Joint and several liability, litigation preconditions and audit quality

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**ABSTRACT**

The paper examines the economic effects of the trial judgement of joint and several liability on BDO China. Our study has the following findings: first, the capital market regarded the judgement as a signal to strengthen investor protection; second, the judgement pushed the auditors to enhance their prudence; third, the clients’ financial reporting quality are improved after the judgment; fourth, the above phenomena are more pronounced in areas where administrative penalties or criminal convictions are not the litigation preconditions for civil proceedings for false statements. The study denies Simunic et al. (2017)’s assertion that the legal system in China makes the recovery of damages from auditors is difficult.

**KEYWORDS**

Joint and several liability; litigation preconditions; investor protection; auditor’s prudence; financial reporting quality

1. Introduction

Simunic et al (2017) believe that though China has adopted the International Standards on Auditing (ISA), the legal system has not been able to ensure that investors get compensation from auditors, so it is not likely to result in high audit quality in this emerging market. According to ‘Some Provisions of the Supreme People’s Court on Trying Cases of Civil Compensation Arising from False Statement in Securities Market’ issued by the Supreme People’s Court in 2003, if CPA firms or other professional intermediaries create losses for investors, they shall take the liability for damage they are responsible of; when joint infringement is constituted, they shall bear joint and several liability for the losses of investors. But, for a long time, due to the requirement of ‘litigation preconditions’\textsuperscript{1} in China, CPA firms only have a low risk of litigation in practice (Pistor & Xu, 2005; Zhu et al., 2018; F. Liu et al., 2010). Despite the administrative penalties imposed by China Securities Regulatory Commission (CSRC), the amount of penalties remains too low.\textsuperscript{2} It is precisely this kind of ‘few lawsuits and low compensation’ risk that makes it difficult for China to promote auditors to enhance audit quality through legal constraints for a long time (Simunic et al., 2017).

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\textsuperscript{1}See Part II, ‘The development of securities false statement compensation system and registration preconditions system in China’.

\textsuperscript{2}The average amount of penalties imposed by CSRC on CPA firms from 2001 to 2018 is 1.28 million yuan, and the median amount is five hundred thousand yuan.

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However, from August 2017 to September 2018, the First Intermediate People’s Court and Higher People’s Court of Shanghai Municipality held BDO jointly and severally liable in the first and final trials due to its failure to fulfill its duties in the financial forfeiting by Shanghai DZH Limited. This put an end to the era of auditor’s ‘few lawsuits and low compensation’. On 20 July 2016, the CSRC issued ‘Administrative Sanction Decision’ [2016] No. 88, which said that Shanghai DZH Limited (stock code: 601519) in its financial statement 2013, ‘inflated profits of RMB 120,666,086.37 in 2013, 281% of the consolidated profits disclosed that year’. On the same day, in ‘CSRC Administrative Sanction Decision’ [2016] No. 89, BDO was identified to break the law that ‘security service agency has failed to fulfil its duty, the document made or issued by the agency has false record, misleading statement or major omission’ stipulated in Article 223 of the ‘Securities Law of the People’s Republic of China’. Later, thousands of stock investors of Shanghai DZH filed a lawsuit. From 14 August 2017 to 18 August 2017, the First Intermediate People’s Court of Shanghai Municipality made the first-trial judgement on the investors’ proceedings of Shanghai DZH and BDO for false statements. The defendant DZH was judged to compensate for the loss in the investment difference, and BDO was jointly and severally liable. In September 2018, the final judgement of the Shanghai Higher People’s Court rejected the appeals of DZH and BDO, and upheld the original judgement of the first trial.

The case of BDO’s joint and several liability due to DZH’s false statements lasted three years (from 2016 to 2018). It was the first case in China where one single CPA firm was held jointly and severally liable, with huge social impact. If one searched ‘BDO’ and ‘joint liability’ on the Internet, one can find more than 800,000 results. After the first trial, investors sued one after another for claims. Up to September 2017, 1239 investors had filed lawsuits against Shanghai DZH and other defendants, with a total claim sum of RMB 266 million. Up to January 2018, the total amount requested had exceeded RMB 380 million. BDO enjoyed a prominent place in China’s audit market. According to the top 100 CPA firms by revenue in 2017 which was released by the Chinese Institute of Certified Public Accountants, BDO ranked third in China with a revenue of RMB 3.69 billion, only behind PWC and Deloitte, before EY and KPMG.

Based on the BDO case, this study looks into the impact of CPA firms’ joint and several liability judgements on auditors’ behaviour and their spillover effect. It is found that firstly, the capital market regards the judgement of joint and several liability as a signal to strengthen supervision on auditors and investor protection, and responds positively;

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3 BDO China Shu Lun Pan CPAs was founded by Dr. Shu Lun Pan, pioneer of China’s accounting profession, in Shanghai in 1927, one of the earliest and most influential accounting firms in China’s history; hereinafter referred to as BDO.

4 Shanghai DZH Limited (stock code: 601519); hereafter this text will be abbreviated as DZH or Shanghai DZH.

5 According to Article 8 of ‘Some Provisions of the Supreme People’s Court on Trying Cases of Civil Compensation Arising from False Statement in Securities Market’, cases of civil compensation due to misrepresentations shall be under the jurisdiction of the intermediate people’s court of the municipality, municipality with separate plans and special economic zone where the people’s government of the province, direct-administered municipality and autonomous region is located.

6 In 2006, the court decided that Hualun Certified Public Accountants was jointly and severally liable for ‘Lantian fraud case’ in Hubei. At that time, 83 plaintiffs claimed more than RMB 6.17 million from 11 defendants. The court decided that the defendant Lantian compensate the plaintiff for more than 5.4 million yuan. The other 8 defendants including Hualun were judged to bear joint liability for the plaintiff’s economic losses. However, ‘because the judgement’s compensation amount is not large, and eight defendants jointly bear the liability, and the industry impact of Hualun is relatively small, it has not caused great social impact on the CPA industry. The CPA industry hasn’t taken it seriously.’ See report from China Business Journal: http://finance.sina.com.cn/stock/s/2018-10-09/doc-ihkvrhpt3342086.shtml

7 https://baijiahao.baidu.com/s?id=1,579,111,741,852,275,782&wfr=spider&for=pc

8 http://finance.sina.com.cn/stock/stockqvg/2018-01-22/doc-ifyqwiq3882741.shtml
secondly, the penalty of joint and several liability forces auditors to enhance their prudence; thirdly, after the judgment, auditors’ governance of financial information has strengthened, resulting in an improvement on their clients’ financial reporting quality; fourth and more importantly, the above mentioned phenomena seems more significant in areas where administrative penalties or criminal convictions are not the litigation preconditions for civil proceedings about false representations. After a series of robustness tests, our results stay valid.

This paper contributes to research in the following ways: Firstly, this paper tests the ‘deep pocket’ theory more ‘cleanly’ by excluding the sample of companies audited by BDO (Dye, 1993). There has been research on punishment imposed on auditors from home and abroad, most of which discusses the economic consequences of legal proceedings and administrative punishments based on the litigation event or all the punished CPA firms (Lennox & Li, 2014; B. Wang et al., 2011), but in such studies, it is hard to distinguish whether the change in auditors’ behaviours after punishment is caused by the ‘reputation’ damage or by the ‘deep pocket’ being opened. Administrative penalties and legal compensation not only bring economic losses to auditors, but also hurt their reputations. The two accompany each other. The case of BDO’s being jointly and severally liable offers us an opportunity of identifying ‘deep pocket’ effect. Specifically, BDO was fined because of involvement in false statements; the event didn’t impair other firms’ reputation, but its deterrent effect turned the underlying litigation faced by the whole CPA industry into realistic. Based on this, our study excludes the listed companies audited by BDO, and tests other auditors’ response to ‘deep pocket’ risks, so it identifies the effect of ‘deep pocket’ in a ‘cleaner’ manner.

