0.000**
SOE	731	0.465	0.000	0.499	4,919	0.571	1.000	0.495	-0.106***	-1.000***
Other firm controls										

Firm age	731	20.157	20.000	4.652	4,921	18.696	19.000	5.073	1.462***	1.000***
Loss	731	0.222	0.000	0.416	4,922	0.074	0.000	0.262	0.147***	0.000***
Special treatment	722	0.040	0.000	0.196	4,842	0.023	0.000	0.151	0.017**	0.000***
Sales growth	703	0.248	0.039	0.900	4,481	0.174	0.074	0.613	0.074**	-0.034***
Related party transaction	731	0.026	0.012	0.037	4,922	0.016	0.007	0.025	0.010***	0.005***
Loan guarantee	731	0.204	0.024	0.381	4,922	0.121	0.000	0.293	0.083***	0.024***
M&A	731	0.088	0.000	0.283	4,922	0.057	0.000	0.233	0.030***	0.000***
Foreign listing	731	0.070	0.000	0.255	4,922	0.108	0.000	0.311	-0.039***	0.000***
Marketization index	731	7.570	7.470	2.026	4,922	8.141	9.120	1.826	-0.570***	-1.65***

Panel B: Correlation matrix

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
(1)	CL	1.00																							
(2)	Internal control weakness	0.03[b]	1.00																						
(3)	High volatility	0.04[a]	-0.08[a]	1.00																					
(4)	Prior year stock return	-0.01	-0.10[a]	0.31[a]	1.00																				
(5)	Log(market cap)	-0.10[a]	0.13[a]	-0.09[a]	0.11[a]	1.00																			
(6)	Modified audit opinion	0.16[a]	0.04[a]	0.07[a]	-0.00	-0.14[a]	1.00																		
(7)	Big4	-0.07[a]	0.03[a]	-0.10[a]	-0.01	0.47[a]	-0.06[a]	1.00																	
(8)	Auditor tenure	0.00	0.12[a]	-0.11[a]	-0.04[a]	0.04[a]	0.00	0.06[a]	1.00																
(9)	Auditor turnover	0.04[a]	-0.02	0.01	0.01	-0.03[b]	0.05[a]	0.02	-0.36[a]	1.00															
(10)	CEO/COB duality	0.03[b]	-0.08[a]	0.07[a]	0.03[b]	-0.09[a]	0.01	-0.06[a]	-0.08[a]	-0.03[a]	1.00														
(11)	Board independence	0.02	0.03[b]	0.04[a]	0.00	0.07[a]	-0.01	0.07[a]	0.03[b]	-0.02	0.08[a]	1.00													
(12)	Board size	-0.07[a]	0.05[a]	-0.11[a]	-0.03[b]	0.32[a]	-0.04[a]	0.22[a]	0.00	0.02	-0.16[a]	-0.39[a]	1.00												
(13)	Institutional ownership	-0.06[a]	-0.01	-0.04[a]	0.12[a]	0.22[a]	-0.10[a]	0.14[a]	0.02	-0.03[b]	0.02	-0.02[c]	0.05[a]	1.00											
(14)	Management ownership	-0.03[c]	-0.13[a]	0.16[a]	0.02[c]	-0.10[a]	-0.05[a]	-0.08[a]	-0.20[a]	-0.09[a]	0.42[a]	0.06[a]	-0.13[a]	-0.01	1.00										
(15)	SOE	-0.07[a]	0.14[a]	-0.16[a]	-0.05[a]	0.16[a]	-0.03[b]	0.14[a]	0.07[a]	0.08[a]	-0.28[a]	-0.03[b]	0.25[a]	-0.01	-0.34[a]	1.00									
(16)	Firm age	0.10[a]	0.10[a]	-0.05[a]	-0.05[a]	-0.09[a]	0.06[a]	-0.08[a]	0.21[a]	0.02	-0.05[a]	-0.07[a]	-0.02	0.01	-0.17[a]	0.05[a]	1.00								
(17)	Loss	0.17[a]	0.05[a]	0.05[a]	0.01	-0.17[a]	0.31[a]	-0.08[a]	0.03[c]	0.04[a]	-0.03[c]	0.01	-0.03[b]	-0.12[a]	-0.08[a]	0.04[a]	0.07[a]	1.00							
(18)	Special treatment	0.04[a]	0.01	0.06[a]	0.00	-0.12[a]	0.23[a]	-0.05[a]	-0.02[c]	0.07[a]	-0.01	0.01	-0.04[a]	-0.09[a]	-0.04[a]	0.00	0.05[a]	0.07[a]	1.00						
(19)	Sales growth	0.04[a]	-0.05[a]	0.08[a]	0.05[a]	0.06[a]	-0.01	-0.02	-0.05[a]	0.08[a]	0.03[b]	0.03[b]	-0.05[a]	0.05[a]	0.03[b]	-0.10[a]	0.06[a]	-0.10[a]	0.12[a]	1.00					
(20)	M&A	0.04[a]	0.00	0.03[b]	0.05[a]	0.06[a]	-0.02	-0.02[c]	-0.02[c]	0.08[a]	-0.03[b]	0.00	-0.02	0.02[c]	-0.02[c]	-0.01	0.05[a]	-0.04[a]	0.05[a]	0.30[a]	1.00				
(21)	Related party transaction	0.12[a]	0.00	0.02	0.01	-0.06[a]	0.11[a]	-0.03[b]	0.05[a]	0.03[b]	0.00	0.07[a]	-0.05[a]	-0.05[a]	-0.07[a]	-0.02[c]	0.05[a]	0.08[a]	0.05[a]	0.02	0.01	1.00			
(22)	Loan guarantee	0.09[a]	0.02	0.01	-0.01	-0.06[a]	0.11[a]	-0.05[a]	0.01	0.02	-0.02	0.00	0.01	-0.06[a]	-0.06[a]	-0.06[a]	0.09[a]	0.08[a]	0.05[a]	0.03[b]	0.01	0.16[a]	1.00		
(23)	Foreign listing	-0.04[a]	0.05[a]	-0.06[a]	-0.01	0.33[a]	-0.04[a]	0.50[a]	0.08[a]	-0.00	-0.08[a]	0.05[a]	0.17[a]	0.04[a]	-0.10[a]	0.20[a]	0.05[a]	-0.01	-0.01	-0.02	-0.02	-0.03[b]	-0.05[a]	1.00	
(24)	Marketization index	-0.10[a]	-0.00	0.03b	0.01	0.13[a]	-0.09[a]	0.13[a]	0.04[a]	-0.11[a]	0.08[a]	-0.02	-0.03[b]	0.04[a]	0.15[a]	-0.09[a]	0.03[b]	-0.14[a]	-0.08[a]	-0.00	-0.00	-0.05[a]	-0.02	0.14[a]	1.00

Panel C: Descriptive statistics of CL outcome variables

	Comment letter = 1				Comment letter = 0				Test of differences	
Variable	N	Mean	Median	Std.Dev.	N	Mean	Median	Std.Dev.	t-test	Wilcoxon test
Amendment	527	0.290	0.000	0.454	3,649	0.072	0.000	0.259	0.218***	0.000***
Number of numbers	462	6.336	6.332	0.480	3,341	6.391	6.370	0.469	-0.055**	-0.038*
Length of disclosure	462	9.317	9.313	0.442	3,341	9.361	9.353	0.412	-0.044**	-0.040*
Bid-ask spread_CS	691	0.880	0.833	0.298	4,762	0.834	0.803	0.282	0.045***	0.030***
Bid-ask spread_AB	691	0.952	0.891	0.374	4,762	0.902	0.851	0.350	0.050***	0.040***
CL-triggered sanction	731	0.116	0.000	0.321						
Sanction	524	0.275	0.000	0.448	3,644	0.138	0.000	0.345	0.138***	0.000***
Cost of debt	385	6.374	5.529	3.942	2,548	5.500	5.180	3.251	0.874***	0.349***
Cost of equity_GLS	160	4.922	4.233	3.430	1,536	5.611	4.734	3.609	-0.690**	-0.501***
Cost of equity_PEG	154	10.402	10.105	4.088	1,498	10.297	10.116	3.803	0.105	-0.011

Table 3. Determinants of firms receiving comment letter

This table examines the determinants of a firm in receipt of a CL and CL characteristics. The sample consists of firms listed on the SSE over the period 2013-2017. Panel A presents the logistic and OLS regression results where the dependent variable is the indicator variable *Comment letter*. Panel B presents the OLS regression results where the dependent variables are CL characteristics: *No. of pages, No. of questions,* and the indicator variable *Revenue recognition*. Variable definitions are provided in Appendix B. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Determinants of firms receiving comment letter

Variable	Comment letter = 1	
	Logit	OLS
Internal control weakness	0.060	0.006
	(0.098)	(0.011)
High volatility	0.145	0.021*
	(0.105)	(0.013)
Prior year stock return	-0.041	-0.007
	(0.106)	(0.012)
Log (market cap)	-0.155**	-0.014**
	(0.066)	(0.006)
Modified audit opinion	0.859***	0.170***
	(0.184)	(0.035)
Big4	-0.351	-0.017
	(0.254)	(0.018)
Auditor tenure	-0.014	-0.002
	(0.016)	(0.002)
Auditor turnover	0.222	0.025
	(0.143)	(0.017)
CEO/COB duality	0.170	0.023
	(0.122)	(0.015)
Board independence	0.340	0.076
	(1.134)	(0.117)
Board size	-0.046	-0.004
	(0.032)	(0.003)
Institutional ownership	-0.703	-0.065
	(0.610)	(0.049)
Management ownership	-0.432	-0.071
	(0.751)	(0.085)
SOE	-0.336***	-0.040***
	(0.104)	(0.012)
Firm age	0.044***	0.005***
	(0.011)	(0.001)
Loss	0.768***	0.119***
	(0.135)	(0.023)
Special treatment	-0.495**	-0.061*
	(0.252)	(0.034)
Sales growth	0.118**	0.017*
	(0.058)	(0.010)
M&A	0.424***	0.047**
	(0.162)	(0.022)
Related party transaction	6.692***	1.008***
	(1.368)	(0.229)
Loan guarantee	0.331**	0.047**
	(0.138)	(0.021)
Foreign listing	0.067	0.009

	(0.211)	(0.018)
Marketization index	-0.106***	-0.012***
	(0.025)	(0.003)
Constant	0.231	0.289**
	(1.227)	(0.117)
Industry fixed effects	YES	YES
Year fixed effects	YES	YES
Pseudo R^2 / Adj. R^2	0.097	0.078
N	5,062	5,084

