

Fraudulent Financial Reporting in China: Evidence from Renaming Behaviour

Yefeng Zhang

Queensland University of Technology, Brisbane, Australia

Yuyu Zhang

Queensland University of Technology, Brisbane, Australia

Troy Yao

Queensland University of Technology, Brisbane, Australia

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Abstract

Using a sample of listed companies in China during 2010-2017, this study examines the association between corporate's renaming behaviour and fraudulent financial reporting activities (FFRs). The moderating role of state-owned enterprises (SOEs) and powerful directors in mitigating the association between corporate renaming and financial reporting fraud is further investigated. The results suggest that companies with renaming experience are more prone to commit financial reporting fraud. The positive association between corporate renaming and FFRs is less pronounced for SOEs than for non-SOEs. Reported results also show that the power of board of directors positively moderates the association between renaming behaviour and the likelihood of FFRs. This study provides a new "red flag" for the regulators to investigate financial fraud. The findings are timely and relevant to the contentious regulation and development of the capital market in China. Results are expected to be generalizable across emerging capital markets.

Keywords: Financial reporting fraud; Corporate renaming; Corporate governance; China

1. Introduction

This study examines the association between corporate renaming behaviour and financial reporting fraud in China. Corporate name can be the most potent intangible asset of a business and is an important form of external information disclosure. The company's name is not only related to the influence of the company in the industry, but also related to the recognition of the corporate. If the company's name conforms to the characteristics of the industry and the trend of the times, the competitiveness of the company is obviously different from the other companies in the same industry. Therefore, many companies arbitrarily changed their corporate name to be associated with the current popular industry and this biased information will directly affect the evaluation of the company value by external information users, ultimately influencing the economic decisions that users make. However, corporate renaming behaviour has been limitedly studied in the literature. Listed companies may either use renaming to communicate specific business changes or strategically alter the corporate name to a more appealing name hence to manipulate the public impression on the company.

Prior research reveals that although nearly 90% of companies can obtain excess returns in the short term after corporate renaming (Pensa, 2006; Lee, 2010), corporate renaming behaviour often indicates the impression management. In the context of the Chinese stock market, from 2010 to 2017, there were 1,306 companies from 18 industries that have changed their corporate name. Besides the frequent renaming practices among

Chinese companies, financial reporting fraud has also become a significant issue in China. Due to the institutional feature and insufficient and underdeveloped legal environment in the Chinese stock market (Jiao et al., 2015), financial scandals have increased dramatically over the past several decades (Yu et al., 2015). The institutional background and country-level corporate governance features in China can be summarised as follows. First, the legal environment in China is weak as compared to other developed countries (e.g. U.S. and U.K.). Roe (2002) shows that the legal environment of a country has a significant impact on companies' performance and corporate governance practices. The code law legal system in China thus provides avenues for listed companies to engage in financial frauds. Second, Chinese stock markets have serious asymmetric information problems (Morck, Yeung, and Yu, 2000), including insufficiently knowledgeable managers, and the asymmetric information between insiders and capital market participants. For instance, in the cases of asymmetric information, some Chinese companies are found to be more likely to disclose positive information and to modify the negative information before releasing it to the capital market. Third, the ownership structure of Chinese listed companies is unique. China is a country where companies have a concentrated ownership structure and a significant proportion of listed companies that are owned by central or local governments (Cheung et al., 2010). Under such a concentrated ownership structure, the primary conflict arises between majority and minority shareholders.

To our best knowledge, no research has investigated whether corporate renaming

behaviour is associated with financial frauds. Therefore, this study is motivated to add new evidence to the corporate renaming and financial fraud literature by investigating this question in the Chinese setting where the overall corporate governance is weak. This study argues that if the corporate name changes are the result of fundamental changes in corporate structure (e.g. mergers or acquisitions) then the new corporate name may provide signals to investor about the company's updated business strategies ('signaling theory'). However, on the other hand, the renaming behaviour itself can also be a case of misrepresentation of information and it may mislead the investors if corporate names are changed without altering the business structure. For example, the company used renaming effect to obtain excess returns in a short period of time, followed by a large sell of company's stocks to achieve illegal cash out when the stock price reached the peak. Therefore, it is hypothesised in this study that corporate renaming may be a 'red flag' of a financial fraud.

Based on a sample of 20,516 company-year observations in the Chinese A-share market, this study finds that companies are more likely to commit financial fraud subsequent to their corporate name changes. Further, there is evidence that the impact of renaming behaviour on the likelihood of fraudulent financial reporting is more pronounced in non-state-owned enterprises (thereafter, non-SOEs) than in state-owned enterprises (thereafter, SOEs). Finally, reported results suggest that the power of the board of directors positively moderated the association between company renaming behaviour and the likelihood of fraudulent financial reporting.

Several additional tests were undertaken to provide further evidence on the research question. Firstly, we classify the frauds into 6 categories (e.g. false statement, a major failure to disclose information, illegal share buyback, a delay in disclosure, inflated earnings, and others) and re-runs the main model, results show that renaming companies are more likely to commit fraud related to information disclosure, such as delay in disclosure or none disclosure of information. Secondly, when observing the association between renaming and fraud in different years, this study finds that the association between corporate renaming behaviour and financial reporting fraud becomes insignificant in 2017. On September 30, 2016, the Shanghai Stock Exchange issued the “Index of Listed Companies Changing Securities Name”, which emphasised that the name of a listed company should be clear in meaning. Listed companies are not allowed to mislead investors by changing the name of the company. This result provides indirect evidence that the introduction of relevant renaming policies and regulations have weakened the relation between the renaming and financial reporting fraud. Thirdly, when the testing windows were extended, results show that renaming companies will commit financial fraud in the short term after they changed the corporate name, and the possibility to commit fraud will decline over the time. Fourthly, this study examines whether the companies change their name after they committed fraud. The results indicate that financial reporting fraud is positively associated with the subsequent corporate renaming behaviour. This result may suggest that the association between financial reporting fraud and corporate renaming may be confounded by the

endogenous nature. To address the endogeneity concerns, this study performs a two-stage Heckman test and the results confirm the main findings of this study. Finally, this study investigates whether the penalties imposed by CSRC would affect the corporate renaming behaviour among fraud companies. The results suggest that companies subject to CSRC penalties are more likely to change the company name subsequently.

Our paper contributes to the literature in several dimensions. First, this study expands the corporate renaming literature and is the first study empirically linking corporate renaming behaviour to financial reporting fraud. The extant studies on the corporate renaming focus on the market reactions (e.g. short-term and long-term share price reaction) to the corporate name changes (Brown and Clift, 2005; Baker and Wurgler, 2006; Lemmon and Portniaguina, 2006). However, the evidence of how corporate renaming impacts on fraudulent behaviour is limited. Thus, this study is motivated to fill the research gap by connecting two streams of literature on financial reporting fraud and corporate renaming behaviour.

Second, the studies on the financial reporting fraud and corporate renaming are mainly based on western countries. In contrast, this study focuses on the Chinese market because of its unique institutional setting. La Porta et al. (2002) and Durnev and Kim (2005) show that the legal environment of a country has a significant impact on company performance and corporate governance. China's legal enforcement and investor protection level is relatively weak, and the penalties imposed for financial

frauds tend to be much lower. Corporate insiders in China have greater opportunities to extract private benefits through a wide range of unethical behaviour at the expense of outside minority shareholders. Thus, these unique corporate governance characteristics and regulation deficiency in China provide a great opportunity to study financial fraud. It is documented that some other developing countries seem to have the similar institutional environment to that of China. Therefore, the findings of this paper are more generalisable to other emerging markets.

Finally, this study has important policy implications on corporate renaming regulation in the emerging markets. The results demonstrate that corporate renaming plays a critical role in increasing financial reporting fraud. Therefore, this research is timely and relevant as it provides a new “red flag” for the regulators to investigate financial fraud and promote the improvement, legislation and contentious development of the capital market.