Secondly, it further enriches literature on ‘law and finance’ (La Porta et al., 2000, 2002). In previous research on auditors’ litigation risks and their behaviours, tests were conducted on the change of litigation risks caused by the issuance and revision of relevant laws and regulations (Geiger et al., 2006; Lamoreaux, 2016; Lennox & Li, 2012; Wu et al., 2010). Different from the existing studies, this one discusses how strengthened law enforcement on audit affects auditors’ behaviour and its spillover effect, based on the existing legal framework. Previous studies including Liu et al (2013) took the year 2006 as the crossover point of determining legal environment quality. By contrast, this article focus on the events occurred in 2017. The economic consequences research based on this event can avoid the ‘noise’ from other major events such as split-share structure reform (2006–2008), accounting standards change, as well as financial crisis.

Finally, this study possesses certain practical significance. It studies how to enhance the quality of social auditing through improved legal system construction and strengthened law enforcement in China, and at the same time breaks the ‘few lawsuits, low compensation’ stereotype of China’s audit market found in western literature (Simunic et al., 2017). The research shows that strengthening legal supervision as well as opening auditors’ ‘deep pocket’ has deterrent effect, which is conducive to enhancing the quality of audit supervision. Our analysis provides implication on how to give full play to the supervision role of CPA firms and improve audit quality of our current capital market.

The paper proceeds as follows. Part II introduces the background of the development of securities false statement compensation system and registration precondition system in China. Part III presents the research hypotheses. Part IV shows the research design,
which introduces the sample selection and research models, and offers our results of descriptive statistics. Part V is the regression analysis. Part VI presents the robustness test. The last part shows the conclusion.

2. The development of securities false statement compensation system and registration precondition system in China

2.1. Beginning

Exposed by ‘Caijing Magazine’ in 2001, the ‘Yinguangxia fraud case’ evoked a strong response in investors responded. They strongly demanded that listed companies provide civil compensation for false statements. However, on September 21st, the Supreme People’s Court issued ‘Notice on Temporary Not Accepting Civil Compensation Cases Related to Securities’. The main contents are as follows:

“China’s capital market is in the stage of constant standardization and development, but there are also some problems such as insider trading, fraud and market manipulation. These acts should be gradually regulated since they have damaged the equity of securities market, infringed on the legitimate rights and interests of investors, and also hindered the safety and healthy development of the capital market. At present, some new situations and problems worthy of attention and study have already appeared in the trial work of the court. However, current conditions still do not permit accepting and hearing such cases due to the limitation of the current legislation and judicial conditions. After discussion, the civil compensation case caused by the above behavior will not be accepted temporarily.”

Then, after months of preparation, on 15 January 2002, the Supreme People’s Court issued ‘Notice on Relevant Issues Concerning Accepting Civil Tort Dispute Cases Caused by False Statement on the Securities Market’, which stipulates that ‘People’s courts shall accept any civil tort compensation dispute caused by false statements in the securities market that meet the acceptance conditions as stipulated in the Civil Procedure Law of the People’s Republic of China’. The notice contains five parts: (1) the definition of civil compensation cases of false statements; (2) the acts of false statements shall be investigated by the China Securities Regulatory Commission and its dispatched agencies and effective punishment decisions shall be made; (3) the time limit for litigation is two years; (4) accepted in the form of separate or joint litigation, not in the form of class action; (5) Intermediate People’s Court is the court of first trial jurisdiction; geographical jurisdiction adopts the plaintiff-defendant principle. This is the first judicial interpretation in the history of China’s stock market that the court has been explicitly requested to accept a civil compensation case of false statements. Based on this notice, X.Y. Chen et al (2009) investigate its market reaction through the event study method. In several trading days before and after the announcement, the market reaction of sample companies was significantly negative. Moreover, companies within relatively non-independent judiciary group respond less weakly, compared with the relatively independent group. Wu et al (2010) believe that before 2003, although China’s court system had begun to accept some cases that required the wrongdoers to bear legal responsibility, these cases were basically unsolved due to lack of relevant legal guidance. For example, in 2002, three shareholders in Beijing and Shanghai sued Daqing Lianyi Petrochemical Co., Ltd. and its auditor, Harbin Certified
Public Accountants, to Harbin Intermediate People’s Court. This was the first case in China that litigation due to false statements was done and accepted. However, Harbin Certified Public Accountants was not included in the defendant.

2.2. Establishment of CPA firms’ liability

On 9 January 2003, the Supreme Court issued ‘Some Provisions on Trying Cases of Civil Compensation Arising from False Statement in Securities Market’, which established the legal procedure system of false statements in China. The regulation states that,”The defendant in a civil compensation case caused by false statements shall be the person who commits false statements, including: … CPA firms … and other professional intermediaries”(Article 7). If professional intermediaries and its direct liable person make false statements in violation of Article 161 and Article 202 of the Securities Law, creating losses for investors, they shall take the liability for damage they are responsible of. However, if there exist evidence to prove the innocence, the counterpart should be exempted from liability.”(Article 24).”If a professional intermediaries know or should have known the false statement made by the issuer or the listed company, but fail to correct or fail to issue a qualified audit opinion, it is supposed to bear joint liability for the losses of the investor.”(Article 27).

Since then, there has been legal basis if CPA firms and other intermediaries were prosecuted for compensation due to false statements. But after the issuance of the Provisions in 2003, when the ‘Yinguangxia Fraud Case’ was concluded in 2005, the auditor did not take any liability. The new Security Law and Corporation Law which took effect on 1 January 2006 also explicitly states that auditors who have caused losses to investors due to false records, misleading statements or major omissions shall take joint and several liability. In addition, ‘Several Provisions of the Supreme People’s Court on the Trial of Civil Tort Compensation Cases Involving CPA firms in Auditing Business Activities’ which went into effect on 15 June 2007 more clearly defines ‘auditor negligence’. So far, from a legislative perspective, the basic legal system of securities civil compensation for intermediaries such as CPA firms has been gradually improving. However, in practice, before the BDO case, lawsuit filed against the CPA firm and the judgement of joint liability only happened in 2006, when Hualun Certified Public Accountants was held jointly liable for the plaintiff’s economic losses for the ‘Lantian case’. In 2006, Hualun Certified Public Accountants was held jointly and severally liable for the ‘Lantian fraud case’ in Hubei. At that time, 83 plaintiffs claimed more than RMB 6.17 million from 11 defendants. The court decided that the defendant ‘Lantian’ compensated the plaintiff for more than 5.4 million yuan. The other 8 defendants including Hualun were judged to bear the plaintiff’s economic losses together. However, as the compensation amount of the judgement was not large enough, with 8 defendants jointly liable, and the industry impact of Hualun was relatively small, it did not cause a large social impact; nor did it shocked the CPA industry (Liu, 2018).
2.3. Whether administrative penalties should be preconditions for registration of suits against CPA firms

The past decade saw few suits against CPA firms, and one important reason is that in many areas administrative penalties were required as the precondition for registration. Take the case of ‘False Statement Dispute between Jin Song, Pan-China Certified Public Accountants and Zhejiang Crystal-Optech Co., Ltd’. as an example. The court for the first trial held that:

“In view of Jin Song’s inability to submit the corresponding administrative penalty decision of the relevant organs or the criminal judgment documents of the People’s Court, which does not meet the requirements of the aforementioned judicial interpretation, this case does not fall within the scope of the civil lawsuits accepted by the People’s Court. In accordance with the provisions in the 3rd item, Article 208 of the ‘Interpretations of the Supreme People’s Court on the Application of the Civil Procedure Law of the People’s Republic of China’, Article 2 of the ‘Notice of the Supreme People’s Court on Relevant Issues Concerning Accepting of Civil Tort Dispute Cases Caused by False Statements’, and Article 6 of the ‘Some Provisions of the Supreme People’s Court on Trying Cases of Civil Compensation Arising from False Statement in Securities Market’, the judgment is as follows: Dismissal of Jin Song’s suit.”