Panel B: Determinants of CL characteristics

Variable	No. of pages	No. of questions	Revenue recognition
Internal control weakness	0.016	0.071	-0.006
	(0.041)	(0.113)	(0.009)
High volatility	-0.011	0.103	0.015
	(0.047)	(0.133)	(0.011)
Prior year stock return	0.010	-0.062	-0.010
	(0.047)	(0.135)	(0.010)
Log (market cap)	0.003	-0.062	-0.006
	(0.023)	(0.065)	(0.006)
Modified audit opinion	0.808***	2.091***	0.121***
	(0.176)	(0.460)	(0.032)
Big4	-0.073	-0.169	-0.013
	(0.066)	(0.174)	(0.015)
Auditor tenure	-0.005	-0.029	0.000
	(0.007)	(0.019)	(0.001)
Auditor turnover	0.096	0.273	0.014
	(0.067)	(0.193)	(0.014)
CEO/COB duality	0.113*	0.261	0.030**
	(0.063)	(0.175)	(0.014)
Board independence	0.223	1.292	0.091
	(0.453)	(1.228)	(0.102)
Board size	-0.014	-0.027	-0.004*
	(0.011)	(0.032)	(0.002)
Institutional ownership	-0.195	-0.169	-0.051
	(0.167)	(0.548)	(0.040)
Management ownership	-0.275	-1.112	-0.123**
	(0.306)	(0.793)	(0.062)
SOE	-0.138***	-0.422***	-0.035***
	(0.049)	(0.136)	(0.010)
Firm age	0.017***	0.055***	0.004***
	(0.005)	(0.013)	(0.001)
Loss	0.397***	1.442***	0.084***
	(0.106)	(0.273)	(0.021)
Special treatment	-0.308**	-0.594	-0.056*
	(0.135)	(0.425)	(0.030)
Sales growth	0.077	0.235*	0.018*
	(0.047)	(0.124)	(0.010)
M&A	0.252**	0.635**	0.026
	(0.102)	(0.269)	(0.019)
Related party transaction	2.503**	10.060***	0.461**
	(0.972)	(2.626)	(0.197)
Loan guarantee	0.173*	0.708***	0.049***
	(0.091)	(0.271)	(0.019)
Foreign listing	-0.024	-0.112	-0.005
	(0.058)	(0.163)	(0.014)
Marketization index	-0.049***	-0.134***	-0.011***
	(0.013)	(0.036)	(0.003)
Constant	-0.172	0.958	0.130
	(0.448)	(1.344)	(0.102)
Industry fixed effects	YES	YES	YES
Year fixed effects	YES	YES	YES
Adj. R^2	0.101	0.090	0.066
N	4,783	5,041	5,041

Table 4. Price reaction to CL announcement

This table examines the price reaction to CL announcement and CL characteristics. The sample consists of 321 SSE-listed firms with available data over the period 2013-2017. We manually check whether the announcement of CLs coincides with the announcement of other major corporate events including earnings announcements, management turnover, acquisitions, restructurings, dividends, and stock repurchases, in the event window examined, and drop those with contemporaneous major event announcements. Our CL announcement sample consists of 389 observations. Panel A presents daily returns around the CL announcement and the last row provides the mean of *CAR (-3, +1)*. Panel B presents the OLS regression results where the dependent variable is *CAR (-3, +1)*. Variable definitions are provided in Appendix B. Standard errors clustered at the CL announcement date level are reported in parentheses. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Daily returns around the CL announcement

Trading day	N	Mean abnormal return	Number of positive : negative
-5	389	-0.002	172 : 217
-4	389	-0.001	172 : 217
-3	389	-0.003*	168 : 221
-2	389	-0.004***	160 : 229
-1	389	-0.003**	155 : 234
0	389	-0.007***	143 : 246
+1	389	-0.005**	147 : 242
+2	389	-0.002	174 : 215
+3	389	0.000	193 : 196
+4	389	0.001	199 : 190
+5	388	-0.001	171 : 217
CAR (-3, +1)	389	-0.022***	125 : 264

Panel B: Determinants of cumulative abnormal returns around the CL announcement

Variable	CAR (-3, +1)	CAR (-3, +1)	CAR (-3, +1)
No. of pages	-0.006**		
	(0.003)		
No. of questions		-0.001*	
		(0.001)	
Revenue recognition			-0.010*
			(0.005)
Log (market cap)	0.008*	0.008**	0.007*
	(0.005)	(0.004)	(0.004)
M/B	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)
Leverage	-0.016	-0.016	-0.018
	(0.014)	(0.013)	(0.013)
CFO	-0.023	-0.017	-0.015
	(0.038)	(0.034)	(0.034)
Institutional ownership	0.025	0.028	0.028
	(0.038)	(0.036)	(0.036)
SOE	-0.003	-0.006	-0.006
	(0.006)	(0.006)	(0.006)
Loss	0.025***	0.021***	0.018***
	(0.007)	(0.006)	(0.007)
Big4	-0.009	-0.006	-0.005

	(0.012)	(0.011)	(0.010)
Foreign listing	-0.012	-0.012	-0.010
	(0.009)	(0.008)	(0.008)
Marketization index	0.001	0.001	0.001
	(0.002)	(0.002)	(0.002)
Constant	-0.088	-0.081	-0.072
	(0.089)	(0.074)	(0.075)
Industry fixed effects	YES	YES	YES
Year fixed effects	YES	YES	YES
Adj. R^2	0.059	0.043	0.039
N	329	383	383

Table 5. Comment letters and amendment

This table examines whether the receipt of a CL trigger amendment. The sample consists of 1,386 SSE-listed firms with available data over the period 2013-2017. This table presents the logistic and OLS regression results where the dependent variable is the indicator variable *Amendment.* Variable definitions are provided in Appendix B. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

Variable	Amendment		
	Logit	OLS	
CL	1.660***	0.205***	0.211***
	(0.128)	(0.027)	(0.020)
Log (market cap)	-0.034	0.013	-0.004
	(0.077)	(0.023)	(0.006)
M/B	0.004	-0.002	0.001
	(0.007)	(0.002)	(0.001)
Leverage	0.459	-0.018	0.035
	(0.314)	(0.083)	(0.027)
CFO	-0.278	0.119	-0.016
	(0.670)	(0.106)	(0.061)
Institutional ownership	-0.638	-0.155	-0.053
	(0.808)	(0.099)	(0.055)
SOE	-0.070	0.038	-0.007
	(0.129)	(0.082)	(0.011)
Loss	0.141	0.001	0.014
	(0.173)	(0.027)	(0.019)
Big4	-0.234	0.014	-0.017
	(0.261)	(0.082)	(0.019)
Foreign listing	0.240	0.143	0.020
	(0.219)	(0.114)	(0.019)
Marketization index	-0.053*	0.025	-0.005*
	(0.031)	(0.018)	(0.003)
Constant	-0.546	-0.306	0.283**
	(1.380)	(0.422)	(0.119)
Industry fixed effects	YES	NO	YES
Firm fixed effects	NO	YES	NO
Year fixed effects	YES	YES	YES
Pseudo R^2 / Adj. R^2	0.110	0.100	0.080
N	4,171	4,176	4,176

Table 6. Comment letters and firms' disclosure quality

This table examines whether the disclosure quality of firms in receipt of CLs change subsequently compared to those of firms not in receipt of CLs. The sample consists of 1,386 SSE-listed firms with available data over the period 2013-2017. Panel A presents the OLS regression results where the dependent variables are different measures of disclosure quality: *Number of numbers* and *Length of disclosure*. Panel B presents the OLS regression results where the dependent variables are different measures of information asymmetry: *Bid-ask spread_CS* and *Bid-ask spread_AB*. Variable definitions are provided in Appendix B. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: CLs and disclosure quality

Variable	Number of numbers		Length of disclosure	
CL	0.020	0.007	0.027	0.015
	(0.018)	(0.023)	(0.017)	(0.021)
Log (market cap)	0.069***	0.163***	0.058***	0.133***
	(0.023)	(0.015)	(0.020)	(0.013)
M/B	-0.003**	-0.013***	-0.004***	-0.009***
	(0.002)	(0.001)	(0.001)	(0.001)
Leverage	0.035	0.389***	-0.010	0.235***
	(0.080)	(0.058)	(0.071)	(0.052)
CFO	-0.064	-0.037	-0.034	0.019
	(0.079)	(0.105)	(0.074)	(0.091)
Institutional ownership	0.293**	0.180	0.236**	0.208**
	(0.116)	(0.113)	(0.104)	(0.099)
SOE	-0.064	-0.053**	-0.055	-0.052**
	(0.064)	(0.024)	(0.052)	(0.022)
Loss	-0.005	-0.061**	0.010	-0.071***
	(0.017)	(0.025)	(0.017)	(0.022)
Big4	-0.030	-0.032	0.031	-0.043
	(0.069)	(0.045)	(0.062)	(0.037)
Foreign listing	0.032	0.023	0.124	-0.005
	(0.069)	(0.043)	(0.104)	(0.037)
Marketization index	0.007	0.003	-0.008	0.001
	(0.023)	(0.006)	(0.019)	(0.006)
Constant	5.120***	3.514***	8.436***	7.080***
	(0.474)	(0.268)	(0.397)	(0.239)
Industry fixed effects	NO	YES	NO	YES
Firm fixed effects	YES	NO	YES	NO
Year fixed effects	YES	YES	YES	YES
Adj. R2	0.762	0.241	0.746	0.203
N	3,803	3,803	3,803	3,803

Panel B: CLs and information asymmetry

Variable	Bid-ask spread_CS		Bid-ask spread_AB	
CL	0.017	0.024**	-0.008	0.021
	(0.013)	(0.010)	(0.017)	(0.013)
Log (market cap)	-0.056***	-0.038***	-0.118***	-0.056***
	(0.013)	(0.004)	(0.017)	(0.005)
M/B	-0.000	0.003***	-0.000	0.002***
	(0.001)	(0.001)	(0.001)	(0.001)
Leverage	-0.050	-0.009	-0.075	-0.028
	(0.052)	(0.020)	(0.067)	(0.025)
CFO	-0.031	-0.065	-0.006	-0.082*
	(0.062)	(0.040)	(0.073)	(0.046)
Institutional ownership	0.046	0.059*	0.119	-0.052
	(0.074)	(0.035)	(0.090)	(0.042)
SOE	0.008	-0.023***	-0.008	-0.031***
	(0.047)	(0.008)	(0.046)	(0.010)
Loss	-0.010	-0.012	-0.015	-0.012
	(0.016)	(0.012)	(0.020)	(0.016)
Big 4	0.050	-0.012	0.050	-0.027
	(0.050)	(0.015)	(0.050)	(0.017)
Foreign listing	-0.020	0.007	0.029	0.019
	(0.072)	(0.014)	(0.078)	(0.017)
Marketizzation index	0.019	0.003	0.020	0.004
	(0.015)	(0.002)	(0.017)	(0.003)
Constant	1.810***	1.570***	2.956***	1.947***
	(0.262)	(0.078)	(0.342)	(0.093)
Industry fixed effects	NO	YES	NO	YES
Firm fixed effects	YES	NO	YES	NO
Year fixed effects	YES	YES	YES	YES
Adj. R^2	0.398	0.342	0.420	0.370
N	5,452	5,452	5,452	5,452

Table 7. Comment letter characteristics and further enforcement

This table examines the relation between CL characteristics and subsequent enforcement based on a subsample of firms ever in receipt of CLs. The sample consists of 483 SSE-listed firms with available information over the period 2013-2017. Panel A presents the logistic and OLS regression results where the dependent variable is the indicator variable *Comment letter*. Panel B presents the logistic and OLS regression results where the dependent variable is the indicator variable *CL-triggered sanction*. Variable definitions are provided in Appendix B. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: CL characteristics and future CLs