The reminder of this thesis is structured as follows. In “literature review and hypotheses development” section, we discuss previous literature, and we develop testable hypotheses. We cover sample selection and defines the models and variables in “Research design” section, and in “Results” section, we report our results. Finally, “Conclusion” section concludes.

2. Literature review and hypotheses development

2.1 Corporate renaming and fraud

The most common reason for a corporate name change is a result of mergers and acquisitions. In these cases, the company changes its name to reflect a new ownership. For example, Muzellec and Lambkin (2009) find that company name changes often inform fundamental changes in the company's structure and business strategies arising from mergers and acquisitions. Second, a company may decide to change to a new corporate name because the company has entered a new line of business (Andrikopoulos et al., 2007) Third, Morris and Reyes (1992) suggest that a corporate name change may be a signal to the customers, competitors and investors about its improvement in the growth prospects of the company. If the corporate name is changed to serve as a credible signal, then the new corporate name could convey important insider information.

Despite all the costs and risks associated with corporate name changes, many companies decided to change their name because changing a corporate name can also bring substantial benefits. To date, most of the studies in the accounting and finance literature on corporate renaming investigate whether security prices react to corporate renaming behaviour. For example, Bosch and Hirschey (1989) study 79 U.S. companies that changed their names between 1979 and 1986. They find that although a positive market reaction to name change announcements is found, the effect is statistically weak, except for the companies having undergone major corporate restructuring. They argue that there is a positive (beneficial) effects of name change on stock price during the

announcement period. Mase (2009) argues that information about name changes should be important to investors and will generate abnormal return after the corporate renaming announcements. Results suggest that deleting an element from the company name is accompanied by a negative stock price change, while adding an element to the name leads to an increased stock price. Based on observations from the Hong Kong market, Kot (2011) demonstrates that investors respond positively to the corporate renaming behaviour due to mergers or acquisitions that have restricted or shifted the company's business. Name changes to provide charity or for reputational reasons generate no stock price reaction. On the contrary, in a study limited to Australian companies, Josev et al. (2004) find significant but negative abnormal returns within 21 days of the name change announcement. However, they limit the sample to those with self-defined "major" name changes. The authors argue that the significant change in corporate name is often perceived as negative information by investors.

Prior studies provide mixed results regarding the impact of corporate name changes on stock price reactions, probably due to the variation in the focus, sample, and methodology. The phenomenon of corporate renaming is common in China's A-share market. From 2010 to 2017, there are 1,306 listed companies that have changed their corporate name. Among these companies, there are 371 companies committed financial reporting fraud as disclosed by the CSRC, accounting for 28.41% of the observations. The major types of frauds include: false statement, a major failure to disclosure information, illegal share buybacks, delay disclosure and inflated earnings.

Prior literature identifies various contributing factors to financial reporting frauds. Some studies focus on the motivations of engaging in financial reporting fraud, including unsatisfactory financial performance, the pressure of meeting analyst forecasts, motivation from the compensation and incentive structures, and the pressure of external financing needs. For example, firstly, DeAngelo and DeAngelo (1990) and Beasley (1996) also show that if a company has accounting losses and negative cash flows for two consecutive years, such company is more likely to commit financial reporting fraud. Chu et al. (2016) show that earnings manipulators tend to be companies that have experienced strong past performance, but whose operating performances began to weaken. Secondly, meeting the analyst's forecasts is another performance-related incentive to engage in fraudulent financial reporting. Kaplan (2003) find that the difference between the financial analysts' predicted return and reporting earnings is positively related to the likelihood of financial reporting fraud. Results from Peng et al. (2011) show that 43% of financial fraud cases are related to meeting the external analyst forecasts. Thirdly, equity-based compensation (e.g. stock options) is a common motivation for misrepresentation of financial reporting. Stock options are associated with the probability to commit financial reporting fraud because the value of options granted to CEOs are directly influenced by stock prices (Burns and Kedia, 2006). Consistent with this view, Goldman and Slezak (2006) show that performance-based compensation can lead to misreporting behaviour. That is, the higher the correlation between CEO compensation and reported income, the more likely that CEO will adopt

discretionary accounting policies to boost the reported earnings, increasing the probability of financial frauds. Fourthly, another motivation for financial reporting fraud is to raise capitals on more favorable terms. Dechow et al. (1996) finds that, companies subject to Accounting and Auditing Enforcement Releases (AAERs), are in need of external financing during the period of which they commit financial reporting fraud. Burns and Kedia (2006) and Erickson et al. (2000) provide similar results that the need for external financing is positively associated with financial reporting frauds. In addition, some studies focus on how institutional characteristics (e.g. weak corporate governance and ownership structure) facilitate financial reporting fraud. Beasley (1996) finds that misconduct declines with directors' shareholdings and directors' tenure but increases with the number of outside directorships held, suggesting that independence of directors plays an important role in reducing financial reporting misconducts. Hazarika et al. (2012) find that companies with higher monitoring effectiveness are less likely to commit financial fraud. Results from Beasley et al. (2000) show that the likelihood of financial reporting fraud is lower in companies with an effective internal audit function.

This study extends the financial reporting fraud literature by investigating whether the corporate renaming is associated ('a red flag') with financial reporting fraud. Agency theory (Jensen and Meckling, 1976) suggests that the company is a nexus of contracts, which is essentially a large network of principal-agent relationships. Corporate information disclosure reflects the process and result of the multilateral game of

stakeholders and provides the basic information disclosed to stakeholders for their decision-making. However, during the process, there might be adverse selection and moral hazard problems arising due to incomplete contract and information asymmetry.

Among many disclosures announced by the company, corporate renaming is the most eye-catching information for investors. Changes in the corporate's name will give investors the most intuitive understanding of the area in which the company is developing, as well as the company's operations and future developments. It can be argued that if a corporate name change is a result of mergers and acquisitions, then consistent with the signaling theory, the new corporate name is to better reflect the ownership and changes in business operations. Therefore, the corporate name changes deliver 'decision-useful' information to the investors (Howe, 1982; Horskey and Swyngedouw, 1987; Muzellec and Lambkin, 2005; Mayo, 2013).

However, corporate renaming can also be used by management for manipulating purposes or even to commit fraud, especially in China where corporate renaming is not costly (Firth et al., 2005) and the governance and legal schemes are still insufficient in investor protection (Jiao et al., 2015). Previous research indicates that when a company changes its corporate name to a word that follows the current economic trend, the company can obtain excess returns in the short term, regardless of its real operating performance (Kashmiri and Mahajan, 2015; Morris and Reyes, 1992). Therefore, renaming becomes the 'opportunity' to boost the stock price. On the other hand, stock

price indicates a company's market performance (Huang, 2012; Tao, 2017). Management does have incentives to boost the company's stock price in various means (Chen, 2006; Dechow et al., 2011). The fraud triangle theory suggests that opportunities can facilitate the financial reporting frauds. Because corporate renaming can be used easily, and the governance scheme is not effective enough to deter the misuse of corporate renaming, management might take this 'opportunity' (country-level governance and regulation weakness) to misuse the means of corporate renaming to manipulate the company's capital market price. For example, the company used renaming effect to obtain excess returns in a short period of time, followed by a large sell of company's stocks to achieve illegal cash out when the stock price peaked. Accordingly, the first hypothesis is developed as follows:

H₁: Renaming companies are more likely to commit financial fraud than those non-renaming companies.

2.2 Ownership structure, corporate renaming, and financial reporting fraud

Chinese companies feature highly concentrated ownership (Chen et al., 2016). It is documented that more than half of Chinese listed companies are state-owned enterprises (SOEs), directly or indirectly owned by local or central government. State ownership in turn affects the information environment of listed companies, as well as the monitoring functions of the board and external investors (Gul et al., 2013).