The dismissal decision of Hangzhou Intermediate People’s Court is a method adopted in many regions across China when handling similar cases. The establishment of the preconditions for litigation has led to very few cases in which investors file lawsuits against CPA firms. However, in recent years, in order to protect citizens, legal persons and other organisations in exercising their right to appeal, enable the People’s Court to accept cases in accordance with the law and in a timely manner, the Supreme People’s Court issued the ‘Provisions of the Supreme People’s Court on Several Issues concerning the Registration and Docketing of Cases by People’s Courts’ and started the case registration system. For this reason, in the second trial of ‘False Statement Dispute between Jin Song, Pan-China Certified Public Accountants and Zhejiang Crystal-Optech Co., Ltd’. the Higher People’s Court of Zhejiang Province decided:

“Article 1 of the ‘Provisions of the Supreme People’s Court on Several Issues concerning the Registration and Docketing of Cases by People’s Courts’, which came into effect on 1 May 2015, stipulates that the People’s Court adopts a case registration system for first-trial civil proceedings, administrative proceedings, and criminal private proceedings that shall be accepted by law. At the same time, Article 20 of the Regulation stipulates explicitly that if the previous regulation on filing a case is inconsistent with this one, this regulation shall prevail. According to this, the court of the first trial shall review the plaintiff’s suit in accordance with the above provision to meet the litigation and acceptance conditions provided for in the Civil Procedure Law. After review, Jin Song’s lawsuit has clear defendants, specific litigation requests, facts and reasons, which falls in the scope of civil lawsuits accepted by the People’s Court. It meets the litigation conditions stipulated in Article 119 of the ‘Civil Procedure Law of the People’s Republic of China’. The first-trial court’s rejection of litigation is improper and shall be corrected.”

9Hangzhou Intermediate People’s Court (2016) Zhejiang 01 Minchu No.254.:
10Civil Ruling (2017) Zhemin End No. 72.: 
With reference to case documents, it is found that in Guangdong, Zhejiang, Jiangsu and Anhui, there are cases in which the defendant was held civilly liable for false statements without the aforementioned preconditions. As a result, there is a cross-sectional difference in whether or not administrative penalty is required for the filing of a ‘false statement’ case in various regions of China.

3. Hypotheses

The fundamental function of social audit is to ensure financial reporting quality and protect external investors (Watts & Zimmerman, 1986). The protection function relies on not only related laws and regulations, but also an ideal environment for law enforcement. In the BDO case, the undutiful CPA firm was held jointly and severally liable, which strengthened law enforcement under the current legal framework, and safeguarded investors’ interest. This is not only a punishment on CPA firms, but also a signal sent to the market that the fight against illegal acts is strengthened. Academic research usually focuses on the stock price response of the event window to judge the effect of law enforcement (G. Chen et al., 2005; Feroz et al., 1991) as well as the information transmission (Nourayi, 1994). When the CPA firm is jointly and severally liable, the security market will release a strong signal for strengthening investor protection, which may lead to positive response in stock prices.\(^{11}\) Although the Provisions issued in 2003 set administrative penalties or criminal convictions as the precondition for civil proceedings for false statements, with reference to case documents, we find that in Guangdong, Zhejiang, Jiangsu and Anhui, there are cases in which the defendant was held civilly liable for false statements without the aforementioned preconditions. With certain other conditions, auditors of listed companies in those regions are not ‘defended’ by the aforementioned preconditions, so when false statements occur, investors are more likely to take civil action and demand financial compensation. In other words, once there is an ‘audit failure’, auditors in those areas will face higher probability of civil litigation and compensation. Therefore, with tougher law enforcement, investors may infer that auditors of listed companies in those areas have greater incentives to increase their prudence so as to avoid litigation risk. Based on this, we infer that investors will hold higher expectations of the information transparency of listed companies in those regions, which will contribute to a more positive feedback in stock prices in the capital market. On the basis of the above analysis, we propose the following hypotheses:

H1-a: During BDO’s assumption of joint and several liability, there was a positive response in the capital market.

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\(^{11}\) The premise of making the above inference is that investors will pay attention to the CPA firms’ judgement of joint and several liability, and this premise exists considering the Internet search situation. On the Internet, more than 800,000 pages can be found by searching for ‘BOD’ plus ‘joint and several liability’. To some extent, the keyword density and relevance indicates investors’ attention to such issues. In addition, discussions about the punishment of CPA firms also appeared on Snowball’s official website, one of the popular platforms for securities investors in China, such as ‘Delisted Stock can also be compensated! Lawsuit in Which Investors Sued Securities Company and CPA Firms Comes to Court Soon’, ‘After Ruihua Lost the Lawsuit: the Upper Limit and the Lower Limit of Due Diligence and Responsibility’, ‘Letv’ Punishment Ticket is Finally Announced, Whether the Intermediaries Take Responsibility?’, ‘False Bank Confirmation Request, CPA Firms with Obvious Gross Negligence Shall Bear the Compensation Liability, the Bank Does Not Need to Bear the Responsibility!’ All the above evidences show that investors do pay attention to the CPA firms’ judgement of joint and several liability, and the inference in this paper is reasonable to a certain extent.
H1-b: During BDO’s assumption of joint and several liability, the capital market responded more positively to listed companies in areas where administrative penalties or criminal convictions are not preconditions for civil lawsuits of false statements.

The change in litigation environment and risks can directly impact auditor behaviour (Firth et al., 2012; Ke et al., 2015; Lennox, 1999a, 1999b; Lennox & Li, 2014; Liu et al., 2013, 2014; Simunic, 1980; Zhai et al., 2017). This penalty case marks the end of the era when China’s auditors enjoy ‘few lawsuits, low compensation’, and a signal to strengthen law enforcement in auditing. With abundant financial resources, CPA firms are more likely to be the object of investor claims; once they are held jointly and severally liable, investors are likely to treat them as ‘deep pockets’, and claim directly from them bypassing other defendants, which is one of the major sources of litigation risks faced by CPA firms (Dye, 1993). After BDO was held jointly and severally liable, investors could bypass other parties and claim for compensation directly from BDO. Concerning BDO’s status as a tier-one domestic CPA firm and the great uncertainty of the claim, the incident had a huge impact on the entire CPA industry, which was then regarded as a signal that the ‘deep pocket’ was opened. Existing studies have shown that as legal punishment becomes tougher, increasing audit prudence, for example, issuing more conservative audit opinions, can effectively avoid legal proceedings and economic compensation (Anantharaman et al., 2016; Kaplan & Williams, 2013; Wang & Shang, 2010). Based on this, we predict that when law enforcement is strengthened and the auditors’ ‘deep pocket’ is opened, auditors will be more motivated to increase audit prudence and issue more conservative audit opinions to avoid audit failures and compensation risks. As above, litigation risk is also closely related to the strength of enforcement in various regions (Ke et al., 2015; F. Liu et al., 2010; Simunic, 1980). Other conditions being equal, in areas where administrative penalties or criminal convictions are not treated as preconditions for civil proceedings, once an audit fails, the auditor is more likely to be civilly sued by investors. So the opening of the ‘deep pocket’ and strengthened law enforcement will also have a greater crash in those areas. Based on this, we infer that without ‘preconditions’ as a ‘defence’, auditors of listed companies in those areas may have more incentive to increase prudence, thereby reducing the probability of audit failure and the risk of being sued. We make the following hypotheses:

H2-a: After BDO was held jointly and severally liable, auditors’ prudence has increased.