Variable	Comment letter=1					
	Logit			OLS		
No. of pages	0.246**			0.049**		
	(0.104)			(0.022)		
No. of questions		0.052**			0.011**	
		(0.025)			(0.005)	
Revenue recognition			0.341			0.063
			(0.241)			(0.046)
Log (market cap)	-0.326*	-0.257	-0.253	-0.054	-0.045	-0.044
	(0.188)	(0.163)	(0.159)	(0.038)	(0.029)	(0.029)
M/B	-0.014	-0.008	-0.009	-0.003	-0.001	-0.002
	(0.012)	(0.008)	(0.008)	(0.003)	(0.002)	(0.002)
Leverage	0.333	0.578	0.812	0.049	0.096	0.140
	(0.709)	(0.551)	(0.536)	(0.144)	(0.109)	(0.107)
CFO	-3.894***	-2.078*	-2.369**	-0.773**	-0.430*	-0.487**
	(1.450)	(1.151)	(1.150)	(0.305)	(0.239)	(0.240)
Institutional ownership	-1.624	1.225	1.373	-0.304	0.224	0.264
	(2.113)	(1.317)	(1.292)	(0.382)	(0.260)	(0.258)
SOE	-0.639**	-0.446*	-0.469*	-0.124*	-0.080	-0.085*
	(0.326)	(0.264)	(0.266)	(0.064)	(0.050)	(0.050)
Loss	0.000	0.137	0.172	0.004	0.026	0.033
	(0.365)	(0.261)	(0.254)	(0.081)	(0.054)	(0.053)
Big4	-0.780	-1.333*	-1.398*	-0.123	-0.166**	-0.173**
	(0.791)	(0.742)	(0.772)	(0.120)	(0.070)	(0.074)
Foreign listing	1.416**	0.489	0.457	0.278**	0.080	0.071
	(0.588)	(0.437)	(0.434)	(0.126)	(0.079)	(0.078)
Marketization index	-0.080	-0.019	-0.019	-0.017	-0.004	-0.004
	(0.081)	(0.061)	(0.062)	(0.017)	(0.013)	(0.013)
Constant	4.268	4.049	4.206	1.157	1.185**	1.228**
	(3.954)	(3.023)	(2.983)	(0.822)	(0.568)	(0.562)
Industry fixed effects	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES
Pseudo R^2 / Adj. R^2	0.087	0.059	0.055	0.011	0.015	0.009
N	274	469	469	278	479	479

Panel B: CL characteristics and future sanction

Variable	CL-triggered sanction					
	Logit			OLS		
No. of pages	0.349***			0.045***		
	(0.103)			(0.014)		
No. of questions		0.094***			0.010***	
		(0.029)			(0.003)	
Revenue recognition			-0.237			-0.026
			(0.310)			(0.033)
Log (market cap)	0.078	-0.087	-0.049	0.008	-0.007	-0.004
	(0.206)	(0.165)	(0.159)	(0.023)	(0.016)	(0.016)
M/B	-0.031	-0.005	-0.008	-0.003*	-0.001	-0.001
	(0.024)	(0.011)	(0.012)	(0.001)	(0.001)	(0.001)
Leverage	-0.333	-0.013	0.436	-0.022	0.013	0.048
	(0.754)	(0.606)	(0.587)	(0.085)	(0.064)	(0.063)
CFO	0.172	0.595	0.250	0.049	0.063	0.019
	(1.481)	(1.216)	(1.228)	(0.177)	(0.138)	(0.138)
Institutional ownership	-0.320	-1.232	-0.821	-0.057	-0.128	-0.099
	(1.894)	(1.683)	(1.542)	(0.197)	(0.146)	(0.142)
SOE	-0.304	-0.475*	-0.509*	-0.035	-0.046	-0.050*
	(0.373)	(0.280)	(0.280)	(0.041)	(0.028)	(0.029)
Loss	0.847**	0.609**	0.698**	0.103**	0.071*	0.078**
	(0.399)	(0.306)	(0.297)	(0.050)	(0.036)	(0.036)
Big4	-0.051	-0.588	-0.556	-0.007	-0.043	-0.043
	(0.987)	(0.818)	(0.812)	(0.107)	(0.059)	(0.059)
Foreign listing	0.183	0.307	0.080	0.008	0.023	0.003
	(0.798)	(0.553)	(0.563)	(0.087)	(0.054)	(0.055)
Marketization index	0.090	0.076	0.063	0.010	0.007	0.007
	(0.076)	(0.065)	(0.063)	(0.008)	(0.006)	(0.006)
Constant	-1.212	-2.076	-1.843	0.055	-0.046	0.001
	(3.943)	(2.917)	(2.856)	(0.468)	(0.273)	(0.275)
Industry fixed effects	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES
Pseudo R^2 / Adj. R^2	0.110	0.079	0.059	0.025	0.020	0.004
N	382	649	649	404	676	676

Table 8. Comment letters and further enforcement

This table examines whether firms in receipt of CLs are more likely to be scrutinized or sanctioned subsequently compared to firms not in receipt of CLs. The sample consists of 1,386 SSE-listed firms with available information over the period 2013-2017. This table presents the OLS regression results where the dependent variables are the indicator variable *Comment letter* and *Sanction*. Variable definitions are provided in Appendix B. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

Variable	Comment letter			Sanction		
CL_lag1	-0.226***		-0.400***	-0.004		0.002
	(0.025)		(0.036)	(0.027)		(0.037)
CL_lag2		-0.175***	-0.306***		-0.042	-0.042
		(0.037)	(0.036)		(0.032)	(0.035)
Log (market cap)	0.008	0.014	0.014	-0.008	-0.003	-0.003
	(0.029)	(0.033)	(0.033)	(0.028)	(0.033)	(0.033)
M/B	-0.001	-0.001	-0.001	0.002	0.003	0.003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)
Leverage	0.133	0.034	0.082	-0.077	0.031	0.031
	(0.108)	(0.145)	(0.146)	(0.096)	(0.142)	(0.142)
CFO	-0.019	0.168	0.122	0.063	0.146	0.146
	(0.111)	(0.145)	(0.134)	(0.125)	(0.152)	(0.153)
Institutional ownership	0.127	0.056	0.155	0.065	0.016	0.015
	(0.124)	(0.211)	(0.188)	(0.137)	(0.202)	(0.203)
SOE	-0.091	-0.092	-0.086	-0.059	0.064	0.064
	(0.101)	(0.109)	(0.105)	(0.102)	(0.138)	(0.138)
Loss	0.012	0.008	0.023	0.016	0.017	0.016
	(0.031)	(0.041)	(0.036)	(0.029)	(0.037)	(0.038)
Big4	-0.028	-0.078	-0.019	0.028	-0.035	-0.035
	(0.097)	(0.103)	(0.106)	(0.051)	(0.117)	(0.117)
Foreign listing	-0.039	-0.007	-0.032	-0.149	-0.167	-0.167
	(0.024)	(0.034)	(0.043)	(0.193)	(0.142)	(0.142)
Marketization index	0.017	-0.014	-0.002	0.008	-0.007	-0.007
	(0.025)	(0.033)	(0.033)	(0.022)	(0.035)	(0.035)
Constant	-0.138	0.053	-0.020	0.320	0.234	0.234
	(0.569)	(0.683)	(0.701)	(0.532)	(0.692)	(0.691)
Firm fixed effects	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES
Adj. R^2	0.178	0.182	0.299	0.149	0.189	0.188
N	4168	3018	3018	4168	3018	3018

Table 9. Comment letters and market discipline

This table examines whether there is any market discipline of firms in receipt of CLs. The sample consists of 1,386 SSE-listed firms with available data over the period 2013-2017. Panel A focuses on institutional ownership and replicates Table 6 Panel A by adding an indicator variable, *High IO*, and its interaction with *Comment letter*. Panel B focuses on the level of institutional development in a firm's headquarters province and replicates Table 6 Panel A by adding the indicator variable, *High marketization*, and its interaction with *Comment letter*. Panel C presents the OLS regression results where the dependent variables are different measures of cost of capital: *Cost of debt, Cost of equity_GLS*, and *Cost of equity_PEG*. Variable definitions are provided in Appendix B. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: CLs, institutional ownership, and disclosure quality

Variable	Number of numbers		Length of disclosure	
CL	0.020	-0.005	0.022	0.012
	(0.020)	(0.025)	(0.019)	(0.023)
High IO	0.036**	0.035	0.025	0.047**
	(0.017)	(0.023)	(0.015)	(0.020)
CL × High IO	0.004	0.055	0.026	0.014
	(0.045)	(0.056)	(0.039)	(0.052)
Log (market cap)	0.076***	0.163***	0.065***	0.133***
	(0.023)	(0.015)	(0.020)	(0.013)
M/B	-0.003**	-0.013***	-0.004**	-0.009***
	(0.002)	(0.001)	(0.001)	(0.001)
Leverage	0.035	0.387***	-0.009	0.232***
	(0.081)	(0.058)	(0.071)	(0.052)
CFO	-0.061	-0.032	-0.032	0.023
	(0.080)	(0.105)	(0.075)	(0.091)
SOE	-0.061	-0.052**	-0.052	-0.052**
	(0.063)	(0.024)	(0.051)	(0.022)
Loss	-0.003	-0.060**	0.011	-0.071***
	(0.017)	(0.025)	(0.017)	(0.022)
Big 4	-0.029	-0.029	0.031	-0.039
	(0.068)	(0.045)	(0.061)	(0.037)
Foreign listing	0.041	0.025	0.130	-0.004
	(0.069)	(0.043)	(0.103)	(0.037)
Marketization index	0.007	0.003	-0.007	0.001
	(0.023)	(0.006)	(0.019)	(0.006)
Constant	4.992***	3.513***	8.321***	7.082***
	(0.466)	(0.267)	(0.395)	(0.238)
Industry fixed effects	NO	YES	NO	YES
Firm fixed effects	YES	NO	YES	NO
Year fixed effects	YES	YES	YES	YES
Adj. R^2	0.761	0.241	0.745	0.204
N	3803	3803	3803	3803