Literature suggests that, compared to non-SOEs, SOEs are less incentivised to commit

financial fraud for a few reasons. Firstly, Chinese SOEs are governed by the State-owned Assets Supervision and Administration Commission (SASAC). To present the state ownership and public interests, SASAC appoints their representative directors in SOEs and evaluates their performance not only based on the economic performance of the company but also considering its social and public influence (Gul et al., 2013; Hass et al., 2016). Therefore, the balanced performance measurement scheme in SOEs has strengthened the awareness of social and public interests and has mitigated the overall corporate incentive to only pursue financial targets. Hence, SOEs are less incentivised to engage in financial reporting fraud to achieve financial targets.

Secondly, the disclosure of SOEs tends to be of higher quality and more transparent (Shleifer and Vishney, 1994). Gul et al. (2013) suggest that in the context of China, a company often enjoys better information environment when its largest shareholder is affiliated to the government. A more transparent information environment may result in a situation where management has little opportunities to commit financial fraud.

Thirdly, SOEs in China are subject to strict regulations and are expected to provide stronger investor protections. Hence the consequences of detected fraud are often much severe in SOEs than that in the non-SOEs. Hou and Moore (2010) argue that due to the political connections with the government, SOEs face monitoring and scrutiny not only from market regulators, but also from local governments and even central government. Chen et al. (2006) indicate that the consequences of committing fraud in SOEs could be more serious and sustained.

Fourthly, SOEs are less likely to be subject to extreme financial distress compared to non-SOEs. According to the fraud triangle theory (Cressey, 1973), financial distress¹ is one contributing factor for management to commit fraud (Burns and Kedia, 2006; Erickson et al., 2000; Huang et al., 2016). SOEs often receive financial support (known as ‘invisible hands’) from the government when they are financially distressed and are well supported by favorable regulatory policies (e.g. Tax breaks on certain products; lower interest rates on loans from state-owned banks). However, these financial resources and supports are not generally available for non-SOEs. Thus, non-SOEs can be more sensitive to the company’s financial goals and pressure.

Overall, this study argues that, without interests and pressure heavily aligned with the company’s financial target, SOEs have less incentives to employ corporate renaming as an opportunistic means of achieving financial targets and engaging in financial fraudulent activities. Instead, because of the benefits from a more transparent and regulated information environment in SOEs, SOEs may be more likely to use corporate renaming as a mechanism to communicate inside information about future aspect and operations of the company (e.g. mergers and acquisitions), reducing information asymmetry. On the other hand, renaming behaviour provides non-SOEs a possible channel to solve the long-term financial distress and to engage financial fraud for

¹ In China, if the listed companies reported a loss for two consecutive years, the companies will be marked ‘ST’ in front of the company abbreviation to be differentiated from other stocks. The stock exchanges take “special treatment” to warn the investors about risks of being delisted from the Chinese security exchange.

compensation and contracting (e.g. debt covenant) purposes. Based on the above arguments, the second hypothesis is presented as follows:

H₂: The association between corporate renaming and the likelihood of financial reporting fraud is not as strong in SOEs as that in non-SOEs.

2.3 Board power and risk of financial fraud from corporate renaming

The board of directors play an important role in corporate governance. The main responsibility of the board of directors is to develop the company's overall strategy, monitor the management performance and ensure that appropriate corporate governance structure, including environmental control, adequate disclosure and protections for the minority shareholders (Yermack, 1996; Bennedsen, 2008). The board is part of the highest corporate hierarchy in the company's organisational structure (Kim and Nofsinger, 2007) and is an important ingredient in solving agency problems within an organisation (Chen et al., 2006). The board of directors is a group of people who bear certain legal obligations to shareholders (Hermalin and Weisbach, 1991). They are expected to abide by the rules of business judgement and act with integrity for the best interests of the company and shareholders (Kim and Nofsinger, 2007).

Corporate renaming is a strategic decision made from the top of the organisation. For example, Chinese corporate law requires that the corporate name change must be voted at a general meeting (AGM) by board of directors (Zhang et al., 2016) where the decision making might be discretionarily influenced by the board's power in dealing

with corporate agency issues. The number of shares held by the board of directors often reflects the power of their rights. The higher the shareholding ratio of the board, the greater the decision-making power it has. Recent empirical studies suggest that the power of board of directors is associated with several of agency problems. For example, some studies find that, due to the abuse of power as a sign of corporate governance failure, powerful board of directors reduce managerial compensation efficiency (Faulkender and Yang, 2010; Bebchuck et al., 2011; Morse et al., 2011). Bebchuck et al. (2011) and Gabaix and Landier (2008) find that companies with powerful board are associated with lower profitability and corporate value. Moreover, some boards started to commit financial fraud to improve their values through accountants (Jensen and Meckling, 1976). In addition, studies indicate that a powerful board may gain a degree of autonomy due to lax internal governance mechanisms that leads to monitoring deficiencies in disciplining the board in case of management misconduct behaviour (Fogel, Ma and Morck, 2014). As a result, Khanna et al. (2015) conclude that board power arising from appointment decisions increases the likelihood of financial fraud scandals and reduces the detection of fraud.

Based on the above arguments, this study predicts that, within the corporate renaming context, companies with powerful board are more likely to utilise their power to lax the governance and monitoring schemes and participate in fraudulent activities through the corporate name changes, leading to the third hypotheses:

H₃: The association between corporate renaming and the likelihood of financial

reporting fraud is stronger in a company with a powerful board than that in a company with a less powerful board.

3. Research design

3.1 Data and sample

The China Stock Market and Accounting Research (CSMAR) database is employed to provide unique data on fraudulent cases and enforcement actions. This database is commonly used in previous research on corporate fraud (e.g., Wang et al., 2017; Chen et al., 2006; Firth et al., 2005). In this study, the data on financial fraud, financial information and corporate governance are all downloaded from CSMAR. In addition, corporate renaming data come from the Wind database.

The sample includes all listed companies in China's A-share market in an eight-year period from 2010 to 2017. The sample period commences from 2010 because this study attempts to reduce the impact of 2008 global financial crisis on the research results.

Table 1 shows the sample selection process. After merging all listed companies in Chinese A-share market as selected from CSMAR database with required financial and corporate governance data, and the renaming information from the Wind database, the sample starts with 21,990 company-years that have A-shares traded on the Shanghai and Shenzhen stock exchanges. There are 1,465 observations deleted because of insufficient data on test variables. In addition, this research further drops the *education* industry because there are less than 10 observations (N=9) in the

education industry with perfect multicollinearity presented in the sample. The final sample consists of 20,516 company-year observations. The sample selection procedure is outlined in Table 1.

[Insert Table 1 about here]

3.2 Research Method and Model

Hypotheses 1 (H₁) predicts that the likelihood of financial fraud is positively associated with the incidence of corporate renaming behaviour. In order to test H₁, this study estimates a logistic regression (Model 1 presented below) of fraudulent financial reporting on corporate renaming behaviour with a set of control variables documented to be related to the likelihood of fraud in prior literature (Cressey, 1950; Beasley, 1996; Chen et al., 2006; Wang et al., 2017). The purpose of this research is not to create a predictive model of fraud, so bias in the constant term has no effect on the analysis.

$$FRAUD = \beta_0 + \beta_1 RENAMING + \beta_2 DUAL + \beta_3 BOARDSIZE + \beta_4 OUTSIDE + \beta_5 ROE + \beta_6 LEV + \beta_7 AUDITINGOPINION + \beta_8 LISTINGPLACE + \beta_9 AGE + \beta_{10} LARGESTSHARE + \beta_{11} BIG4 + \beta_{12} SIZE + \beta_{13} ST + \delta INDUSTRY + \Phi YEAR \dots\dots\dots \text{Model (1)}$$

The dependent variable *FRAUD* is a dummy variable to measure financial reporting fraud, defined as 1 when the listed company is alleged to have experienced the financial fraud and 0 otherwise. It is argued that the impact of renaming on financial fraud can be concurrent in the same year or led to the subsequent year; therefore, the model is

estimated with the dependent variable $FRAUD_t$ and $FRAUD_{t+1}$ respectively in the tests.

RENAMING is the main variable of interest, coded as 1 if the company renames its corporate name during the year and 0 otherwise.