H2-b: After BDO was held jointly and severally liable, auditors’ prudence has increased even more to listed companies in areas where administrative penalties or criminal convictions are not preconditions for civil lawsuits of false statements.

Existing literature has found that strengthening legal supervision can raise auditors’ risk awareness and thus improve the clients’ financial reporting quality (Choi et al., 2008; Lamoreaux, 2016). As mentioned above, strengthening legal supervision and opening up the ‘deep pocket’ will force auditors to increase their prudence, resisting greater litigation risks. In the audit game, the auditor’s prudence will directly affect the game process, and ultimately affect the quality of the client’s financial statements. Specifically, the purchase of audit opinions depends on the dynamic game between the auditor and the client (Wu, 2005). When corporate earnings perform badly, the management may purchase audit opinions by giving
CPA firms exceed audit fees (Choi et al., 2010). However, with tougher law enforcement, auditors may not be easily ‘bribed’ in the game with clients, because once it is revealed, auditors who are ‘bought in’ will face greater compensation risks. If the auditor becomes more independent and prudent when negotiating with the client, the client’s false statement behaviour can be suppressed to a certain extent, which may eventually contribute to financial statements with higher quality. Based on this, we predict that when law enforcement is strengthened, in order to avoid audit failures and litigation risks, auditors will be more motivated to play an active role in financial statements governance, thus the quality of clients’ financial statements will improve. As above, other conditions being equal, in areas where administrative penalties or criminal judgements are not regarded as preconditions for civil proceedings for false statements, once an audit failure occurs, the auditor is more likely to be civil sued by investors; at the same time, auditors of listed companies in those regions will become more prudent. Therefore, strengthening law enforcement and opening the ‘deep pocket’ will have a greater impact on the quality of financial statements of listed companies in those regions. In this regard, we conclude that without ‘precondition’ as the ‘defence’, auditors will be more motivated to play a governance role in financial statements, thereby reducing the probability of audit failure, and ultimately leading to greater improvement in the quality of financial statements of listed companies in those areas. Based on the above inferences, we make the following hypotheses:

H3-a: After BDO was held jointly and severally liable, the quality of financial statements in listed companies was improved.

H3-b: After BDO was held jointly and severally liable, the quality of financial statements in listed companies was improved more in areas where administrative penalties or criminal convictions are not preconditions for civil lawsuits of false statements.

4. Research design
4.1. Sample and data sources
To test the economic effect of strengthening law enforcement and the consequence of opening the ‘deep pocket’ in a ‘cleaner’ manner, we exclude all listed companies audited by BDO. Meanwhile, we exclude listed companies in the financial industry and those with missing data. With reference to legal documents on the Chinese Judgement Documents website, we identify areas where administrative penalties or criminal convictions are not preconditions for civil proceedings for misrepresentation. Other data are drawn from the CSMAR database.

4.2. Empirical models and variables
To test H1-a, we adopt the event research method and examine the cumulative abnormal rate of return of the BDO case in the event window. Specifically: (1) In this article we regard 14 August 2017 as the event day, and select the event day as the observation
window.\textsuperscript{12} (2) We choose the 120 trading days before this event \((-31, -150)\) as the estimation window. (3) The market model \((R_{it} = a_0 + a_1 R_{mt} + \varepsilon_{it})\) is regarded as the predictive model of the normal return of the stock, with which the abnormal return is calculated. In the above market model, \(R_{it}\) and \(R_{mt}\) refer to the returns of stock \(i\) and of the market securities portfolio respectively in period \(t\) (cash dividend investment is considered in both cases). The residual term of the market model \(\varepsilon_{it}\) is the abnormal return (AR) of a single stock that we have estimated. Based on this, we calculate the cumulative abnormal return (CAR) of a single stock of a listed company within a given window. In the main test, we focus on the abnormal rate of return on the day of the event. In the robustness test, considering the leading role of media reports before the trial in the court, we investigate the cumulative abnormal return within the \((-2, 0)\) event window. We expect that investors have received a strong signal to combat false statements, and therefore give a positive response. On the day of the event and within the \((-2, 0)\) event window, both the abnormal return and the cumulative abnormal return are significantly greater than 0.\textsuperscript{13}

To test H1-b, we construct the following multivariate regression model:

\[
AR/CAR = \alpha_0 + \alpha_1 \text{TREAT} + \alpha_2 \text{SIZE} + \alpha_3 \text{LEV} + \alpha_4 \text{ROA} + \alpha_5 \text{BM} + \alpha_6 \text{MOV} + \alpha_7 \text{BIG8} + \alpha_8 \text{FPUN} + \alpha_9 \text{APUN} + \alpha_{10} \sum \text{PRO} + \alpha_{11} \sum \text{IND} + \varepsilon 
\]

(1)

Among them, the dependent variable AR is the abnormal return of a single stock of a listed company on the day of the event. In the robustness test, the cumulative abnormal return CAR of a single stock of a listed company in the \((-2, 0)\) window is chosen as the dependent variable. TREAT is the main explanatory variable that is examined in this model. If the local court of the province where the listed company is located does not treat administrative penalties or criminal convictions as a precondition for civil proceedings for false statements, it is set to 1, otherwise it is 0. Other conditions being equal, in areas where administrative penalties or criminal convictions are not preconditions for civil proceedings for false statements, once an audit failure occurs, the auditor will face a higher risk of civil lawsuits and compensation due to the absence of the above preconditions as a ‘defence’. With strengthened law enforcement, auditors of listed companies in those regions are more motivated to improve audit quality so as to reduce the risk of civil compensation. Therefore, investors will also possess higher expectations on audit quality and information transparency of those local listed companies, which may cause a more positive response in stock prices. Based on this, we expect the coefficient before

\textsuperscript{12}It is known from DZH’s announcement that on August 14–18, 2017, Shanghai First Intermediate People’s Court tried the dispute case between DZH and BDO due to securities false statements. It was the first time that BDO was judged to held joint and several liability. In the event study, if the earliest possible date for information release is investigated, the effect of ‘information dilution’ can be weakened. Therefore, in this study, 14 August 2017 is chosen as the event day.

\textsuperscript{13}At the same time, in order to eliminate the influence of other information on the event date as much as possible, we also did the following work: referring to the practice of Li and Shen (2010), Xu and Xin (2011), we have conducted the events survey among China Securities Journal, Securities Daily, Securities Times, Shanghai Securities News, China Business News, 21st Century Business Herald, Economic Observer and China Business News, which are the most widely influential, well-known and authoritative eight national financial newspapers in China. Those original reports are recorded in the Chinese major newspaper full-text database. We have not found any other good news on 14 August 2017 for A-share market. In the absence of other major good news, if this paper finds significant positive anomalies in the capital market on the event day, to some extent, it can be explained that it is related to the auditor’s judgement of joint and several liability as well as the strong signal of strengthening investor protection released by the capital market.
Referring to the existing literature, we also control the relevant characteristics of listed companies in the year before the incident. Meanwhile, this paper also controls the fixed effects of province and industry. The definitions of control variables are shown in Table 1.