Panel B: CLs, marketization, and disclosure quality

Variable	Number of numbers		Length of disclosure	
CL	0.019	0.020	0.021	0.023
	(0.020)	(0.025)	(0.019)	(0.022)
High marketization	0.021	0.069***	0.001	0.033
	(0.022)	(0.025)	(0.020)	(0.023)
CL × High marketization	0.010	-0.073	0.039	-0.046
	(0.043)	(0.058)	(0.040)	(0.055)
Log (market cap)	0.068***	0.164***	0.059***	0.133***
	(0.023)	(0.015)	(0.020)	(0.013)
M/B	-0.003**	-0.013***	-0.004***	-0.009***
	(0.002)	(0.001)	(0.001)	(0.001)
Leverage	0.034	0.392***	-0.010	0.237***
	(0.080)	(0.057)	(0.071)	(0.052)
CFO	-0.060	-0.036	-0.034	0.020
	(0.080)	(0.105)	(0.075)	(0.090)
Institutional ownership	0.294**	0.182	0.238**	0.208**
	(0.116)	(0.114)	(0.104)	(0.099)
SOE	-0.066	-0.048**	-0.057	-0.050**
	(0.064)	(0.024)	(0.052)	(0.022)
Loss	-0.004	-0.060**	0.010	-0.070***
	(0.017)	(0.025)	(0.017)	(0.022)
Big 4	-0.028	-0.028	0.033	-0.041
	(0.069)	(0.045)	(0.062)	(0.037)
Foreign listing	0.039	0.020	0.121	-0.007
	(0.071)	(0.043)	(0.105)	(0.037)
Constant	5.175***	3.508***	8.379***	7.075***
	(0.425)	(0.267)	(0.360)	(0.239)
Industry fixed effects	NO	YES	NO	YES
Firm fixed effects	YES	NO	YES	NO
Year fixed effects	YES	YES	YES	YES
Adj. R^2	0.762	0.243	0.746	0.204
N	3803	3803	3803	3803

Panel C: CLs and cost of capital

Variable	Cost of debt		Cost of equity_GLS		Cost of equity_PEG	
CL	0.056	0.378*	0.199	-0.132	0.563	0.195
	(0.228)	(0.201)	(0.523)	(0.282)	(0.517)	(0.334)
Log (market cap)	-0.340*	-0.296***	0.448	0.560***	-0.029	0.041
	(0.201)	(0.113)	(0.300)	(0.115)	(0.463)	(0.118)
M/B	-0.013	0.059***	-0.047	-0.186***	0.028	-0.114***
	(0.025)	(0.018)	(0.041)	(0.043)	(0.048)	(0.035)
Leverage	1.386	0.318	1.092	3.287***	2.380	4.329***
	(1.156)	(0.537)	(1.708)	(0.518)	(1.836)	(0.615)
CFO	0.584	0.525	0.177	1.227	3.489	4.025***
	(1.215)	(0.966)	(1.273)	(0.884)	(2.410)	(1.020)
Institutional ownership	-1.824	-0.412	1.078	0.511	2.504	0.540
	(1.224)	(0.758)	(1.141)	(1.021)	(1.640)	(0.898)
SOE	0.594	-0.515***	-0.415	-0.191	-3.126**	-1.342***
	(0.623)	(0.189)	(0.945)	(0.190)	(1.397)	(0.222)
Loss	0.592**	1.071***	1.587	0.812	1.036	0.820
	(0.266)	(0.254)	(1.050)	(0.545)	(0.990)	(0.588)
Big4	0.431	0.725**	-0.549	0.601	-0.072	-0.358
	(0.896)	(0.302)	(1.795)	(0.384)	(1.740)	(0.362)
Foreign listing	-1.325	0.115	-0.941	0.044	-3.122*	-0.444
	(0.853)	(0.291)	(2.219)	(0.453)	(1.804)	(0.407)
Marketization index	-0.093	-0.109**	-0.146	-0.063	-0.215	-0.044
	(0.181)	(0.050)	(0.334)	(0.051)	(0.406)	(0.063)
Constant	11.774***	11.964***	-1.715	-7.290***	13.419	8.104***
	(4.266)	(2.003)	(6.278)	(2.157)	(9.149)	(2.294)
Industry fixed effects	NO	YES	NO	YES	NO	YES
Firm fixed effects	YES	NO	YES	NO	YES	NO
Year fixed effects	YES	YES	YES	YES	YES	YES
Adj. R2	0.605	0.130	0.708	0.381	0.422	0.161
N	2,933	2,933	1,696	1,696	1,652	1,652

Internet Appendix

IA1. An example of CL conversation

Rainbow Display Devices Co., Ltd.

Reply to the Post-Examination Comment Letter Issued by the Shanghai Stock Exchange on the Company's 2016 Annual Report

The board of directors and all directors of the company certify that there are no false records, misleading statements or major omissions in the content of this announcement, and bear individual and joint responsibility for the truthfulness, accuracy, and completeness of the content.

Rainbow Display Devices Co., Ltd. (hereinafter referred to as "the company") received the "Shanghai Stock Exchange Post-Examination Comment Letter for Rainbow Display Devices Co., Ltd. 2016 Annual Report" (Reference: SSE Official Letter [2017] 0354) on March 30th, 2017.

Our reply to the relevant questions is as follows:

I. Related parties and related party transactions

1. Related party transactions

According to the annual report, the company's operating revenue for the year was CNY ¥337,000,000. Of the revenue, CNY ¥297,000,000 was from related parties and accounts for 88% of the total revenue. (1) Please discuss the position of the company and its related parties on the industry, procurement, and sales policies. Please explain the necessity of large-scale related party transactions. (2) Please quantify the dollar value of transactions with related parties by product type and illustrate the pricing fairness of related party transactions. (3) The company executed an abnormal amount of transactions with Xianyang Cailian Packaging in 2016. Please explain if transactions are conducted with other significant related parties in addition to Xianyang Cailian Packaging. (4) In past annual reports, the company had promised to reduce related party transactions; however, the amount of related party transactions was significantly higher than that in 2015. Furthermore, the company projected that the amount of related party transactions would double in 2017. The company should disclose the specific steps through which it intends to reduce related party transactions. Please ask the auditors to express an opinion regarding the issue.

Reply:

(1) The company primarily engages in the development, manufacturing, and sale of LCD glass substrates, which is the core material used by the upstream flat-panel display (FPD) industry. China Electronics Corporation (hereinafter referred to as "CEC") is the

controlling shareholder of the company. CEC is a large-scale corporation that is wholly owned, funded, and managed directly by the Chinese central government; it was founded upon the approval of the State Council. CEC is the largest state-owned IT conglomerate and its subsidiaries cover all aspects of the production chain in the device display industry.

Currently, only Boe Technology Group Co., Ltd. and Nanjing CEC Panda LCD Technology Co., Ltd. (hereinafter referred to as "Panda LCD") have G6 panel production lines that are capable of mass production; thus, supplying G6 glass substrates to Panda LCD is necessary and reasonable. Concurrently, the company is actively seeking potential non-related party clients, both domestically and internationally, in the interest of expanding sales channels and increasing sales volume. Once the company completes private placement of equity, the business focus will expand to encompass panels. The potential revenue from panel sales could further reduce the company's proportion of sales to related parties.

(2) The amounts of related-party transactions of the company and the proportions of such transactions to all transactions in the same product category

Unit: 10,000 Yuan

Related party name	Product Category	Pricing Method	Transactions in 2016	
			Amount	Proportion (%)
Xianyang Cailian Packaging Materials Co., Ltd.	G6 glass substrates sales	market	14,753.80	62.13
CEC Panda LCD Technology Co., Ltd.	G6 glass substrates sales	market	6,642.72	27.97
Nanjing CEC Panda FPD Technology Co., Ltd.	G8.5 glass substrates sales	market	2,702.28	100.00
Hefei Rainbow New Energy Co., Ltd.	Industrial electricity sales	market	5,578.10	87 .06
Rainbow Group	Material sales	market	52.42	0.20
Total			**29,729.32**	**--**

The sales prices of the company's glass substrates products for both related and non-related parties were set through bidding. Because they are considered trade secrets, the company's sales prices have never been disclosed. The sales prices of the same G6 product for related parties and non-related parties differ by approximately 1.8%. This difference was primarily determined by the bargaining power of the company and is within the reasonable range.

(3) Xianyang Cailian Packing Material Limited Company (hereinafter referred to as "Xianyang Cailian") is a related company with which the company's related party IRICO Group Corporation (hereinafter referred to as "IRICO Group") holds a 30% stake. Xianyang Cailian engages primarily in the distribution of glass substrates, as such, it has a stable sales channel for glass substrates, which could improve our sales turnover. Xianyang Cailian purchased glass substrates products from the company at a fair price after receiving an order from one of its customers. After the products were sold to Xianyang Cailian, the main risks associated with holding the merchandise shifted to the buyer. The company did not retain continuing management rights associated with ownership and no longer exercised effective control over the merchandise sold. Moreover, the income from and cost of the goods could be reliably measured, and payment for the sold merchandise was received on time. These conditions met the accounting standards for revenue recognition (i.e. the transaction was real

and commercially reasonable). During the time period covered by this report, Xianyang Cailian also sold low-value consumable products to the company, as a result, the transaction value was minimal. The transaction price was determined according to the fair market price and as such, the interests of the company and the minority shareholders were not affected.

In "Estimated Routine Related-Party Transactions for 2016", the company estimated the value of related-party transactions between the company and both Xianyang Cailian and Panda LCD for G6 glass substrates products to be CNY ¥109,200,000 each for a total of CNY ¥218,400,000. In 2016, the actual total value of related-party transactions with Xianyang Cailian was CNY ¥147,540,000, which exceeded the estimated amount by CNY ¥38,340,000. The actual total value of related-party transactions with Panda LCD was CNY ¥66,430,000, which was CNY ¥42,770,000 less than the estimated amount.

The company predicted the values of related-party transactions with both Panda LCD (relating to TFT glass substrates) and Xianyang Cailian (relating to CF glass substrates) based on the assumption that the TFT and CF glass substrates would be purchased equally and together from the company, because every panel is comprised of both a thin-film transistor (TFT) and color filter (CF) glass substrate. In reality, because CF glass substrates required a shorter product certification cycle than TFT glass substrates, the company realized higher revenue from the sales of CF glass substrates during the reporting period. The value of total actual sales to the related parties Xianyang Cailian and Panda LCD did not exceed the estimates. Specifically, the total of the actual transaction values with Xianyang Cailian and Panda LCD was CNY ¥213,970,000, which is less than the estimated total amount by CNY ¥4,430,000.

In "Estimated Routine Related-Party Transactions", the company estimated the value of related-party transactions of G8.5 glass substrates with Nanjing CEC Panda FPD Technology Co., Ltd. (hereinafter referred as "Panda FPD") to be CNY ¥17,150,000. The actual transaction values totaled CNY ¥27,020,000, which was CNY ¥9,870,000 more than the estimated amount. The main reason for this phenomenon was that the product certification process went smoothly, and sales were realized ahead of schedule. The company failed to make a timely disclosure of the above estimated transaction amount in related-party transactions with Panda FPD of G8.5 products. In addition to the above-mentioned events, the company analyzed incidents of non-timely disclosure of related-party transactions and found failures to fulfill the disclosure obligations in 2016, when the company's wholly-owned subsidiary IRICO (Hefei) LCD Glass Co., Ltd. received service revenue from the related-parties China Electronics System Engineering No. 2 Construction Company, The Fourth Construction Company of China Electronics System Engineering, and Nanjing Panda Electronic Equipment Company of CNY ¥113,680,000, CNY ¥136,990,000, and CNY ¥115,220,000 respectively. The company then took appropriate corrective measures to reinforce routine monitoring of related-party transactions, to prevent such incidents from happening and ensure the company complied with relevant rules of disclosure.