This study includes a series of control variables that are identified as determinants of financial reporting fraud. The first set of variables control for the corporate governance quality. Jensen (1976) argues that the CEO cannot duly perform the chairperson's monitoring role apart from his or her personal interests. He believes that it is important to separate the chairperson and CEO positions if the board is to be an effective monitoring device. Carcello and Nagy (2004) find a positive relationship between the financial fraud and CEO duality. Therefore, this study includes an indicator variable, *DUAL*, which equals 1 if the same person holds a dual position as the board chair and CEO of the company, and 0 otherwise. Prior research also finds that the likelihood of committing to financial fraud is positively related to the board size (Carcello and Nagy, 2004); thus *BOARDSIZE*, measured as the number of directors on the board, is controlled in the model. The frequency and severity of corporate frauds are affected by the supervisory efficiency of outside directors. Hu et al. (2010) find that independent directors play an effective role in the corporate governance of listed companies in China. Thus, *OUTSIDE* is included, representing the percentage of independent directors on the board. The percentage of shares held by the largest shareholder is also included (*LARSHARE*) in the regression because largest shareholder can effectively monitor a company and thus reduce the likelihood of fraud. Chen et al. (2006) contend that the

characteristics of the board are related to financial fraud. On the one hand, the concentrated ownership structure may cause the interests of minority shareholders to be encroached. On the other hand, the supervision of major shareholders will help improve the company's performance.

The second set of variables control for company characteristics. Basley et al. (1999) and Carcello and Nagy (2004) state that the likelihood of financial fraud is negatively associated with the company size, as fraud is more prevalent among smaller companies.

The company size (*SIZE*) is measured as the natural log of total assets. Previous studies find that companies with poor financial performances are more likely to commit financial fraud (Chen et al., 2006, Beasley, 1996). This study considers three financial indicators related to financial health and company performance: leverage (*LEV*), return on equity (*ROE*) and special treatment (*ST*). *LEV* is the financial leverage of the company measured as the total liabilities divided by total assets. *ROE* is the return on equity and indicates the company performance. *ST* is a dummy variable that equals to 1 if the listed companies is a special treatment² company and 0 otherwise. Further, this study includes *AGE* in the regression model, and it equals to the number of years a company's stock has been traded on the stock exchange. The listing place of the listed companies, *LISTINGPLACE*, is also controlled in Model (1). *LISTINGPLACE* is a dummy variable that equals to 1 if the company is listed on the shanghai stock exchange,

² ST stands for special treatment. In the event of financial issues or other abnormal conditions of listed companies that make investors unable to judge the future of the companies and may endanger the interest of investors, the Stock Exchanges shall take special treatment on these stocks.

and 0 otherwise.

The last two control variables are related to audit quality as audit quality is found to be associated with financial reporting fraud (Carcello and Nagy, 2004). Audit opinion (*AUDITOPINION*) is an indicator variable that equals 1 when an unmodified opinion is issued, and 0 otherwise. *BIG4* controls for the type of auditors used by the listed companies. Carcello and Nagy (2004) state that companies audited by the high-quality audit companies are less likely to commit financial reporting fraud. As such, this study uses the *BIG4* audit companies as a proxy for high-quality auditors. *BIG4* is an indicator variable that equals 1 while the auditor is from one of the big 4 auditors in China, and 0 otherwise.

Hypotheses 2 (H₂) predicts that the positive association between financial fraud and corporate renaming is more pronounced in *non-SOEs*. To test H₂, Model (2) is estimated by including *SOE* and *SOE*RENAMING* into Model (1).

$$FRAUD = \beta_0 + \beta_1 RENAMING + \beta_2 SOE + \beta_3 SOE*RENAMING + \beta_4 DUAL + \beta_5 BOARDSIZE + \beta_6 OUTSIDE + \beta_7 ROE + \beta_8 LEV + \beta_9 AUDITINGOPINION + \beta_{10} LISTINGPLACE + \beta_{11} AGE + \beta_{12} LARGESTSHARE + \beta_{13} BIG4 + \beta_{14} SIZE + \beta_{15} ST + \delta INDUSTRY + \Phi YEAR \dots \dots \dots \text{Model (2)}$$

SOE is a dummy variable that equals 1 if the company is a state-owned enterprise, and 0 otherwise. Prior studies find that *SOEs* are less like to commit financial fraud (e.g. Hou and Moore, 2010). As a result, this study predicts that the sign of *SOE* is negative.

All other variables are previously defined in Model (1). As predicted in H₂, the coefficient on the variable of interest, *SOE*RENAMING*, is expected to be negative.

Hypotheses 3 (H₃) predicts that the positive association between financial fraud and corporate renaming is more pronounced for companies with a more powerful board of directors. Model (3) is used to test H₃ by including *BOARDPOWER* and *BOARDPOWER*RENAMING* in Model (1).

$$\begin{aligned}
 FRAUD = & \beta_0 + \beta_1 RENAMING + \beta_2 BOARDPOWER + \beta_3 BOARDPOWER*RENAMING \\
 & + \beta_4 DUAL + \beta_5 BOARDSIZE + \beta_6 OUTSIDE + \beta_7 ROE + \beta_8 LEV + \\
 & \beta_9 AUDITINGOPINION + \beta_{10} LISTINGPLACE + \beta_{11} AGE + \beta_{12} LARGESTSHARE \\
 & + \beta_{13} BIG4 + \beta_{14} SIZE + \beta_{15} ST + \delta INDUSTRY + \Phi \\
 & YEAR \dots \dots \dots \text{Model (3)}
 \end{aligned}$$

BOARDPOWER is measured as the number of shares held by the board of directors. Previous studies find that powerful board increases the likelihood of financial fraud scandals and reduces the detection of fraud (Khanna et al., 2015). Therefore, this study predicts that the coefficient on the interaction variable *BOARDPOWER*RENAMING* is positive.

Year and industry fixed effects are controlled in Models (1) to (3). The standard errors are clustered by company in order to deal with potential heteroscedasticity or serial correlation. The definitions of variables are summarised in Table 2 below.

[Insert Table 2 about here]

4. Results

4.1 Descriptive statistics

Panel A of Table 3 shows the sample distribution of companies with financial fraud and corporate renaming in each year. It is noted that the percentage of sample companies that committed to financial fraud increased from 16.07 percent (N=316) in 2010 to 22.62 percent (N=550) in 2012, followed by a downward trend from 2013 to 2016. The lowest percentage of fraud (8.00 percent, N=266) is observed in 2017. The number of companies with renaming increases from 2010 to 2016. In 2010, there are 129 listed companies (6.56 percent) changed their corporate names, increasing to 218 companies (7.50 percent) with name changes in 2016. The number of corporate name changes decreases in 2017 to 189 companies (5.68 percent). This may be a result of the implementation of “Index of Listed Companies Changing Security Name” in 2016 that has put strict renaming requirements on listed companies in order to prevent companies using discretionary renaming practice to mislead investors.

The industry distribution³ is reported in Panel B of Table 3. Companies from the *Manufacturing* industry make up about 64 percent of the sample, and companies in *Wholesale and Retail Trade*, *IT* as well as *Real Estate* account for another 15 percent of observations. The remaining observations are evenly distributed across the other

³ The industry classification is based on the industry codes issued by the CSRC. As a result, the sample companies are classified into 18 industries.

industries with exceptions of *Public Administration and Defense* (0.09 percent) and *Human Health and Social Work* (0.17 percent). It is also noted from Table 3 Panel B that *Agriculture* industry reports the highest percentage (35.49 percent) to commit financial fraud. In addition, *Accommodation* industry reports the highest percentage (18.18 percent) to change corporate name between 2010 and 2017.