Table 1. Variable definitions.

| Variable | Definition                                                                 |
|----------|---------------------------------------------------------------------------|
| AR       | The abnormal return; See IV-(II).                                        |
| CAR      | The cumulative abnormal return; See IV-(II).                             |
| RISKOP   | The dummy variable of risk audit opinion1; See IV-(II).                  |
| RISKOP2  | The dummy variable of risk audit opinion2; See IV-(II).                  |
| DA       | The quality of financial statements1; See IV-(II).                       |
| DA2      | The quality of financial statements2; See IV-(II).                       |
| POST     | The dummy variable of event-time; See IV-(II).                          |
| TREAT    | The dummy variable of event-area; See IV-(II).                          |
| SIZE     | Natural logarithm of total assets.                                      |
| LEV      | Total liabilities/Total assets.                                          |
| ROA      | Total profit/Total assets.                                              |
| LOSS     | The dummy variable that equals 1 if firms have a negative income and 0 otherwise. |
| BM       | Book value/Market value.                                                 |
| MOV      | The return of individual stocks in the year prior to the event.         |
| BIG8     | The dummy variable that equals 1 for the Big 8 audit firms and 0 otherwise. |
| REC      | Total receivables/Total assets.                                          |
| INV      | Total inventory/Total assets.                                            |
| LOP      | The dummy variable that equals 1 if last year’s audit opinion is not modified and 0 otherwise. |
| REV      | Operating revenue.                                                      |
| CASH     | Net cash flow of operating activities/100,000                            |
| FPUN     | The dummy variable that equals 1 if the listed company is punished by the CSRC, 0 otherwise. |
| APUN     | The dummy variable that equals 1 if the CPA firm is punished by the CSRC, 0 otherwise. |

Model (2) is a logit regression model. In the main test for (2), the dummy variable of risk audit opinion RISKOP is adopted to measure prudence. Specifically, all the listed companies are ranked according to the absolute value of accruals. If the auditor issues a standard and unqualified auditor’s report for a listed company whose absolute value of accruals is higher than the sample median, we may regard the auditor issues a risky opinion. At this time, the value of RISKOP is set as 1, otherwise it is 0. In the robustness test, RISKOP2 is adopted to measure prudence. Still, the listed companies are ranked according to the absolute value of accruals. If the auditor’s audit opinion on a listed company with an absolute accrual value higher than the sample median is ‘standard unqualified opinion’, or ‘unqualified opinion plus explanatory paragraph’, it indicates a risky opinion, and the prudence is low. In this case, RISKOP2 is set as 1, otherwise

\[
RISKOP_{i,t}/RISKOP2_{i,t} = \alpha_0 + \alpha_1 POST_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 LEV_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 LOSS_{i,t} + \alpha_6 REC_{i,t} + \alpha_7 INV_{i,t} + \alpha_8 LOP_{i,t} + \alpha_9 BIG8_{i,t} + \alpha_{10} FPUN_{i,t} + \alpha_{11} APUN_{i,t} + \alpha_{12} \sum PRO + \alpha_{13} \sum INDUSTRY + \epsilon_{i,t} \tag{2}
\]

The event happened in 2017. With reference to existing literature, we control the situation of listed companies in 2016. As the time span for the explanatory variable and all control variables is only one year, it is unnecessary to control the fixed effect of year in model (1).

We calculated the absolute value of accruals by the modified Jones model.
it is 0.\textsuperscript{16} POST is a time indicator variable. It is set as 1 after BDO was held jointly and severally liable, otherwise it is 0.\textsuperscript{17} When law enforcement is strengthened, with increasing litigation and compensation risks, auditors are more motivated to improve audit prudence and publish fewer risky opinions. Therefore, we expect that the coefficient before POST in model (2) is significantly negative. With reference to existing literature, we control the characteristics of the company and auditors. At the same time, this article also controls the fixed effects of province and industry. See Table 1 for the definitions of control variables.

To test H2-b, we build the following multivariate regression model:

\[
RISKOP_{t,t}/RISKOP2_{t,t} = a_0 + a_1 POST_{t,t} + a_2 TREAT_{t,t} + a_3 POST_{t,t} \times TREAT_{t,t} + a_4 SIZE_{t,t} + a_5 LEV_{t,t} + a_6 ROA_{t,t} + a_7 LOSS_{t,t} + a_8 REC_{t,t} + a_9 INV_{t,t} + a_{10} LOP_{t,t} + a_{11} BIG8_{t,t} + a_{12} FPUN_{t,t} + a_{13} APUN_{t,t} + a_{14} \sum PRO + a_{15} INDUSTRY + \varepsilon_{t,t}
\]

(3)

Compared to model (2), TREAT and the interaction term of TREAT * POST are included in model (3). Likewise, model (3) is also a logit regression model. As the definition of TREAT in model (1), if the local court of the province where the listed company is located does not treat administrative penalties or criminal convictions as a precondition for civil proceedings for false statements, it is set to 1, otherwise it is 0. In model (3), we focus on the coefficient before the interaction term POST*TREAT, which represents compared to other places, the improvement in auditors’ prudence in areas where administrative penalties or criminal convictions are not treated as preconditions of civil proceedings for false statements before BDO was held jointly and severally liable. According to the inference of H2-b, we expect that in model (3), the coefficient before POST*TREAT is significantly negative. Meanwhile, the fixed effects of province and industry are also controlled. The definitions of control variables are shown in Table 1.

\textsuperscript{16}In this paper, the construction of the variable ‘risk audit opinion’ is innovative but based on certain theoretical basis and literature suggestions. According to audit theory, there are two types of errors in the audit process. The first type of error is ‘true-abandoning’, that is, the auditor issues a modified audit opinion (MAOS) to a company that should receive a standard and unqualified auditing opinion. The second type of error is ‘type B error’, where the auditor issues a standard unqualified opinion to a company that should receive a modified auditing opinion (MAOS) (He et al., 2017). Most of the existing literature only use ‘whether to issue a modified auditing opinion (MAOS)’ to measure audit quality, and believe that the higher the probability of MAO is issued, the higher the audit quality will be. However, the problem lies in ignoring the first type error, which is ‘truth-abandoning’ error (Aobdia, 2019). Therefore, Aobdia (2019) clearly suggests that future academic studies should choose composite indicators to construct measurement indicators of audit quality. Thus, based on the investigation results of Aobdia (2019), this paper selects two indicators which have significant correlation with audit quality in practice (absolute value of discretionary accruals and the audit opinion) to build the variable of risk audit opinion, and regard the standard unqualified opinion with a high absolute value of discretionary accruals as a risk audit opinion. It not only considers the ‘type B error’, that is, if the auditor issues the standard unqualified opinion even when the financial information quality of the listed company is poor, then the audit quality in this instance is low and such audit opinion belongs to the risk audit opinion. At the same time, the first type error is also considered, that is, when company’s absolute value of discretionary accruals is low and the financial information quality is good, it is reasonable for the auditor to issue the standard unqualified opinion, which means that the standard unqualified opinion at this time is not risky audit opinion, and the audit quality is still good. To sum up, we believe that the variable of ‘risk audit opinion’ makes up for the deficiency of simply using ‘whether to issue MAO’ as the measurement method of audit quality, and it is reasonable to some extent.

\textsuperscript{17}The BDO joint and several liability case happened in the second half of 2017, so when the auditor issued the 2016 report, they were not affected. The annual report and audit report for 2017 was issued in March – April, 2018, which means the auditor had plenty of time to adjust their behaviour in their 2017 reports for listed companies. Therefore, when setting the value of POST, we set the value of the 2017 sample to 1, and that for 2016 to 0.
To test H3-a, we have constructed the following multivariate regression model (4):

\[
\begin{align*}
\text{DA}_{i,t}/\text{DA}_{2,t} &= a_0 + a_1 \text{POST}_{i,t} + a_2 \text{SIZE}_{i,t} + a_3 \text{LEV}_{i,t} + a_4 \text{ROA}_{i,t} + a_5 \text{LOSS}_{i,t} + a_6 \text{REV}_{i,t} \\
&+ a_7 \text{CASH}_{i,t} + a_8 \text{BM}_{i,t} + a_9 \text{BIG8}_{i,t} + a_{10} \text{FPUN}_{i,t} + a_{11} \text{APUN}_{i,t} + a_{12} \sum \text{IND} + \epsilon_{i,t}
\end{align*}
\]

(4)

The dependent variable DA refers to the quality of financial statements of listed companies. In the main test, the absolute value of discretionary accruals (DA) is calculated via the performance-adjusted Jones model. In the robustness test, the absolute value of DA2 generated from the traditional Jones model is chosen as the measure. A larger DA means lower quality of the listed company’s financial statements. As the above, POST is a time indicator, which equals 1 after BDO was held jointly and severally liable, otherwise it is 0. The judgement of the BDO case has sent an alarm to CPA firms, which may contribute to better governance of them and improvement in financial reports of listed companies. Therefore, we expect the coefficient before POST to be significantly negative. With reference to existing literature, we control the characteristics of companies and auditors. The fixed effects of province and industry are controlled. The definitions of control variables are shown in Table 1.