(4) Currently, only Boe Technology Group Co., Ltd. and Panda LCD have G6 production lines capable of mass production in China. The development of G6 glass

substrates production techniques by the company has rapidly increased the company's revenue from such products. To fulfill the commitment to reduce related-party transactions, the company has been actively seeking potential non-related-party clients both in China and abroad. Further, establishing a G8.6 panel production line could allow the company to internally use the G6 glass substrates rather than sell them. Through technological improvements and increases of the yield factor of the company, the production line capacity and business scale will increase and expand. The absolute amount of related-party transactions by the company will increase, but the proportion of all transactions to related-party transactions should decrease. Finally, the company will adopt a cautious and practical method for estimating potential incidents regarding routine related-party transactions.

The Auditor's opinion:

Regarding the related-party transactions with Xianyang Cailian, Panda LCD, and Panda FPD during the reporting period, we ascertained proof of the commercial justification for the related-party transactions through interviews, data reviews, and analytical reviews during the audit. Supporting files such as receipts, contracts, and shipping documents were examined and cross-checked against the cash flow statements. Confirmation forms were sent to related parties to inquire about their income, revenue, and current balances to verify the authenticity and integrity of the related-party transactions. We compared the contract terms for related-party and nonrelated-party transactions and the sales price, quantity, and terms of payment for transactions of the same product models. Any differences found during the examination were further verified to validate the pricing fairness of related-party transactions. Relevant matters regarding related-party transactions were truthfully disclosed in the audit report.

We conclude that the related-party transactions between Rainbow Display Devices Co and Xianyang Cailian, Panda LCD, and Panda FPD were regular business decisions made by all parties under fair competition with other LCD glass substrates suppliers. Rainbow Display Devices Co determined the supplier and sales price through a market bidding process in which the related parties were selected. Although its glass substrates sales are still considerably dependent on related parties, reforms are actively being implemented by Rainbow Display Devices Co. The related-party transactions during the reporting period were real transactions with commercial value, and the sales prices of those transactions reasonably reflected market prices. The recognition of the aforementioned income complied with the "Accounting Standard for Business Enterprises" and accounting policies of Rainbow Display Devices Co. The interests of Rainbow Display Devices Co and other nonrelated shareholders were not affected by the related-party transactions.

2. Related-party non-operating funds transactions

In the annual report, the company disclosed that the balance of non-operating funds occupied by the related company was CNY ¥59,938,100 at the beginning of 2016, and increased by CNY ¥18,773,000 during that year. Simultaneously, other receivables decreased by 86.12% compared with those in the same period of last year. The company is requested to disclose the reasons for the aforementioned non-operating capital transactions

with the related party. The company should disclose the repayment plan, if any, and discuss how the related party non-operating borrowings impact the company. Furthermore, the company should disclose whether the controlling shareholder uses the company's funds for personal interests. Please ask the auditor to express an opinion on this issue.

Reply:

At the end of 2015, during the 39th meeting of the seventh board of directors and the third interim shareholders' meeting of 2015, a resolution was made to focus on strengthening the core business and revitalize and integrate assets. According to the resolution, the company's wholly-owned subsidiary, Shaanxi Caihong Electronic Glass Co., Ltd. (hereinafter referred to as "Electronic Glass Company"), sold its CX01 and CX03 production lines and relevant patented technology to IRICO Group. Following the "Assets Transfer Agreement" and "Assets Transfer Transaction Agreement" signed by all parties involved in the transaction, the final transaction price for this transfer was CNY ¥886,174,500. On December 31, 2015, the company, Electronic Glass Company, and IRICO group completed the aforementioned asset transfer transaction by reconciling the accounts payable of all three parties. The relevant assets, ownership responsibility, and risks associated with the underlying assets were concurrently transferred from Electronic Glass Company to IRICO Group. At the beginning of 2016, the non-operational capital balance between the company and IRICO Group was CNY ¥59,938,100, which was generated by the aforementioned transfer of assets. The IRICO Group made a payment on January 29, 2016 in accordance with the relevant agreements. The detailed circumstances and results of executing this major sale of assets were published in *China Securities Journal*, *Securities Times*, and the website of the Shanghai Stock Exchange (www.sse.com.cn) on December 15, December 21, December 25, and December 31 of 2015 and February 19, 2016.

In 2016, the total value of financial transactions between the company and IRICO Group was CNY ¥18,773,300. The details are presented in the following table:

Unit: 10,000 Yuan

Project	Amount
Staff salaries, social security and individual taxes	800.07
Kinetic energy fee	1,018.65
Other	58.61
Total	**1,877.33**

The aforementioned financial transactions primarily consist of expenses that could not be accurately allocated, as a result of the asset transfer. The expenses were therefore agreed by both parties to be listed on the accounts of the company. In June 2016, both parties agreed to the amount that IRICO Group needed to pay the company. The aforementioned non-operational capital dealings were paid off during the reporting period. These transactions were based on economic activity; therefore, they were genuine capital transactions rather than a capital occupation of a listed company by controlling shareholder and their related parties.

The Auditor's opinion:

IRICO Group and Rainbow Display Devices Co. had non-operational capital transactions of CNY ¥59,938,100 at the beginning of 2016. These financial transactions arose from the transfer of assets from Electronic Glass Company to IRICO Group at the end of 2015, and payment was tendered according to the relevant agreement on January 29, 2016. In 2016, a financial transaction between Rainbow Display Devices Co and IRICO Group valued at CNY ¥18,773,300 was completed, which was primarily generated from the expenses after the asset transfer which were unable to be accurately allocated, and therefore agreed by both parties to be listed on the account of Rainbow Display Devices Co. In June 2016, both parties agreed to terms of payment and IRICO Group made a payment to Rainbow Display Devices Co.

During the audit, we examined the files containing decision-making documents, sales contracts, and assets evaluation reports from 2015, when Rainbow Display Devices Co sold the CX01and CX03 production lines and relevant patented technology to IRICO Group. Handover records and original receipts of payment settlements related to this transaction were also verified. Moreover, we focused on the follow-up management and accounting concerning the transferred assets in the audit of 2016. Regarding the CNY ¥18,773,300 financial transaction in 2016, we conducted a random check of documents including the original receipts, distribution basis, and payment settlement documents.

We believe that the aforementioned non-operational capital transactions were performed on the basis of real transactions. Further, payment was made during the reporting period and thus could not be considered an act of capital occupation of the capital of listed companies.

3. Business independence

According to the annual report, the company's main customers are related parties. During the period of the report, the company sold some of its major assets related to the main business to related parties. Please discuss whether horizontal competition or other circumstances exist that affect the independence of the company, and if so, please discuss possible solutions to the circumstances. Additionally, please discuss the progress in the disposal of major assets related to the core business and specifically address whether these assets are still control by the company.

Reply:

During the reporting period, the main related-party clients of the company were Xianyang Cailian, Panda LCD, and Panda FPD. The core business, technology, supplier channels, and sales channels of the company and its related parties were different; therefore, there was no horizontal competition and the independence of the company was not affected.

The company's wholly-owned subsidiary Electronic Glass Company sold two production lines to another related party, IRICO Group, in December 2015. The asset

transaction was completed at the end of 2015. After obtaining such assets, IRICO Group transformed the production lines into G6 cover glass production lines. The IRICO Group has recently started selling G6 cover glass products.

The main product of the company is LCD glass substrate, which is a type of alkali-free borosilicate glass that is mainly used in LCD panel substrates. Main buyers are LCD panel manufacturers such as Panda Electronics, Innolux Corporation, Infovision Optoelectronics, and Boe Technology Group Co., Ltd. Cover glass is a type of alkali-aluminosilicate glass that is used primarily in protective covers for touch-screen devices such as smartphones and tablets. The main buyers are cover glass processing plants and touchscreen manufacturers such as Lens Technology, Biel Optics Company, and O-film Tech Co., Ltd. With respect to production technology and market application, these two products belong to completely different segments; therefore, the core business, technology, supplier channels, and sales channels of the company and IRICO Group were different. Consequently, there was no horizontal competition and the independence of the company was not affected. The transaction concerning the aforementioned assets was completed on December 31, 2015. The ownership, responsibility, and risks associated with the underlying assets were completely transferred; at that time, the assets would not continue to be control or used by the company.

II. Industry and business conditions

4. Business risks

According to the annual report, the company's net profit after non-recurring gains and losses has been negative for six consecutive years. In 2016, the company's net profit was CNY (¥270,000,000). Please provide additional information regarding productivity issues such as the company's product line, industry competition, company's market share, competitors, and upstream and downstream conditions. Please explain whether the company has a strategy to continue its business operations.

Reply:

1. Factors affecting the company performance and the future trends of those factors

(1) Glass substrates business

In recent years, consumer demand for end products with larger displays has continued to grow, and shipment of such products worldwide has increased accordingly. The demand for larger LCD television screens has increased the demand for larger LCD displays. Therefore, major manufacturers in the industry have shifted their focus to panel production lines of G8.5 and higher generations. This trend in development of LCD displays has caused a concordant development trend for glass substrate production lines. The ability to adapt to these development trends in the industry and produce increasingly advanced generations of glass substrate products will be the key factor in determining the company's future performance.

The current global glass substrates industry is an oligopoly market. The main competitors in the glass substrates industry are Corning Incorporated from the United States, AGC Inc. and Nippon Electric Glass Co., Ltd. from Japan, and Dongxu Optoelectronic Technology Co., Ltd. from China. The company was the first in China to enter the glass substrates business, establishing the first G5 and G6 glass substrates production lines in the country. With the rapid development of the glass substrates industry in the country, competition between the company and the aforementioned competitors will affect the future performance of the company.

The company is one of the enterprises in the country that possesses core independent intellectual property rights in the glass substrates industry. After years of research, development, and technology accumulation, the company is able to build large-scale G5 and G6 production lines. Further, the company has become a supplier to TFT–LCD panel manufacturers in China and Taiwan. In addition, the company owns the National Engineering Laboratory for Flat Panel Display Glass Substrates Technology, which has conducted numerous scientific research projects for the government and shows that the company possesses a large capacity for scientific research.

The G6 glass substrates products produced by the company comprise of more than 20% of the total domestic market share. The market share is projected to increase as technology of the company improves and the scale of the production line expands; the company's substantial research capacity will also contribute to the predicted increase in market share. The proposed G8.5/8.6 glass substrates production line would serve as an internal supplier for the G8.6 panel production line. The integrated design of "substrates + panel" would increase the company's market share and general competitiveness, and enhance its overall performance.

(2) Panel business

The company will raise funds by private placement to set up the G8.6 panel production line, which will enable an expansion of the main business domain to the high-generation panel business. Consequently, the operation of such business will become a crucial factor for overall company performance.

China is currently the most concentrated region in the world for panel production, which is a result of the industry trend that the "panel defines the machine." In recent years, consumer demand has grown for end products with larger LCD displays. Because the demand for larger LCD television screens has increased the demand for larger LCD displays, major manufacturers in the industry have shifted their focus to panel production lines for G8.5 and higher generations. Currently, eight mass production lines of G8.5 panels are operating in China. Additionally, four production lines for G8.5 panels are under construction, one of which is the G8.6 panel production line that the company plans to build. The market for G8.5 panels is promising because of a high demand for large-display and high-definition televisions, which contributes to the stable, if not slightly rising price of G8.5 panels.