[Insert Table 3 about here]

Table 4 displays the descriptive statistics for all variables used in the regressions. The full sample comprises 20,516⁴ company-year observations for Chinese listed companies from 2010 to 2017. The mean $FRAUD_t$ is 0.1691, indicating that about 16.91 percent of listed companies during 2010 to 2017 are detected as fraud by the regulatory agencies. Similarly, the mean $FRAUD_{t+1}$ is 0.1776, indicating that about 17.76 percent of listed companies during 2011 to 2017 are detected as fraud. There are, on average, 6.37 (6.74) percent of total listed companies changed their corporate name (*RENAMING*) during the sample period 2010-2017 (2011-2017). The other two variables of interest are *SOE* and *BOARDPOWER*. The summary statistics shows that the average shareholding ratio by the board is 12.41 percent (*BOARDPOWER*). In addition, on average, there are 41.97 percent of total listed companies are state-owned enterprises (*SOE*).

In terms of corporate governance variables, the mean *DUAL* is 0.7373, suggesting that

⁴ The full sample size for the T+0 period (from 2010 to 2017) is 20,516 and the sample size for the T+1 period (from 2011 to 2017) is 17,011.

73.73 percent companies' CEO and board chair are the same person. In addition, the average number of directors on the board is 8.7349 (*BOARDSIZE*). The descriptive statistics also show that on average, 37.29 percent of directors on the board are independent directors (*OUTSIDE*). Furthermore, the average percentage of shares held by the largest shareholder is 35.33 percent (*LARGESHARE*). Regarding the company characteristics, the average size (natural log of total assets) of the listed companies is 22.0321, ranging from a minimum of 13.0760 to a maximum of 30.8148. The average mean *ROE* and *LEV* are 0.0667 and 0.4360 respectively, suggesting that most sample companies have a good financial performance during the sample period and these companies are not highly leveraged. Further, the mean *ST* is only 3.67 percent, suggesting that majority of companies perform well. The average number of years a company's stock has been traded on the Chinese securities exchange is 9.3494 years (*AGE*) and 61.09 percent of sample companies are listed on the Shanghai Stock Exchange. Finally, two variables are included in models to measure the audit quality of listed companies. During the sample period, only about 6 percent of listed companies used Big 4 auditors. The mean *AUDITOPINION* is 0.9614, showing that 96.14 percent of listed companies obtained an unmodified opinion during the sample period.

[Insert Table 4 about here]

4.2 Results of Correlations

Table 5 shows the Pearson correlations for the variables used in the regressions. The

dependent variable *FRAUD* is positively correlated with *RENAMING* ($r=0.080$, $p<0.01$), providing preliminary evidence that corporate renaming behaviour can increase the likelihood of a company committing financial fraud. It is shown that *FRAUD* is also positively correlated to the leverage ratio ($r=0.087$, $p<0.01$), the numbers of years a company's stock has been traded on a national securities exchange ($r=0.035$, $p<0.01$) and *ST* ($r=0.076$, $p<0.01$) suggesting that companies under pressure (e.g. special treatment companies because of consecutive losses for two years) are more likely to commit frauds. However, *FRAUD* is found to be negatively correlated with *BIG 4* ($r=-0.052$, $p<0.01$) and audit opinion ($r=-0.128$, $p<0.01$), which indicates that high quality auditors can reduce the likelihood of a company committing financial fraud. In addition, *FRAUD* is negatively correlated to the *ROE* ($r=-0.104$, $p<0.01$) and *SIZE* ($r=-0.062$, $p<0.01$), which may suggest that fraud is more prevalent among smaller companies and companies with good performance are less incentivized to engage in financial frauds.

Further, the independent variable *RENAMING* is positively correlated with *DUAL* ($r=0.014$, $p<0.05$), *LEV* ($r=0.126$, $p<0.01$), *ST* ($r=0.749$, $p<0.01$), and *AGE* ($r=0.153$, $p<0.01$). However, *RENAMING* is negatively correlated with the *BOARDSIZE* ($r=-0.025$, $p<0.01$), *ROE* ($r=-0.040$, $p<0.01$), *AUDITOPINION* ($r=-0.143$, $p<0.01$), *LARGESTSHARE* ($r=-0.056$, $p<0.01$), *BIG4* ($r=-0.033$, $p<0.01$) and *SIZE* ($r=-0.062$, $p<0.01$).

[Insert Table 5 about here]

4.3 Regression Results

4.3.1 Corporate renaming and financial reporting fraud

Model (1) of Table 6 reports the regression results from testing H_1 regarding the association between corporate renaming and financial reporting fraud. The results show that the coefficient on *RENAMING* is positive and significant at the 1 percent level, indicating that companies with renaming experience are more likely to commit financial fraud in the year of name change and the following year. This result is consistent with the prediction that corporate renaming can be used by management for manipulating purposes or even to committed fraud, especially in China where corporate renaming is not costly and the governance and legal schemes are still insufficient in investor protection. Thus, H_1 is supported.

Regarding the control variables, it can be seen that the coefficient for *LEV* is positive and significant, indicating that highly leveraged companies are more likely to create fraudulent financial reports. The coefficient for *ROE* is negative and statistically significant, consistent with the argument that companies with good financial performance are less like to commit financial fraud. These results are consistent with the prior studies (e.g. Chen et al., 2006; Zhang et al., 2017). In addition, the negative coefficient for *LARGESTSHARE* suggests that the likelihood of financial reporting fraud decreases with a greater number of shares held by the largest shareholders. The

coefficient for *BIG4* is significantly negative, suggesting that clients of the top four audit companies are less likely to commit fraud. In addition, the coefficient for *SIZE*, *AGE*, *BOARDSIZE*, *OUTSIDE*, *ST* and *LISTINGPLACE* are statistically insignificant .

4.3.2 Corporate renaming and financial fraud: the role of government ownership (SOE vs non-SOE)

Model (2) of Table 6 presents the regression results of estimating H₂. Results show that the coefficient for *RENAMING* continues to be positive and significantly significant at 1% level, as predicated. Notably, the coefficient for *SOE* is negative and significant, indicating that SOEs are less likely to commit financial fraud. More importantly, the coefficient for the variable of interest *SOE*RENAMING* is negative and significant ($P < 0.05$), suggesting that the probability of corporate renaming behaviour in increasing financial reporting fraud is lower for *SOE* than for *non-SOE*. Collectively, these analyses indicate that renaming behaviour provides non-SOEs possible channels to solve the long-term financial distress and to engage financial fraud for compensation and contracting (e.g. debt covenant) purposes because non-SOEs do not have the same financial support and resources as *SOEs* do when they are financial distressed. Therefore, H₂ is supported.

4.3.3 Corporate renaming and financial fraud: the moderating role of powerful directors

Model (3) of Table 6 presents the results of estimating H₃. Regression results continue to show that the coefficient for *RENAMING* is positive and significant, as predicted.

More importantly, consistent with H₃, it is shown that the coefficient for *BOARDPOWER*RENAMING* is significantly positive, suggesting that the impact of renaming behaviour on increasing financial reporting fraud is higher for a company with higher board power than that with lower board power. These results are consistent with the prior literature that board power increases the likelihood of financial fraud scandals and reduces the detection of fraud (e.g. Morse et al., 2011; Khanna et al., 2015). Therefore, H₃ is supported.

[Insert Table 6 about here]

4.4 Additional and robustness tests

4.4.1 The association between corporate renaming and different types of fraud

The CSRC is entrusted with the supervision and investigation of companies that commit financial fraud. Examples of financial fraud include embezzlement by company official or securities companies, the expropriation of assets, falsified financial statements, inadequate financial disclosures, and stock market manipulation. Panel A of Table 7 describes different types of financial fraud based on the CSRC enforcement actions. The enforcement actions by the CSRC are classified into six types: false statement, major failure to disclose information, illegal share buyback, delay in disclosure, inflated earnings, and others.

Panel B of Table 7 presents the results from the additional test that investigates the

association between corporate renaming behaviour and the different types of financial fraud. Columns labelled as Type (1) -(6) represent the regression results on each type of financial fraud respectively as the independent variables. *RENAMING* is positive and statistically significant at 1 percent level on (1) *False statements*, (2) *Failure to disclose information*, (4) *Delay in disclosure* and (6) *Others*. However, *RENAMING* is insignificantly associated with (3) *Illegal share buybacks* and (5) *Inflated earnings*. These results provide additional evidence that renaming companies are more likely to commit information-disclosure related frauds. Frauds including illegal buyback and inflating earnings require high level of professional knowledge and the cost to commit these types of fraud are relatively high. Comparatively, concealing or disclosing misleading information costs less. Thus, companies use less costly tool such as renaming to distract the public's attentions in order to hide information regarding their fraudulent activities.