To test H3-b, we have constructed the following multivariate regression model (5):

\[
\begin{align*}
\text{DA}_{i,t}/\text{DA}_{2,t} &= a_0 + a_1 \text{POST}_{i,t} + a_2 \text{TREAT}_{i,t} + a_3 \text{POST}_{i,t} \times \text{TREAT}_{i,t} + a_4 \text{SIZE}_{i,t} + a_5 \text{LEV}_{i,t} \\
&+ a_6 \text{ROA}_{i,t} + a_7 \text{LOSS}_{i,t} + a_8 \text{REV}_{i,t} + a_9 \text{CASH}_{i,t} + a_{10} \text{BM}_{i,t} + a_{11} \text{BIG8}_{i,t} \\
&+ a_{12} \text{FPUN}_{i,t} + a_{13} \text{APUN}_{i,t} + a_{14} \sum \text{PRO} + a_{15} \sum \text{IND} + \epsilon_{i,t}
\end{align*}
\]

(5)

Compared to model (4), TREAT and the interaction term of TREAT * POST are included in model (5). Defined in the same way as in model (1), if the local court of the province where the listed company is located does not treat administrative penalties or criminal convictions as a precondition for civil proceedings for false statements, it is set to 1, otherwise it is 0. In model (5), we focus on the coefficient before the interaction term POST*TREAT, which shows compared to other places, the improvement degree in auditors’ prudence in areas where administrative penalties or criminal convictions are not treated as preconditions of civil proceedings for false statements before BDO was held to
jointly and severally liable. According to the inference of H3-b, we expect the coefficient before \( \text{POST} \times \text{TREAT} \) to be significantly negative. With reference to existing literature, we control the characteristics of companies and auditors. In this model, the fixed effects of province and industry are also controlled. The definitions of control variables are shown in Table 1.

4.3. Descriptive statistics

Table 2 reports the descriptive statistics of the main variables. To avoid the impact of abnormal values on the results, we winsorise continuous variables at the 1% level.

It can be observed in Table 2 that the mean of abnormal return on the day of the event is greater than 0, which indicates a high probability of positive feedback in the capital market within the event window. This sets a foundation for the following research. The mean value of RISKOP is 0.485, which means that some auditors issue standard unqualified opinion for clients with lower quality of profits – this brings certain risk to auditors. Next we will discuss whether strengthening law enforcement can improve auditors’ prudence and reduce such risky behaviour. The mean value, minimum and maximum values of DA are 0.069, 0.001 and 0.401 respectively, indicating that quality of financial reports varies with listed companies. This is the prerequisite for us to study the factors affecting the difference of financial report quality among listed companies. In regard to the investigation of independent variables, POST is the time indicator. As the sample span is two years, in this study POST for 2017 is set as 1, and 0 for 2016, with a mean of 0.5. A proportion of 50% also offers us a favourable condition for analysis between groups. The mean value of TREAT is 0.39, which implies that despite only four provinces where administrative penalties and criminal convictions are not treated as preconditions for civil proceedings for false statements, those places are developed, with a large number of listed companies and a large share in the total number across the country. Statistical results of other variables are close to those in existing studies, and no normal value is found.\(^{18}\) Next we will do further analysis.

5. Results and discussion

5.1. ‘Joint and Several Liability’ penalty, litigation preconditions and shareholder’s response

We choose the event day as the short window, and test whether the abnormal rate of return on that day is significantly greater than 0. It is known from Table 3 that the abnormal rate of return on the day of the event is significantly greater than 0 at the 5% level.

Table 3. ‘Joint and Several Liability’ penalty and market response.

| AR  | N   | Mean>0 | T-value | P-value |
|-----|-----|--------|---------|---------|
| EVENTDAY | 2286 | Y      | 2.45**  | 0.014** |

(1) This table reports the results of the abnormal rate of return on the event day (2) *significance at the 0.1 level, **significance at the 0.05 level, and ***significance at the 0.01 level.

\(^{18}\)Descriptive statistics of other control variables are not listed, available upon request.
Table 4. ‘Joint and Several Liability’ penalty, litigation preconditions and market response.

|                | Coefficient | T-value |
|----------------|-------------|---------|
| TREAT          | 0.003***    | 5.58    |
| SIZE           | 0.002***    | 3.21    |
| LEV            | −0.002      | −0.86   |
| ROA            | 0.023***    | 3.22    |
| BM             | −0.003***   | −4.19   |
| MOV            | −0.006***   | −4.22   |
| BIG8           | −0.001      | −0.68   |
| FPUN           | −0.000      | −0.43   |
| APUN           | −0.000      | −0.44   |
| Constant       | −0.036***   | −3.79   |
| Industry       | Y           |         |
| Province       | Y           |         |
| N              | 2024        |         |
| Adj. R²        | 0.100       |         |

(1) This table reports the OLS regression results (2) *significance at the 0.1 level, **significance at the 0.5 level, ***significance at the 0.01 level (3) The coefficient for the TREAT is significantly positive, showing that investors hold higher expectations on the audit quality and information transparency in ‘Treat areas’, which leads to more positive response in stock prices. The result is consistent with Hypothesis1-b.

This level. This indicates that when the auditor receives the penalty of joint and several liability, the security market releases a strong signal to strengthen investor protection, and the investors expect ‘higher audit quality’ and ‘greater information transparency’, which leads to positive response in stock prices. This is consistent with H1-a.

Table 4 reports the regression results with the abnormal rate of return on the event day as the dependent variable, and ‘whether administrative penalties or criminal convictions are treated as preconditions for civil proceedings for false statements’ as the main observation. It is found in Table 4 that the coefficient before TREAT is significantly positive at 1% level. This means that, other things being equal, in areas where administrative penalties or criminal convictions are not treated as preconditions for civil proceedings for false representations, auditors probably face greater risks of civil litigation and compensation; with tougher law enforcement, those auditors are better motivated to enhance audit quality and reduce the likelihood of audit failure. Therefore, investors hold higher expectations on the audit quality and information transparency in those areas, which leads to more positive response in stock prices. The result is consistent with that of H1-b.

5.2. ‘Joint and several liability’ penalty, litigation preconditions and audit prudence

Table 5 reports the test results of multivariate regressions on H2-a and H2-b. It shows that POST and the coefficient before the interaction term POST*TREAT are significantly negative, which means that penalty on BDO has acted as deterrence; after the event, auditors have become more prudent, and are less likely to issue standard unqualified opinions for listed companies with higher absolute values of accruals. Meanwhile, in comparison with other areas, those where administrative penalties or criminal convictions are not treated as preconditions for civil proceedings for misrepresentations have witnessed greater
5.3. ‘Joint and several liability’ penalty, litigation preconditions and client’s financial reporting quality

As is shown in Table 6 (1), the coefficients before POST are significantly negative, which indicates that after the judgement, the absolute values of listed companies’ accruals are decreasing, while the quality of financial statements is getting better. This means that the joint and several liability penalty on the CPA firm has not only affected audit prudence, but also has a spillover effect, i.e. it has effectively lowered accruals and enhanced the quality of clients’ financial statements. After TREAT and the interaction term POST*TREAT are added to Column (2) in Table 6, both the coefficient before POST and that before the interaction term are significantly negative, which indicates that compared to 2016 and compared to other regions, in areas where administrative penalties or criminal convictions are not treated as preconditions for civil proceedings for false statements, the quality of clients’ financial reporting has improved to a greater degree. This is consistent with hypotheses H3-a and H3-b.
Table 6. ‘Joint and Several Liability’ penalty, litigation preconditions and financial reporting quality.