With respect to the panel industry, the main competitors to the company include Samsung Display Co., Ltd. and LG Display from South Korea, Innolux Corporation and AU Optronics Corporation from Taiwan, and Boe Technology Group Co., Ltd from China. The company will depend primarily on the technical support provided by Panda LCD to Rainbow Optoelectronics Technology Co., Ltd.; additionally, the company will hire a professional technical team that possesses abundant external construction and operation management experience to establish the only G8.6 panel production line in northwestern China. Further, the production lines for G8.6 panels and G8.5/8.6 glass substrates will integrate the design into a "substrates + panel" combination. The company will establish close relationships with downstream manufacturers of display end products, and additionally take advantage of the critical role that Shaanxi province plays in The Belt and Road Initiative. This will quickly create sales channels to generate scale effects and increase the company's market share in the high-generation panel market.

2. Critical uncertainty risk to the company's profitability, sustainable management capabilities and response measures

(1) Business and market risk

The flat-panel display industry is a high-technology industry with steady market growth yet rapid renewal and replacement of products. Market sentiment is subject to cyclical fluctuations caused by changes in supply and demand; product prices also fluctuate. For a long time, foreign companies have had a monopolistic control on the LCD glass substrates product market and suppressed the price to deter domestic manufacturers, which may affect the future operating revenue and profitability of the company.

Response measures: the company will adjust the scale of production capacity according to market conditions, improve yield factors and reduce operating cost. Underutilized assets were actively disposed of to accelerate the construction of the G8.5/8.6 glass substrates production line. The G8.5/8.6 glass substrates production line will be combined with the G8.6 panel production line, creating a new source of profit for the company.

(2) Technology risk

Flat-panel display technology develops at a rapid pace and increases demand for advanced specifications and high performance glass substrates products. Although the company has possessed the ability to build and operate glass substrates production lines after years of accumulating technologies, new technologies for high-generation products are starting to be developed and tested. Achieving a high-generation glass substrates technological breakthrough, development, and/or product upgrade is crucial to the company. Moreover, when private placement is complete, the company will expand the panel production business, which may introduce risks associated with panel production technology.

Response measures: The company will renew the composition of the internal technical team by attracting foreign and domestic experts in the industry. In addition, the company will promote the expansion of the National Engineering Laboratory for Flat Panel Display Glass Substrates Technology, to improve the research and development and technological innovation capacity, in order to establish a technological foundation for the subsequent development of the high-generation glass substrates business. Concurrently, the G8.6 panel project will depend primarily on technical support provided by Panda LCD, a subsidiary of CEC, which focuses on display panel manufacturing. The G8.6 panel project will also depend on a professional technical team that has abundant and external construction and operation management experience, which will ensure the technical reliability and advancement of the panel production business.

(3) Capital risk

Because the early investment in and operation of the glass substrates production line was subject to improvements of technical specifications, the production capacity lagged behind market expectations. As a result, the company was under considerable pressure to raise funds and pay debts, escalated by the establishment of the G8.6 project and the G8.5/8.6 glass substrates production line project, which required a substantial amount of investment.

Response measures: To meet the capital requirement for routine operations and to establish new projects, the controlling shareholder and the related parties have provided continuous support to ensure steady development of the business. Such an example demonstrates the support of controlling shareholder and the related parties for the business development of the listed company. In addition, the company will seek financing in capital markets and other places to ensure capital security for business development.

5. The company's products and industry status

In the annual report, it is disclosed that the company will react timely to market conditions. It is also disclosed that the company will adjust the production capacity, continuously improve the yield rate, and reduce operating costs. The company will actively dispose of underutilized assets, accelerate the construction of high-generation (G8.5) production lines, and sell the product soon as possible. (1) Please disclose the company's operating income, net profit, capacity utilization rate, inventory turnover rate, and yield rate by product categories. Please indicate whether a strategy to improve the yield rate has been established. (2) Please provide additional details on the G8.5 product lines with regard to their technical level, substitutability, and future application prospects in the industry. Please provide supplementary disclosure related to the construction of the G8.5 production lines, including but not limited to: the amount of investment, construction progress, and the construction time and the construction of competitors' production lines. Please indicate whether the construction times may result in the obsolescence of the technology.

Reply:

(1) Sales income, gross profit and proportion of its products

Unit: 10,000 Yuan

Product	Revenue	COGS	Gross Margin	% of Revenue
G5 glass substrates	7,799.39	11,022.98	-3,223.59	23.13
G6 glass substrates	18,591.13	17,477.02	1,114.11	55.14
Total	26,390.52	28,500.00	-2,109.48	--

(2) Capacity utilization, proportion of products sold, and yield rate

The capacity utilization of the G5 glass substrates and G6 glass substrates were 89% and 92% respectively. The proportion of products sold to those produced in 2016 that were G5 glass substrates and G6 glass substrates were 120.1% and 101.2% respectively. Compared with last year, annual glass substrates product sales increased by 39.67%. During the reporting period, the company established processes to resolve problems that limited the improvement of the yield rate. As a result, the mean yield rate of the G6 production line increased by 10.8% compared with last year.

(3) Specific measures to improve the yield rate and the effects on future management

During the reporting period, the company adopted several innovative technical collaboration models such as technical collaboration, technical support, and the development of an alliance called the “Industry–University–Research Institute–Application” to accelerate technological advancements. The company utilized the National Engineering Laboratory and smart manufacturing and big data platforms to improve production line equipment. In addition, the company increased its support for scientific research work and research talent to form a positive cycle in which production efficiency and profitability is improved through the increase of technical ability, and vice versa. Finally, management initiated a policy of “lean manufacturing” to further support the initiative to reduce costs and increase efficiency. The aforementioned measures were implemented to achieve a steady increase in the yield rate and lower production costs, in order to attain future production line profits.

(4) G8.5 production line conditions

In recent years, consumer demand for end products with larger displays has continued to grow, and shipment of such products worldwide has increased accordingly. Because the demand for larger LCD television screens has increased the demand for larger LCD displays, major manufacturers in the industry have shifted their focus to panel production lines of the G8.5 and higher generations. Such a trend in production line development has caused a concordant development trend for glass substrates production lines. Therefore, the projected future market demand for G8.5/8.6 glass substrates is substantial.

To date, only three mass production G8.5 glass substrates production lines exist in China; two belong to Corning Incorporated and one belongs to AGC Inc. In addition to the G8.5/8.6 glass substrates production line that the company plans to establish, Dongxu Optoelectronic Technology Co., Ltd. is establishing a G8.5 glass substrates production line. However, the aforementioned G8.5 glass substrates production lines are incapable of

satisfying the demand of downstream G8.5 panel production lines in the country. G8.5 glass substrates are in high demand.

In addition, the G8.5/8.6 glass substrate is a high-generation product that requires the most advanced production technology. Because of current demand for large LCD televisions and higher cutting efficiency for G8.5/8.6 glass substrates, the chance of the technology becoming substitutable is low and overall production costs can be controlled. Further, the company will establish G8.6 panel production, which would allow the company to sell the G8.5/8.6 glass substrates product internally. Overall, the G8.5 production line has a low risk of becoming unproductive.

The company has completed the design for the technical solutions of the G8.5 production line. The total amount of funding needed for this project is CNY ¥6,003,000,000, of which CNY ¥5,220,000,000 will be raised through private placement. The contractor of the project is IRICO (Hefei) LCD Glass Co., Ltd. and the construction will take 15 months to complete. This project obtained the He Xin Zhan Guo Yong No. 1 Certificate of Land Use in 2010, the He Zong Shi Jing No. 103 Notice of Record Regarding the G8.5 LCD Glass Substrates Construction Project of IRICO (Hefei) LCD Glass Co., Ltd. issued by the Commercial Development Bureau of Hefei New Station General Development Experimental Zone in 2016, and the Huan Jian Shen (Xin) Zi No. 135 Environmental Assessment Review in 2016. The G8.5 product line utilizes current technologies such as the advanced overflow pull-down method, which has substantial advantages over other methods such as the float method. The company has established a G8.5 glass substrates cold end line, which is a stable, reliable, and fully operational technology. Because the G8.5 product line is operated by a highly experienced technical team and the company owns over 200 glass substrate core technologies, the G8.5 product line possesses a low risk of substitutability and can achieve self-dependent innovation.

6. Gross profit margin

According to the annual report, the company's operating income for LCD glass substrates increased by 31.56% compared with that in the previous year. Simultaneously, the operating costs only increased by 7.81% compared with those in the previous year, and the gross profit margin increased by 23.79%. Please provide a quantitative analysis of the reasons for the sharp increase in the gross profit margin of liquid crystal glass substrates in 2016. Please include the following in the analysis: the specific cost categories, proportion of the company's cost, product structure change, sales volume, and unit price. Please ask the auditor to express an opinion regarding this issue.

Reply:

In 2016, the revenue from LCD glass substrates was CNY ¥263,910,000, the operational cost was CNY ¥285,000,000, and the overall gross profit margin was 7.99%. The revenue, cost, and gross profit margin increased by 31.56%, 7.81%, and 23.79% respectively, compared with last year. The increase of the gross profit margin resulted from

the gross profit margin of G6 glass substrates products increasing by 30.5% compared with last year. The main reasons for such growth in 2016 are as follows:

(1) During the reporting period, the yield rate of the G6 glass substrates production line increased, and the cost of unit sales decreased 21.4% compared with last year. The actual cost structure and its proportion are presented in the following table:

Cost Item	Cost %	Change of Unit Cost compared to last year
Material Cost	18%	-32.5%
Kinetic energy cost	19%	-40.9%
Direct labor	9%	-4.2%
Manufacturing cost	54%	-8.6%
Total	100%	-21.4%

According to this table, the cost of glass substrates mostly consisted of fixed costs; therefore, the increased yield rate is equivalent to the increase of product yields, which reduced the unit cost and increased the gross profit margin.

(2) During the reporting period, the sales of G6 glass substrates products increased by 28% compared with last year. Moreover, the mean sales price for G6 glass substrates increased by 4% compared with last year.

The Auditor's opinion:

For Rainbow Display Devices Co., Ltd., the gross profit margin for G6 glass substrates increased by 23.79% in 2016 compared with 2015. In the audit process, we employed a comprehensive analytical program to assess the gross profit margin by comparing multiple aspects such as the unit sales price, product yield, yield rate, and unit cost changes. Subsequently, we examined the revenue by verifying several source materials such as sales contracts, sales receipts, and invoices. Finally, we checked and verified other source materials such as bookkeeping records concerning costs, purchasing contracts, purchase-inbound documents, and stocktaking.

We believe that the substantial increase of the gross profit margin of G6 glass substrates in 2016 for Rainbow Display Devices Co., Ltd. reflects the actual situation and the operational performance of the company.