[Insert table 7 about here]

4.4.2 The association between corporate renaming and fraud by year

Table 8 shows the results of the yearly logistic regression of *FRAUD* on *RENAMING*. *FRAUD* is positively associated with *RENAMING* between 2010 and 2016, consistent with the main results reported in the Table 6. However, for 2017, results show that *RENAMING* is not statistically significant, and the coefficient is comparatively smaller. It can be possible attributable to the recent regulatory intervention on corporate renaming practices that may have had a significant effect in deterring discretionary

renaming behaviour for fraudulent purposes. On September 30, 2016, the Shanghai Stock Exchange issued the “Index of Listed Companies Changing Securities Name” that required clear and business-relevant names in listed companies and prohibited listed companies from misleading investors by corporate name changes. In other words, company’s renaming behaviour should be derived from the actual needs of the business development, and should not be used for speculation, improper market value management and other illegal purposes. It is further required that if a company changes its name, it shall disclose the compliance and prompt risk. Overall, results reported in this section suggest that the implementation of the new policy has constrained the opportunities for using corporate renaming as a tool to engage in financial frauds. The new policy released in 2016 aims to regulate and control the artificial manipulation of stock prices by enterprises, and also improves the quality of accounting information disclosure (e.g. transparency of information).

[Insert Table 8 about here]

4.4.3 Extend testing windows

This additional test extends the testing window from $t+0$ to $t+3$ (three years after the change of the company name). Table 9 indicates that *RENAMING* is positively and significantly associated with $FRAUD_t$ and $FRAUD_{t+1}$, which supports H_1 , but insignificantly associated with $FRAUD_{t+2}$ and $FRAUD_{t+3}$. It seems that companies are easier to commit financial reporting fraud in the year of changing the company name and the following year, but not in the second and third year after the company’s name

has changed. These results provide interesting evidence that the likelihood of fraud commitment associated with corporate name change holds in the first two years when renaming occurs, but this effect fades afterwards.

[Insert Table 9 about here]

4.4.4 The financial fraud and subsequent renaming behaviour

This additional test examines whether the company will change their corporate name after they commit financial fraud. Results reported in Panel A of Table 10 show that *FRAUD* is positively and significantly associated with *RENAMING_t*, *RENAMING_{t+1}*, *RENAMING_{t+2}*, *RENAMING_{t+3}*, suggesting that the company may change the corporate name in the next three years after the company conducts financial fraud, consistent with impression management. That is, companies are more likely to change the company name to manipulate public perceptions to rebuild its market reputation. However, the results also rise an econometric issue that the relation between *FRAUD* and *RENAMING* may be confounded by the endogenous nature. The potential endogeneity issue is hence discussed in section 5.4.5.

Panel B of Table 10 introduces a new independent variable, *FRAUD declare year*, which equals to 1 if CSRC discloses company's financial fraud scandals in the year, and 0 otherwise. Renaming is a method to erase negative brand equity and image problems. At the same time, renaming can influence stakeholder's perception by a

radical revitalisation of the market aesthetics (Muzellec and Lambkin, 2006). When the company's financial fraud scandals were disclosed and announced by the CSRC, this could be a huge negative signal for stakeholders and the market. Companies may eliminate the negative effects by changing the corporate name. Results in Panel B of Table 5.10 show that *FRAUD disclosure year* is insignificantly associated with *RENAMING_t* and *RENAMING_{t+3}*. However, *FRAUD declare year* is positively and significantly associated with *RENAMING_{t+1}* and *RENAMING_{t+2}*. It suggests that although the company will not change its name in the year when the company's financial fraud is disclosed by the CSRC, the company will change its name in the near future.

Based on a subsample with all fraudulent companies that were disclosed by CSRC (N=3,223), Panel C of Table 10 further tests, after company's fraud behaviour is disclosed, whether the penalties imposed by the CSRC would affect the corporate renaming behaviour. A new independent variable *PUNISHMENT* is introduced to measure the CSRC's punishment. *PUNISHMENT* equals to 1 when CSRC announces certain punishments to the fraud companies, including fine, denounce, and confiscation of illegal gains; *PUNISHMENT* equals to 0 when CSRC only discloses company's fraudulent behaviour, but no actual punishment was given. Results in Panel C of Table 12 indicate that *PUNISHMENT* is positively and significantly associated with *RENAMING*. Companies subject to CSRC penalties are more likely to change their corporate name. This is because the punishment is often related to the severity of the

company's fraudulent behaviour, giving a negative impression on stakeholders and the security market. Therefore, these companies prefer to use the renaming behaviour subsequently to erase company's negative image after the punishments were taken.

[Insert table 10 about here]

4.4.5 Addressing potential endogeneity

As mentioned in Section 5.4.4, the association between company renaming behaviour and the fraud may be confounded by a potential endogenous nature. This study attempts to address the potential endogeneity issue by using a two-stage Heckman model. In the first stage, this study models *RENAMING* as a function of one instrumental variable (IV), *MERGE* (a dummy variable equals to 1 if the company has mergers and acquisitions; and 0 otherwise) and other explanatory variables. This is supported by Muzellec and Lambkin (2006) who consider that the changing in ownership structure should be a reason for corporate rebranding. Muzellec and Lambkin (2006) state that the change in the corporate name is driven by changes that have affected the company's structure and organization. As discussed in section 2, the merger and acquisition often reflect changes of company's ownership thus a corporate renaming is often the result of it.

In the second stage regression, Model (1) is re-estimated using the predicted value of *RENAMING* from the first stage regression. Ideally the instrument (*MERGE*) will be

correlated with the endogenous variable, *RENAMING*, and uncorrelated with the error term. Recognizing potential problems with the use of instruments, this study conducts a number of tests to evaluate the appropriateness of instrumental variable following Larcker and Rusticus (2010).

The coefficient of *MERGE* in the first stage is positive and significant as expected (untabulated), indicating that instrument variable (*MERGE*) and independent variable (*RENAMING*) are strongly correlated. In Table 11, results for the second-stage model show that *RENAMING* is positive and significant associated with *FRAUD*. While it is impossible to rule out the potential endogeneity issue, the results of the Heckman analyses is consistent with the main finding as reported in Table 6 that companies are more likely to commit financial fraud after changing the company name. In views of the main tests and the robust results from a battery of robustness tests, a conclusion can be reasonably made that in a less regulated environment like China, company's renaming behaviour is a 'red flag' for the regulators to investigate financial fraud.

[Insert Table 11 about here]

5. Conclusion

The quality of financial information is a major concern for investors, regulators, and capital market participants. However, due to the relatively weak legal and institutional environment, falsified financial information are not uncommon in China. The primary objective of this paper is to examine the association between corporate renaming

behaviour and financial reporting fraud in China.

Using a sample of listed companies in China during 2010-2017, this study finds that companies with renaming experience are more prone to commit financial fraud than companies without renaming experience. The positive association between corporate renaming and fraudulent financial reporting is less pronounced for SOEs than for non-SOEs. Reported results also suggest that the power of the board of directors positively moderates the association between company renaming behaviour and the likelihood of fraudulent financial reporting.