| DV:DA | (1) | (2) |
|-------|-----|-----|
| | Coefficient | T-value | Coefficient | T-value |
| POST | −0.025*** | −13.85 | −0.022*** | −10.01 |
| TREAT | 0.006*** | 2.96 | 0.007*** | −2.66 |
| SIZE | −0.003 | −1.67 | −0.003 | −1.65 |
| LEV | 0.063*** | 6.21 | 0.064*** | 6.21 |
| ROA | 0.039 | 1.10 | 0.039 | 1.10 |
| LOSS | 0.020*** | 4.05 | 0.020*** | 4.10 |
| REV | 0.000 | 1.44 | 0.000 | 1.44 |
| CASH | −0.000 | −0.75 | −0.000 | −0.77 |
| BM | 0.000 | 1.44 | 0.000 | 1.44 |
| BIG8 | −0.006** | −2.34 | −0.006** | −2.34 |
| FPUN | 0.009** | 2.26 | 0.009** | 2.28 |
| APUN | 0.002 | 1.77 | 0.002 | 1.77 |
| Constant | 0.084** | 2.15 | 0.082** | 2.11 |

| Industry | Y | Y |
| Province | Y | Y |
| N | 4443 | 4443 |
| Adj. R² | 0.092 | 0.092 |

(1) This table reports the OLS regression results (2) *significance at the 0.1 level, **significance at the 0.5 level, ***significance at the 0.01 level (3) As is shown in Table 6 (1), the coefficients before POST are significantly negative, which indicates that after the judgement, the absolute values of listed companies’ accruals are decreasing, while the quality of financial statements is getting better. Column (2) in Table 6, both the coefficient before POST and that before the interaction term are significantly negative, which indicates that compared to 2016 and compared to other regions, in areas where administrative penalties or criminal convictions are not treated as preconditions for civil proceedings for false statements, the quality of clients’ financial reporting has improved more. This is consistent with hypotheses H3-a and H3-b.

Table 7. Test on alternative variables (1).

| CAR | N | Mean>0 | T-value | P-value |
|-----|----|--------|---------|---------|
| (−2, 0) | 2286 | Y | 16.83*** | 0.000*** |

(1) This table reports the results of the cumulative abnormal rate of return within the window (−2, 0) (2) *significance at the 0.1 level, **significance at the 0.5 level, and ***significance at the 0.01 level.

Table 8. Test on alternative variables (2).

| DV | CAR (−2, 0) | RISKOP2 | DA2 |
|----|-------------|---------|-----|
| POST | −0.462*** | −0.018*** |
| TREAT | 0.004*** | 0.124* | 0.008*** |
| POST*TREAT | −0.259** | −0.006** |
| CONTROLS | Y | Y | Y |
| Constant | 0.086*** | −0.128 | 0.059 |
| Industry | Y | Y | Y |
| Province | Y | Y | Y |
| N | 2024 | 4304 | 4443 |
| Adj. R² or Pseudo. R² | 0.176 | 0.0574 | 0.094 |

(1) This table reports the OLS regression results (2) *significance at the 0.1 level, **significance at the 0.5 level, ***significance at the 0.01 level (3) Compared to Tables 4-6, we change the measurements for IVs. And after that, the above findings are still valid.
The above mentioned judgement cases of ‘joint and several liability’ and ‘administrative penalties or criminal convictions without preconditions for civil proceedings for false statements’ are, in essence, typical examples of tougher law enforcement and the ‘deep pocket’ opened under the current legal framework. The above results show that strengthening law enforcement and opening ‘deep pockets’ have signalling and deterrence effects, spurring auditors to adjust their behaviour and eventually enhance the quality of listed companies’ financial reports.

6. Robustness tests

6.1. Tests on alternative variables

To ensure the robustness of the test results, we run regression on alternative variables. Firstly, we set (−2,0) as the event window, and investigate the capital market’s response to the joint liability penalty with the cumulative abnormal rate of return within the window. Results in Table 7 show that the cumulative abnormal rates of return are all significantly greater than 0 at the 1% level, consistent with H1-a. The first column in Table 8 shows that, with the cumulative abnormal rate of return during (−2,0) as the dependent variable for the regression test, the coefficient before TREAT is also significantly positive, consistent with H1-b. Secondly, we choose RISKOP2 as the dependent variable to test the impact of the event on auditor behaviour. In the second column of Table 8, the coefficients before POST and before the interaction term POST*TREAT are significantly negative, consistent with H2-a and H2-b. Lastly, with DA2 as another proxy variable in the quality of financial reports, we investigate again how the BDO event has affected the quality of listed companies’ financial reports. As is shown in the third column of Table 8, the coefficients before POST and before the interaction term POST*TREAT are significantly negative, consistent with H3-a and H3-b.

6.2. Mitigation of endogenous problems

As for the mitigation of endogenous problems in H1-a, H2-a and H3-a tests, firstly, the above test results on H1-b, H2-b, and H3-b can further prove the rationality of these inferences. Specifically, the test of H1-b shows that in areas where administrative penalties or criminal convictions are not preconditions for civil proceedings for financial misrepresentation, auditors are faced with greater risks of civil litigation and liability, so they are more motivated to improve audit quality and reduce the risks of civil compensation when the law enforcement is strengthened. Therefore, investors have higher expectations for the audit quality and information transparency of listed companies in those areas, and respond more positively in stock prices to companies in those places in the event window. If the significantly positive market response is not related to the change in the litigation environment caused by this penalty, but due to other policies or events, then there is no reason for the capital market to respond differently in stock prices to listed companies in different litigation environments. Therefore, the significantly positive coefficient before TREAT to a certain extent explains that the positive abnormal return within the event window is related to the BDO’s event, and further verifies H1-a. In the same way, our tests of H2-b and H3-b show that compared with other regions, in areas where administrative
penalties or criminal convictions are not preconditions for false statements litigation, the auditors’ prudence and the quality of listed companies’ financial statements have improved even more after the BDO’s penalty. If the improvements were not related to changes in the litigation environment caused by the BDO case, then changes in auditor behaviour and financial reports quality in listed companies in different litigation environments would not have been significantly different due to different litigation risks. Therefore, the tests of H2-b and H3-b also partly explain that the improvement in auditor prudence and the quality of financial reports is related to the change in the litigation environment caused by the BDO event, and further verifies H2-a and H3-a.

We also run a placebo test on the time indicator variables before and after the penalty. We randomly divide the sample into two groups at a 1:1 ratio, put one group into the POST group and assign a value of 1, and for the rest the value is 0. If the new coefficient for POST were consistent with that before it is redefined, the results for previous test would have been questioned, i.e. the response in stock price in the capital market, the response of auditors for listed companies and the change in the quality of financial statements would not have been necessarily related to the penalty. However, the placebo test on the variable POST shows inconsistency in the coefficients of POST before and after the redefinition, which partly identify that above results are related to the penalty event.19

In regard to the alleviation of endogenous problems of the H1-b, H2-b and H3-b tests, with reference to related documents, it is found that in Guangdong, Zhejiang, Jiangsu and Anhui, there are cases where the defendant is penalised with civil compensation due to false statements, without the above-mentioned preconditions. But compared to other provinces, these four are more developed economically, with a greater number of private enterprises. To avoid impacts of those differences, we have alleviated endogenous problems from the following four perspectives:

Firstly, given the fact that one important reason for regional difference in economic development is industrial cluster, we restrict the sample to manufacturing enterprises before a new round of regression analysis, so that we can minimise the impact of industrial difference on market response, auditor behaviour and the quality of financial reports.20 The test results of the manufacturing sample are consistent with the previous one. Secondly, the economic development in the four provinces is above the national average in terms of GDP. To mitigate the impact of economic development on market response, auditor behaviour and the quality of financial reports, only listed companies in provinces with similar levels of economic development (whose GDP rank one before or after the four provinces) are kept for the regression test. With further control for economic factors, the results are consistent with the previous test. Thirdly, considering the developed private economy in the four provinces, to reduce the effect of the property nature on the regression results, we only keep private enterprises for analysis. With the property factors controlled, the above conclusion stands. Fourthly, the rice theory (Talhelm et al., 2014) believes that compared with wheat cultivation, rice cultivation requires more workload

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19 Because in the test for H1-a, the time span of explanatory variables and all control variables is only one year, it is impossible to conduct a placebo test for this hypothesis on the time indicator POST. Meanwhile, for CSRC’s administrative penalty on BDO on 20 July 2016 due to the case of DZH false statements, we investigate the market response, but find no significant abnormal return in the event window. The results are not listed, available upon request.