7. Borrowing from related parties

In the annual report, it is disclosed that the company borrowed from the controlling shareholder CLP Rainbow in the current period. The borrowing rate of 1.2% is lower than the market borrowing rate, and the loan balance for the year is nearly CNY ¥1,250,000,000. Please disclose the accounting treatment for the loan transaction in accordance with the Accounting Standards for Business Enterprises and provide supplementary disclosure of the future arrangements for funds and the repayment plans.

Reply:

The sources of funding to the controlling stockholder, Xianyang China Electronics IRICO Group Holding Co., Ltd. (hereinafter referred to as "CEC IRICO"), were the Ministry of Finance and a specific state-owned capital budget for glass substrates projects dispensed by the state-owned Assets Supervision and Administration Commission of the State Council. These funds were loaned to the company before completing private placement. The set interest rate of 1.2% was determined by the national development fund interest rate formula that the central government uses to support key construction projects; this was because the interest rate of loans disbursed from state-owned assets to a subsidiary is not specifically regulated, and the controlling shareholder intended to support the development of the company by providing operational capital. The company recorded the balance of this loan in the account "other accounts payable", and every accounting process was conducted in accordance with appropriate accounting standards. According to the contract, such funds must be used only for the glass substrates business of the company and must be repaid by December 30, 2017.

III. Financial accounting situation

8. Capital and financial leverage risks

The company's liability-asset ratio in the previous three years was 72.59%, 71.98%, and 79.21% respectively, which illustrates an upward trend. The current ratio was 0.12, 0.26, and 0.19 in the previous three years respectively. The audit report states in the highlighted section that the company has liquidity concerns. In the annual report, it is disclosed that as of December 31, 2016, the balance of short-term loans was approximately CNY ¥1,639,000,000, long-term non-current liabilities due within one year amounted to CNY ¥618,000,000, and balance of other payables was CNY ¥1,312,000,000. Please explain in detail whether a strategy to address the liquidity concerns has been established, including but not limited to future funding sources. Please ask the auditor to express an opinion regarding this issue.

Reply:

Since 2016, the yield rate of glass substrates produced by the company has been steadily increasing, and the relevant business has become stable. However, due to market price fluctuation, the LCD substrates project has not yet reached the intended financial outcome. Because of the considerable capital demand for the industrial transformation and upgrading, the company was still short on funds and under pressure to pay debts in the short term by the end of 2016. The management of the company projected that the yield and yield rate of LCD glass substrates in the future will be further improved by the launch of multiple production lines, the conversion to different production lines, and the improvement of technology; consequently, the pressure of capital shortage will be relieved. The following measures will be applied in response to the shortage of capital:

(1)A total of CNY ¥19,220,000,000 is estimated to be raised by private placement. The debt-to-asset ratio of the company is estimated to decrease from the current 79.21% to less than 30% (estimate based on the audited financial data of 2016). This measure will result in

the optimization of the company's capital structure and the improvement of the company's financing ability.

(2)The company will seize the current market opportunity and optimize its product structure, while increasing the yield rate of its production lines. In this way, the profitability of the glass substrates business will increase, and the pressure of capital shortage will be relieved from the company.

(3)The company will actively solicit capital support from the controlling shareholder for the routine production operations.

(4)The company has obtained government subsidies from State ministries and governments at all levels, as well as lending support from financial institutions. With the improvement of the glass substrates business and implementation of the new project, the situation will be further relieved.

In summary, the capital shortage of the company is estimated to be relieved from 2017 on.

The Auditor's opinion:

As of December 31, 2016, the gross profit from the main business of Rainbow Display Devices Co., Ltd. was negative because the market price of LCD substrates fluctuates considerably. Further, the company faced a capital shortage and pressure to pay debts in the short term because the outbound cash flow of operational activity was greater than that inbound, and a considerable amount of capital was required for the industrial transformation and upgrades. Therefore, we conducted this independent auditors' report containing unmodified opinions with emphasis-of-matter paragraphs.

We have observed an increase in the gross profits of products that resulted from the effort of Rainbow Display Devices Co., Ltd. Accordingly, we believe that the company will receive sufficient support from the controlling shareholder and from private placement to relieve the pressure of capital shortage. The private placement of a total of CNY ¥19,220,000,000 was approved by the Review Board of Stock Issuance of the China Securities Regulatory Commission on March 15, 2017. The capital shortage problem is projected to be relieved from the year 2017 on.

9. Capitalization of research and development expenses

The company's capitalization research and development fee was CNY ¥134,000,000. The proportion of capitalization achieved by the company is 97.06%. Please provide evidence that the research and development fees meet all the requirements of capitalization. Please provide the specific accounting treatment and basis for the capitalization of research and development expenses. Please ask the auditor to express an opinion regarding this issue.

Reply:

The capitalized expenditure in 2016 originated from the management information system of the company. As the glass substrates business belongs to the high-tech industry, technology specifications and product qualities are continuously improved. To promptly meet market requirements, the company integrated research and development with trial production. The main research and development project, new product development, and technology upgrades and conversions were conducted simultaneously during the trial production process, and relevant patents and patented technologies were formed. The company received approval from the National Development and Reform Commission of the People's Republic of China to be the first enterprise to establish a National Engineering Laboratory for Flat-Panel Display Glass Substrates Technology. The smart manufacturing project for the electronic glass of the company was designated by the Ministry of Industry and Information Technology to be a model project.

To truthfully, comprehensively, and objectively represent investment in research and development, starting in 2014 the test production costs for glass substrates products were disclosed in the record as part of the capitalized investment of research and development, in accordance with the management information system. At the same time, for financial reporting purposes, the company's accountants still practice GAAP and recorded the test production cost of CNY ¥134,000,000 as property, plant, and equipment. This cost comprised of fixed assets purchased or built during test production that had not yet reached the estimated operational state or were under construction. This accounting record was correct. According to GAAP standards, the accounted expense of research and development investment was CNY ¥4,075,148.01, and the capitalized research and development investment was CNY ¥0. To be consistent with the accounting standards, the "Research and Development Investment Table" in the annual report from 2016 was modified as follows:

Current cost of research and development	4,075,148.01
Capitalization of R&D investment in the current period	0.00
Total R&D investment	4,075,148.01
Total R&D investment as a percentage of operating income (%)	1.21
Number of company R&D personnel	54
The proportion of R&D personnel to the total number of companies (%)	3.5
Proportion of R&D investment capitalization (%)	0.00

The Auditor's opinion:

In 2016, capitalized research and development was CNY ¥134,000,000. This was recorded according to the data provided by the management information system

The trial production cost for in-process construction was CNY ¥134,000,000 for Rainbow Display Devices Co., Ltd. in 2016. The specific accounting treatment was as follows: costs related to trial production were listed under the construction-in-process cost; when such products that were not defective were sold or transferred to inventory, the actual sales revenue or the estimated sales price was listed to reconcile the construction-in-process cost. During the audit, we examined various source materials such as sales contracts, sales orders, invoices, and sales receipts to determine trial production revenue. We examined the test production cost through various methods, including a comprehensive analytical program

and a detailed examination. Finally, the actual development progress of the in-process construction was examined.

We believe that the accounting treatment of the trial production cost of in-process construction complied with the "Accounting Standard for Business Enterprises."

10. Provision for impairment of assets

In the annual report, it is disclosed that the company had an asset disposal loss of CNY ¥37,230,000, and the impairment loss of fixed assets was approximately CNY ¥2,224,000. The asset disposal loss in the previous year was approximately CNY ¥34,000,000, with no impairment loss on the fixed assets. The difference is large. Please provide the reasons for the significant changes in the disposal of non-current assets. Please provide an update regarding the status and actual conditions of the two projects under construction. Additionally, please provide the previous period's status of usage for assets disposed of in the current period.

Reply:

(1) A disposal loss of CNY ¥37,230,000 was incurred on a non-current asset during this reporting period, from the liquidation of the SCX02 glass substrates production line furnace, by the wholly-owned subsidiary Electronic Glass Company. In 2015, the SCX02 glass substrates production line and other production lines were operating normally. However, late in the reporting period, operational problems affected the SCX02 glass substrates production line furnace, which negatively affected the quality of products. Because various corrective measures were unable to resolve the problem, after the company assessed the overall production and operating costs, the company elected to shut down the operation. In accordance with the principle of prudence, the company deducted the recycle value from the net value of the furnace and accounted for the remaining value as a liquidation loss. By contrast, in 2015, a disposal loss was incurred on a non-current asset of CNY ¥3,400, which arose from the disposal of individual office equipment. The main reason for the substantial difference between the amounts of disposal losses incurred on non-current liabilities was the difference between the assets disposed of.

(2) At the end of the reporting period, the wholly-owned subsidiaries Electronic Glass Company and IRICO (Hefei) LCD Glass Co., Ltd. conducted impairment tests, which revealed that the book value of a certain fixed asset (an A-frame) exceeded its recoverable amount. Both companies accounted for this loss and withdrew CNY ¥1,531,600 and CNY ¥710,400 respectively from the fixed asset impairment loss reserves. Because no such impairment loss was observed in the impairment test during the previous reporting period, a considerable difference is apparent between the fixed asset impairment losses incurred during the reporting periods.

The Auditor's opinion:

Rainbow Display Devices Co., Ltd. separated each production line as a separate asset class to conduct impairment tests on its main long-term assets (including fixed assets, construction in process, and engineering materials), and account for withdrawal from its impairment reserve. In 2015, Rainbow Display Devices Co., Ltd. conducted impairment tests on several primary asset classes, including the SCX02 glass substrates production line of Electronic Glass Company, but did not document critical impairments. Moreover, the company contracted a professional evaluation company to appraise the values of each asset class. The results indicated that the SCX02 glass substrates production line of Electronic Glass Company was not impaired. We reviewed the basis and data for this asset class evaluation during the first undertaking of the audit on the initial numbers. We believe that the SCX02 glass substrates production line of Electronic Glass Company did not have significant impairment in 2015.

During 2016 auditing, we checked the decision-making documentation and other relevant data regarding the liquidation of the SCX02 glass substrates production line furnace and examined the actual condition of this asset at the time of liquidation. The decision to liquidate the production line furnace was made on the basis of the actual operating condition in 2016, and liquidation resulted in a net loss of CNY ¥37,077,200.

In 2016, the subsidiaries Electronic Glass Company and IRICO (Hefei) LCD Glass Co., Ltd. conducted impairment tests and determined that for a certain fixed asset (an A-frame), the book value exceeded its recoverable amount. Therefore, both companies accounted for this loss and withdrew CNY ¥2,242,000 in total from the impairment loss reserves. We reviewed the relevant data concerning the accounting and withdrawal of impairment loss funds and reconstructed the relevant data. We concluded that the accounting and withdrawal from the aforementioned fixed-asset impairment loss reserve in 2016 was appropriate to the actual situation.

11. Provision for inventory price declines

In the annual report, it is disclosed that the company has a reserve of CNY ¥42,080,000 for inventory depreciation, which is significantly higher than the reserves in 2015 and 2014. Given that the unit price of the aforementioned product rebounded, please explain why the provision for inventory depreciation in the current period is significantly higher than that in the previous year, and indicate whether any inconsistencies in information disclosure exist.