A battery of additional tests was undertaken to provide further evidence on the research question. First, this study classifies the financial fraud into 6 categories (e.g. false statement, a major failure to disclosure information, illegal share buyback, a delay in disclosure, inflated earnings, and others) and re-runs the main models. Results show that renaming companies are more likely to commit fraud related to information disclosure, such as delay in disclosure or non-disclosure of information. Second, when observing the association between renaming and fraud in different years, this study finds that the implementation of the new regulation “Index of Listed Companies Changing Security Name” in 2016 has weakened the association between the corporate renaming and financial reporting fraud. Third, when the testing windows were extended, results show that renaming companies will commit fraud in the short term (e.g. the year of renaming and the following year) after they changed the corporate name. Fourthly,

this study examines whether the companies change their name after they committed fraud. The results indicate that financial reporting fraud is positively associated with the subsequent corporate renaming behaviour. This result suggests that the association between financial reporting fraud and corporate renaming may be confounded by the endogenous nature. In order to address the endogeneity concerns, this study performs a two-stage Heckman test and the results are consistent with the main results. Finally, this study investigates whether the penalties imposed by CSRC would affect the corporate renaming behaviour among fraud companies. The results suggest that companies subject to CSRC penalties are more likely to change the company name subsequently.

This research contributes to the literature by presenting the first evidence that corporate renaming behaviour is closely associated with corporate fraud. The results from a battery of empirical tests indicate that corporate renaming might have been used by management as a less costly tool to manage corporate image and conceal corporate misconduct behaviour. It also suggests that corporate renaming can be viewed as a ‘red flag’ for detecting potential financial fraud in the market. Given the negative impact of financial fraud on capital market efficiency and the relatively weak institutional governance on investor protection in China, the findings from this study regarding the indicative role of renaming behaviour is of the interest to regulators and standard setters in shaping a better governed capital market and deterring financial frauds in the market. This study also finds evidence that the implementation of “Index of Listed Companies Changing Security Name” in 2016 has substantially eliminated the association between

renaming and financial fraud, suggesting the positive effect of enhanced regulation and market discipline on capital market efficiency.

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Table 1 Sample selection

Company-year observations that have A-shares trade on the stock exchanges in Shanghai and Shenzhen from 2010 to 2017	21,990
Less: the following observations	
Missing financial statement data	-1,465
The number of observations in the education industry	-9
Number of company-years in the full sample	20,516

Table 2 Variable definition and measurement

Variables	Measures
<i>FRAUD</i>	A dummy variable that equals to 1 when the listed company is alleged to have experienced financial fraud, and 0 otherwise.
<i>RENAMING</i>	A dummy variable that equals to 1 if the company renames its corporate name during the year, and 0 otherwise.
<i>BOARDPOWER</i>	The number of shares held by the board of directors.
<i>SOE</i>	A dummy variable that takes the value of 1 if a company is state-owned, and 0 otherwise.
<i>DUAL</i>	A dummy variable that takes the value of 1 if the CEO also serves as the board chairperson and 0 otherwise.
<i>BOARDSIZE</i>	The number of directors on the board.
<i>OUTSIDE</i>	The percentage of independent directors on the board.
<i>ROE</i>	Return on equity.
<i>LEV</i>	Financial leverage ratio measured as total liabilities over total assets.
<i>AUDITINGOPINION</i>	A dummy variable that equals to 1 when an unmodified opinion is issued, and 0 otherwise.
<i>LISTINGPLACE</i>	A dummy variable that equals to 1 if the company is listed on the Shanghai stock exchange, and 0 otherwise.
<i>AGE</i>	The number of years a company's stock has been traded on the stock exchange.
<i>LARGESTSHARE</i>	The percentage of shares held by the largest shareholder.
<i>BIG4</i>	A dummy variable that equals to 1 when the company is audited by a Big4 audit company, and 0 otherwise.
<i>SIZE</i>	The log of total assets.
<i>ST</i>	A dummy variable that equals to 1 if the listed companies is a special treatment company, and 0 otherwise.

Table 3 Sample distributions

Panel A: by year

Year	Freq.	Percent	Number of observations with fraud	Percent	Number of observations with renaming	Percent
2010	1,967	9.59%	316	16.07%	129	6.56%
2011	2,265	11.04%	465	20.53%	139	6.14%
2012	2,431	11.85%	550	22.62%	139	5.72%
2013	2,403	11.71%	501	20.85%	143	5.95%
2014	2,508	12.22%	445	17.74%	153	6.10%
2015	2,709	13.20%	527	19.45%	196	7.24%
2016	2,906	14.16%	401	13.80%	218	7.50%
2017	3,327	16.22%	266	8.00%	189	5.68%
Total	20,516	100%	3,471	16.92%	1,306	6.37%

Panel B: by industry

Industry	Freq.	Percent	Number of observations with fraud	Percent	Number of observations with renaming	Percent
<i>Agriculture</i>	324	1.58%	115	35.49%	41	12.65%
<i>Mining</i>	523	2.55%	127	24.28%	53	10.13%
<i>Manufacturing</i>	13,101	63.83%	3,543	27.04%	1,118	8.53%
<i>Power, gas and water</i>	646	3.15%	89	13.78%	41	6.35%
<i>Construction</i>	524	2.55%	133	25.38%	35	6.68%
<i>Wholesale and retail trade</i>	1,128	5.50%	245	21.72%	81	7.18%
<i>Transportation</i>	633	3.09%	65	10.27%	24	3.79%
<i>Accommodation</i>	88	0.43%	29	32.95%	16	18.18%
<i>IT</i>	1,156	5.63%	306	26.47%	75	6.49%
<i>Financial and insurance</i>	305	1.49%	60	19.67%	14	4.59%
<i>Real estate</i>	991	4.83%	223	22.50%	107	10.80%
<i>Leasing</i>	225	1.10%	47	20.89%	14	6.22%
<i>Professional, scientific and technical</i>	144	0.70%	14	9.72%	8	5.56%
<i>Administrative and support service</i>	198	0.97%	46	23.23%	15	7.58%
<i>Public administration and defense</i>	19	0.09%	2	10.53%	1	5.26%
<i>Human health and social work</i>	35	0.17%	3	8.57%	2	5.71%
<i>Arts, entertainment and recreation</i>	233	1.14%	33	14.16%	33	14.16%
<i>Others</i>	243	1.18%	69	28.40%	40	16.46%
Total	20,516	100%				

Table 4 Summary statistics

Variable	Obs	Mean	Media	25%	75%	Std. Dev.	Min	Max
<i>FRAUD_t</i>	20,516	0.1691	0	0	0	0.3749	0	1
<i>RENAMING_t</i>	20,516	0.0637	0	0	0	0.2442	0	1
<i>FRAUD_{t+1}</i>	17,011	0.1776	0	0	0	0.3822	0	1
<i>RENAMING_{t+1}</i>	17,011	0.0674	0	0	0	0.2507	0	1
<i>BOARDPOWER</i>	20,516	0.1241	0.0005	0	0.2197	0.1962	0	0.6753
<i>SOE</i>	20,516	0.4197	0	0	1	0.4935	0	1
<i>DUAL</i>	20,516	0.7373	1	0	1	0.4401	0	1
<i>BOARDSIZE</i>	20,516	8.7349	9	7	9	1.8196	3	22
<i>OUTSIDE</i>	20,516	0.3729	0.3333	0.3333	0.4286	0.0549	0.1250	0.8000
<i>ROE</i>	20,516	0.0667	0.0720	0.0317	0.1133	0.1181	-0.8496	0.6421
<i>LEV</i>	20,516	0.4360	0.4210	0.2509	0.6024	0.2351	0.0262	2.2581
<i>AUDITOPINION</i>	20,516	0.9614	1	1	1	0.1926	0	1
<i>AGE</i>	20,516	9.3494	8	3	15	6.9446	0	27
<i>LARGESTSHARE</i>	20,525	0.3533	0.3332	0.2347	0.4533	0.1516	0.0220	0.8999
<i>BIG4</i>	20,516	0.0592	0	0	0	0.2360	0	1
<i>SIZE</i>	20,516	22.032	21.830	21.051	22.764	1.4538	13.076	30.814
<i>ST</i>	20,516	0.0367	0	0	0	0.1881	0	1
<i>LISTINGPLACE</i>	20,516	0.6109	1	0	1	0.4876	0	1

All the variables are defined in Table 2.