20 Although the fixed effect of industry has been included in all the existing tests, only industrial characteristics that do not vary with time can be controlled. By limiting the sample to manufacturing enterprises, we can further mitigate the effect of industry clustering on the regression results.
and teamwork. Therefore, people in regions with rice cultivation tradition are more accustomed to interdependence, and their regional culture tends to be the collectivism culture. With traditional wheat cultivation areas, people become more independent, the regional culture is also more inclined to individualism culture. Among the four provinces of Guangdong, Zhejiang, Jiangsu and Anhui, Guangdong, Zhejiang and Jiangsu mainly belong to southern areas where rice cultivation dominates, and so does the south of Anhui province, Thus, according to the rice theory, we reckon that the four provinces are mostly about collectivist cultures. In order to mitigate the impact of cultural customs, we only retain the samples of listed companies from provinces that are also dominated by collectivism culture for regression.\textsuperscript{21} After mitigating the impact of cultural customs, the conclusion is still valid.

Lastly, a placebo test is carried out to alleviate endogenous problems. The sample is divided randomly into two groups with a ratio of 1:1. One of them is included in the TREAT group and assigned a value of 1, the other 0. If, after TREAT is redefined, the coefficient before POST*TREAT were consistent with the previous one, the results would have been doubted, i.e. the capital market’s response in stock prices, the response of listed companies’ auditors or change in the quality of financial statements might not have been related to the existence of preconditions. However, the coefficient of POST*TREAT is not significant in the placebo test. This also verifies the hypotheses H1-b, H2-b, and H3-b from the other side, and shows the robustness of the above test results. Due to the large number of tables, they are not included in the text and are available upon request.

6.3. Further research: Discussions on the size of CPA firm

‘Deep pocket’ theory suggests that larger CPA firms with abundant resources are more likely to be targeted for claims by investors (Dye, 1993; Lennox, 1999b). In this part, the moderating effect of CPA firm size on the above results is further discussed. If the CPA firm with a larger scale is more likely to become the litigation object of investors and the “deep pocket of claims, faced with strengthened law enforcement, will the capital market react differently to the listed companies audited by CPA firms of different sizes? With this penalty event as well as the ban on litigation preconditions in some regions, whether the CPA firms of different sizes will show differences in the adjustment of audit behaviour, and ultimately lead to the difference in the quality of listed companies’ financial reporting? Referring to the list of top 100 CPA firms in China, we manually collected the annual revenue of each firm. We performed a statistical analysis of the revenue of all CPA firms qualified to audit public companies and calculated the median revenue. If a CPA firm’s revenue exceeds the median, it is considered as a large CPA firm; otherwise, it is considered as other CPA firm. Based on this, we divided the sample into two groups to examine the moderating effect of firm size. From the results, the capital market has a more positive reaction to the listed companies audited by large scale and high-income CPA firms, which indicates that investors have the ‘deep pocket’ awareness. It is believed that after strengthening law enforcement, large CPA firms will pay more attention to audit prudence and be able to play a better role in the governance of financial reporting.

\textsuperscript{21}Namely, samples of listed companies from Chongqing, Sichuan, Jiangsu, Guangxi, Hubei, Hunan, Fujian, Guangdong, Zhejiang, Jiangxi, Shanghai, Henan and Anhui.
However, significant differences of audit behaviour adjustment among CPA firms of different sizes after this penalty event are not found. At the same time, there exist no significant evidence of the distinct difference in the governance effect of financial reporting quality. This may be due to the fact that under the regulation of securities market, there are no orders of magnitude differences in income levels among the 40 qualified CPA firms. These CPA firms are all ‘deep pocket’s for investors, but none of them are prominent ‘deeper pockets’. Therefore, in view of this penalty event, there is no significant difference in audit behaviour adjustment and the information governance effect of financial report between CPA firms of different sizes. Due to the large number of tables, they are not included in the text and are available upon request.

7. Conclusion

An improved legal system with strengthened law enforcement can motivate auditors to enhance audit quality and better perform their supervision and governance (Anantharaman et al., 2016; Geiger et al., 2006; Lennox & Li, 2012; Simunic et al., 2017). BDO’s penalty of joint and several liability as a result of the false statements by Shanghai DZH Limited is the first case in China where a single CPA firm is penalised with joint and several liability. Starting from this case, our study investigates the economic consequences of strengthening law enforcement and opening the auditor’s ‘deep pocket’ under the current legal framework. It is found that firstly, investors regard BDO’s penalty as a strong signal of combatting false statements and, with an expectation of strengthened investor protection, thus respond positively. Secondly, the event of joint and several liability penalty is a strong signal to strengthen law enforcement and may act as a demonstration in the market, and sound an alarm for the CPA firm industry. After the event, auditors have significantly enhanced audit prudence. Thirdly, compared with the previous year, the overall practice level of the CPA firm industry in 2017 has improved, which has eventually led to improvement in the average quality of financial reports by listed companies in China. Fourthly, in areas where administrative penalties or criminal convictions are not treated as preconditions for civil proceedings due to false statements, listed companies have received more positive market feedback within this event window; auditors have maintained high prudence, and quality of financial reports by listed companies in those areas has also greatly improved. After a series of robustness tests, the above findings are still valid.

Finally, in the further study part, this paper also investigates the moderating effect of CPA firm size, although the capital market possesses different expectations for CPA firms of different sizes and gives different market responses to this event. However, since there is no difference of magnitude in the income level of the 40 qualified CPA firms in China, and there is no such thing as ‘deeper pockets’, there exist no significant difference in the audit behaviour adjustment and financial report information governance effect of the CPA firms of different scales when dealing with the penalty event. This study discusses the economic consequence of strengthening law enforcement in the current legal framework. Meanwhile, in the scenario of the BDO case, the ‘law and finance’ and ‘deep pocket’ theory has been well tested, which enriches related literature research. This study has provided new empirical evidence for how to strengthen the supervision on auditor behaviour and enhance the information governance by external auditors in the new era, which has
important implications for the construction of the legal system to strengthen investor protection and law enforcement. More importantly, the results of this study have broken the ‘few lawsuits, low compensation’ stereotype of China’s audit market found in western literature (Simunic et al., 2017).

Our analysis also provides implications for the current capital market on how can the supervision functions of the CPA firms be exerted, thus improving audit quality. Recently, the financial fraud cases represented by Kangmei Pharmaceutical and Kangde Xin enterprise have caused huge market shock, their auditors, Zhengzhongzhuijiang accounting firm and Ruihua certified public accountants have also been widely questioned. This paper argues that the joint and several liability of CPA firms should be effectively implemented and the preconditions for investors to file lawsuits should be relaxed for the long-term and healthy development of China’s capital market.

Disclosure statement

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