Reply:

In 2016, the company withdrew CNY ¥42,080,000 from the inventory obsolescence reserve, which was CNY ¥12,950,000 higher than 2015. The main reason for the increase was that during the reporting period certain clients modified their G6 product specifications; therefore, products manufactured according to the original specifications no longer met the demands of the clients. Consequently, the company decreased the value of this inventory. According to the relevant accounting standards and the principle of prudence, the company conducted impairment tests on the affected products during the reporting period. The

company withdrew CNY ¥18,350,000 from the inventory obsolescence reserve, which was the amount that the book value exceeded the net realizable value. This increased the inventory obsolescence reserve of G6 products from the previous year. In addition, the inventory of G5 products at the end of this reporting period decreased compared to last year; therefore, the inventory obsolescence reserve account withdrawal decreased by CNY ¥7,940,000. Additionally, the sales price of G6 glass substrates products increased by 4% compared with the price during the same period last year, due to market factors. The accounting of the company was consistent and did not exhibit inconsistent disclosure of data.

The Auditor's opinion:

In 2016, Rainbow Display Devices Co., Ltd. withdrew CNY ¥42,080,000 from the inventory obsolescence reserve, which was comprised of withdrawals of CNY ¥13,256,800 by Electronic Glass Company for the G5 products and CNY ¥27,586,100 by IRICO (Hefei) LCD Glass Co., Ltd. for G6 products. The main reason for these withdrawals was a decrease in the overall market price for G5 products in 2016. Due to this market condition, the company determined the net realizable value by deducting relevant fees generated by each aspect of sales and compared the resulting value to the book value; subsequently, the company accounted for the withdrawal of the amount that was lower than the book value from the impairment reserve. The main reason for the withdrawal from the inventory obsolescence reserve for the G6 products by IRICO (Hefei) LCD Glass Co., Ltd. was that certain clients modified their specifications for G6 products; therefore, the products manufactured according to the original specifications no longer met the demands of the clients. Consequently, the company decreased the value of this inventory. Further, the company determined the net realizable value by deducting relevant fees generated by each aspect of sales and compared the resulting value with the book value; subsequently, the amount that was lower than the book value was withdrawn from the impairment reserve.

We obtained the data used for calculating the inventory obsolescence reserve from the company and reviewed the appropriateness of the main parameters used for impairment tests to recalculate the amount of the inventory obsolescence reserve. Additionally, we checked the inventory on site and reviewed the sales conditions after the inventory period. We believe that the accounting concerning withdrawals from the inventory obsolescence reserve during this reporting period was appropriate, given the actual conditions.

It is hereby announced.

Rainbow Display Devices Co., Ltd. Board of Directors

April 20, 2017

IA2. An example of the subsequent (no) change of the Rainbow Display Devices Co., Ltd. from its 2016 CL review process

Item 2: Related-party non-operating funds transactions

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5. Related Parties Receivables and Payables

(1). Accounts Receivable

√ Applicable □ Not applicable

Unit : Yuan Currency: CNY

project name	Related party	Ending balance		Opening Balance	
		Book balance	Bad debt provision	Book balance	Bad debt provision
accounts receivable	Nanjing Zhongdian Panda Tablet Display Technology Co., Ltd.	14,558,544.00			
accounts receivable	Xianyang Cailian Packaging Materials Co., Ltd.	24,169,619.31		35,796,191.40	
accounts receivable	CLP Panda LCD Display Technology Co., Ltd.	35,676,786.60		5,743,827.18	
accounts receivable	Hefei Rainbow New Energy Co., Ltd.	9,346,467.52		10,693,213.12	
accounts receivable	Rainbow (Hefei) Photovoltaic Co., Ltd.			5,159,747.60	
Prepayments	Rainbow Energy Services	125,000.00			
Other receivables	Rainbow Energy Services			1,200.00	
Other receivables	Rainbow Group			59,938,139.39	
Other receivables	Zhongdian Rainbow			10,000.00	
Total		83,876,417.43	-	117,342,318.69	

(2). Accounts Payable

√ Applicable □ Not applicable

project name	Related party	Final book balance	Initial book balance
accounts payable	Rainbow Group New Energy Co., Ltd.	1,153.85	
accounts payable	Rainbow Energy Services	49,151,949.77	47,649,138.26
accounts payable	Hefei Rainbow Blu-ray Industrial Co., Ltd.	95,000.00	
accounts payable	Xianyang Rainbow Photovoltaic Technology Co., Ltd.		423,549.79
accounts payable	Zhongdian Rainbow	2,346,800.00	2,415,505.37
accounts payable	China Electronic Systems Engineering Second Construction Co., Ltd.	4,568,000.00	

accounts payable	China Electronic Systems Engineering Third Construction Co., Ltd.	14,627,234.09	14,841,764.00
accounts payable	China Electronic Systems Engineering Fourth Construction Co., Ltd.	3,558,000.00	
accounts payable	Xianyang Rainbow Hospital	142,934.00	
accounts payable	Xianyang Cailian Packaging Materials Co., Ltd.	50,600.00	
accounts payable	China Electronics International Exhibition Advertising Co., Ltd.	19,000.00	
accounts payable	Information Industry Electronics Eleventh Design and Research Institute		141,000.00
accounts payable	Rainbow Group	233,240.00	233,240.00
Other payables	Rainbow Group	9,373,377.73	20,458,106.32
Other payables	Zhongdian Rainbow	1,248,493,586.18	1,091,847,600.00
Other payables	China Electronic Systems Engineering Third Construction Co., Ltd.	16,200.00	5,000.00
Combined meter		1,332,443,835.62	1,178,014,903.74

(3) As of December 31, 2016, the Company deposited in the China Electronic Finance Company Limited's bank balance is 59,936.12 yuan.

The accumulated interest income from deposits for the year was CNY 5,219.68 .

(4) As of December 31, 2016, the company obtained the loan from China Electronic Finance Co., Ltd. with the pledge of receivables 38,600,000.00 yuan.

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5. Related Parties Receivables and Payables

(1) Accounts Receivable

√ Applicable □ Not applicable

Unit: Yuan Currency: CNY

		Ending balance		Opening Balance	
project name	Related party	Book balance	Bad debt provision	Book balance	Bad debt provision
accounts receivable	Nanjing Zhongdian Panda Tablet Display Technology Co., Ltd.	46,983,105.00		14,558,544.00	
accounts receivable	Xianyang Cailian Packaging Materials Co., Ltd.			24,169,619.31	
accounts receivable	Nanjing Zhongdian Panda LCD Display Technology Co., Ltd.	40,304,160.00		35,676,786.60	
accounts receivable	Rainbow (Hefei) Photovoltaic Co., Ltd.	10,443,758.20		9,346,467.52	

accounts receivable	Rainbow Group (Shaoyang) Special Glass Co., Ltd.	16,947,436.00			
accounts receivable	Nanjing Zhongdian Panda Liquid Crystal Material Technology Co., Ltd.	44,659,600.00			
Prepayments	Shaanxi Rainbow Energy Service Co., Ltd.	125,000.00		125,000.00	
Other receivables	Shaanxi Rainbow Energy Service Co., Ltd.	899,906.20		1,200.00	
Other receivables	Nanjing Panda Information Industry Co., Ltd.	208,509.51			
Other receivables	China Electronics Import and Export Co.	28,186,665.24			
Other receivables	China Electronic Systems Engineering Second Construction Co., Ltd.	532,742.76			
Other receivables	China Electronic Systems Engineering Fourth Construction Co., Ltd.	849,980.56			
Total		**190,140,863.47**		**83,877,617.43**	

(2) **Accounts Payable**

√ Applicable □ Not applicable

Project name	Related party	Final book balance	Initial book balance
accounts payable	Rainbow Group New Energy Co., Ltd.		1,153.85
accounts payable	Shaanxi Rainbow Energy Service Co., Ltd.	54,300,931.11	48,918,709.77
accounts payable	Hefei Rainbow Blu-ray Industrial Co., Ltd.		95,000.00
accounts payable	Zhongdian Rainbow	3,053,600.00	2,346,800.00
accounts payable	China Electronic Systems Engineering Second Construction Co., Ltd.	4,568,000.00	4,568,000.00
accounts payable	China Electronic Systems Engineering Third Construction Co., Ltd.	1,080,000.00	14,627,234.09
accounts payable	China Electronic Systems Engineering Fourth Construction Co., Ltd.	6,000.00	3,558,000.00
accounts payable	Xianyang Rainbow Hospital	142,934.00	142,934.00
accounts payable	Xianyang Cailian Packaging Materials Co., Ltd.	52,155.56	50,600.00
accounts payable	China Electronics International Exhibition Advertising Co., Ltd.		19,000.00
accounts payable	Rainbow Group Co., Ltd.	233,240.00	233,240.00
accounts payable	Rainbow Group (Shaoyang) Special Glass Co., Ltd. Xianyang Branch	44,462.39	

accounts payable	Nanjing Panda Electronic Equipment Co., Ltd.	4,384,896.00	
accounts payable	Wuhan Zhongyuan Electronic Information Co., Ltd.	42,989.74	
accounts payable	Xianyang Cailian Electronic Material Co., Ltd.	2,850,753.84	
accounts payable	Rainbow Group New Energy Co., Ltd.	1,153.85	
Other payables	Rainbow Group Co., Ltd.	9,373,377.73	9,373,377.73
Other payables	Zhongdian Rainbow	1,591,291,806.12	1,248,493,586.18
Other payables	China Electronic Systems Engineering Third Construction Co., Ltd.	16,200.00	16,200.00
Other payables	Nanjing Panda Electronic Equipment Co., Ltd.	4,050.00	
Other payables	Nanjing Panda Electromechanical Instrument Technology Co., Ltd.	3,600.00	
Other payables	Nanjing Panda Information Industry Co., Ltd.	20,749.32	
Other payables	Wuhan Zhongyuan Electronic Information Co., Ltd.	7,150.00	
Other payables	Xianyang Rainbow Photovoltaic Technology Co., Ltd.	3,449,378.11	
Other payables	Xianyang Rainbow Intelligent Equipment Co., Ltd.	20,000.00	
Other payables	Xianyang Gold Control	5,135,529,724.40	
Other payables	China Electronic Systems Engineering Second Construction Co., Ltd.	278,988.58	
Other payables	China Electronic Systems Engineering Fourth Construction Co., Ltd.	424,337.49	
Other payables	China Electronic Information Industry Group Co., Ltd.	6,000.00	
Advance payment	Rainbow (Hefei) Photovoltaic Co., Ltd.	1,358,000.00	
Advance payment	Rainbow Group (Shaoyang) Special Glass Co., Ltd.	51,966.61	
Advance payment	Nanjing Panda Electronic Equipment Co., Ltd.	44,060.00	
Total		**6,812,640,504.85**	**1,332,443,835.62**

(3) As of December 31, 2017, the bank deposit balance deposited by the company in China Electronic Finance Co., Ltd. was 4,492,664.66 Yuan, the accumulated interest income from deposits in 2017 was 34,158.65 yuan.

(4) As **of** December 31, 2017, the company obtained the loan from China Electronic Finance Co., Ltd. with the pledge of receivables 128,000,000.00 yuan.