Table 5 Correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
<i>(1) FRAUD</i>	1.000															
<i>(2) FRAUD T+1</i>	0.399***	1.000														
<i>(3) RENAMING</i>	0.080***	0.060***	1.000													
<i>(4) RENAMING T+1</i>	0.073***	0.085***	0.240***	1.000												
<i>(5) DUAL</i>	-0.016**	-0.026***	0.014**	0.019**	1.000											
<i>(6) BOARDSIZE</i>	-0.013**	-0.013*	-0.025***	-0.038***	0.178***	1.000										
<i>(7) OUTSIDE</i>	-0.006	-0.019	-0.001	0.003	-0.103***	-0.435***	1.000									
<i>(8) ROE</i>	-0.104***	-0.087***	-0.040***	-0.116***	-0.016**	0.033***	-0.014**	1.000								
<i>(9) LEV</i>	0.087***	0.076***	0.126***	0.137***	0.157***	0.191***	-0.014**	-0.107***	1.000							
<i>(10) AUDITOPINION</i>	-0.128***	-0.143***	-0.143***	-0.150***	-0.008	-0.005	0.010	0.137***	-0.173***	1.000						
<i>(11) AGE</i>	0.035***	0.015**	0.153***	0.134***	0.236***	0.102***	-0.033***	-0.086***	0.395***	-0.136***	1.000					
<i>(12) LARGESTSHARE</i>	-0.084***	-0.078***	-0.056***	-0.074***	0.045***	0.020***	0.050***	0.100***	0.025***	0.096***	-0.086***	1.000				
<i>(13) BIG 4</i>	-0.052***	-0.059***	-0.033***	-0.036***	0.078***	0.185***	0.031***	0.069***	0.145***	0.033***	0.060***	0.135***	1.000			
<i>(14) SIZE</i>	-0.062***	-0.072***	-0.062***	-0.102***	0.183***	0.351***	-0.010	0.100***	0.427***	0.098***	0.269***	0.228***	0.429***	1.000		
<i>(15) ST</i>	0.076***	0.064***	0.749***	0.315***	0.021***	-0.023**	-0.004	-0.058***	0.157***	-0.166***	0.151***	-0.052***	-0.032***	-0.105***	1.000	
<i>(16) LISTINGPLACE</i>	0.003	-0.007	-0.025***	-0.026***	-0.180***	-0.157***	0.027***	0.001	-0.261***	0.037***	-0.320***	-0.117***	-0.164***	-0.284***	-0.049***	1.00

All the continuous variables are winsorized at 1% and 99% to mitigate the effect of outliers. All the variables are defined in Table 2.

*Significant at the 10% level, using two-tailed tests.

**Significant at the 5% level, using two-tailed tests.

***Significant at the 1% level, using two-tailed test.

Table (6) Corporate renaming, the moderation role of government ownership, the moderation role of powerful directors, and financial reporting fraud

Variable	Dependent Variable: <i>FRAUD</i>											
	Model (1)				Model (2)				Model (3)			
	<i>FRAUD_t</i>		<i>FRAUD_{t+1}</i>		<i>FRAUD_t</i>		<i>FRAUD_{t+1}</i>		<i>FRAUD_t</i>		<i>FRAUD_{t+1}</i>	
	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-	Coef.	z-stat.
<i>RENAMING</i>	0.520***	5.05	0.363***	3	0.481***	4.35	0.291**	2.29	0.301***	2.39	0.243*	1.73
<i>SOE</i>					-0.291***	-3.94	-0.297***	-3.92				
<i>SOE*RENAMING</i>					-0.443**	-1.97	-0.246***	-1.02				
<i>BOARDPOWER</i>									-0.094	-0.57	0.89	0.56
<i>BOARDPOWER *RENAMING</i>									1.897***	3.45	1.082*	1.91
<i>DUAL</i>	-0.145**	-2.44	-0.178***	-2.83	-0.106*	-1.79	-0.141**	-2.23	-0.142**	-2.35	-0.171***	-2.69
<i>BOARDSIZE</i>	-0.027	-1.44	-0.031	-1.56	-0.016	-0.86	-0.02	-1.02	-0.027	-1.47	-0.029	-1.53
<i>OUTSIDE</i>	-0.47	-0.86	-1.082*	-1.89	-0.436	-0.79	-1.058*	-1.85	-0.462	-0.84	-1.091*	-1.91
<i>ROE</i>	-	-7.04	-1.029***	-5.52	-1.268***	-7.5	-1.102***	-5.89	-1.195***	-7.1	-1.039***	-5.58
<i>LEV</i>	0.782***	5.46	0.631***	4.22	0.792***	5.47	0.644***	4.25	0.776***	5.41	0.636***	4.24
<i>AUDITOPINION</i>	-	-7.72	-1.030***	-8.68	-0.818***	-7.58	-1.012***	-8.53	-0.841***	-7.78	-1.033***	-8.69
<i>AGE</i>	0.001	0.23	-0.007	-1.17	0.009	1.58	0.001	0.23	0	0.16	-0.005	-0.79
<i>LARGESTSHARE</i>	-	-6.05	-1.078***	-5.34	-1.059***	-5.26	-0.951***	-4.65	-1.189***	-5.97	-1.057***	-5.22
<i>BIG4</i>	-0.550**	-3.4	-0.666***	-3.93	-0.528***	-3.29	-0.646***	-3.78	-0.547***	-3.44	-0.662***	-3.9
<i>SIZE</i>	-0.046	-1.7	-0.038	-1.33	-0.03	-1.12	-0.022	-0.77	-0.048*	-1.79	-0.039	-1.36
<i>ST</i>	-0.149	-1	-0.139	-0.84	-0.099	-0.64	-0.099	-0.58	0.009	0.05	-0.052	-0.3
<i>LISTINGPLACE</i>	0.003	0.05	-0.083	-1.18	-0.022	-0.33	-0.108	-1.55	0.004	0.07	-0.889	-1.26
Industry and year dummies	YES		YES		YES		YES		YES		YES	
N	20,516		17,011		20,516		17,011		20,516		17,011	
Pseudo R ²	0.0594		0.0562		0.0619		0.0584		0.0602		0.0565	

The z-statistics are based on robust standard error clustered by company (Petersen, 2009). All the variables are defined in Table 2. *Significant at the 10% level, using two-tailed tests.

Significant at the 5% level, using two-tailed tests. *Significant at the 1% level, using two-tailed tests.

Table 7 Corporate renaming and different types of fraud

Panel A: Description of fraud types	
<i>False statement</i>	A false statement refers to an act of misleading statements of important events and improper disclosure of information during the issue or trading of securities.
<i>Major failure to disclose information</i>	A major failure disclosure is that the information disclosure obligor does not fully record the matters in the information disclosure document, or only partly disclose information.
<i>Illegal share buybacks</i>	Illegal share buybacks refer to the illegal repurchasing of share of stock by the company that issued them.
<i>Delay in disclosure</i>	A delay in disclosure means failure to disclose important information that should be disclosed to the public within the prescribed time, and the violation of the principle of timeliness.
<i>Inflated earnings</i>	Inflated earnings refer to exaggerate current period earnings on the income statement by artificially inflating revenue and gains, or by deflating current period expenses. This approach makes the financial condition of the company look better than it actually is in order to meet established expectations.
<i>Others</i>	Other acts that violate the provisions of the Security Act, such as the fabrication of assets, the unauthorized change of fund usages.

Panel B: corporate renaming and different types of fraud												
Variables	Dependent variable: Types of financial reporting fraud											
	(1) False Statement		(2) Failure of Disclosure		(3) Illegal Share Buybacks		(4) Delay in Disclosure		(5) Inflated Earnings		(6) Others	
	coef.	z-stat	coef.	z-stat	coef.	z-stat	coef.	z-stat	coef.	z-stat	coef.	z-stat
<i>RENAMING</i>	0.447***	2.35	0.608**	4.02	0.101	0.46	0.451***	3.13	-0.020	-0.04	0.494***	4.16
<i>DUAL</i>	-0.215*	-1.70	-0.191*	-1.94	0.038	0.37	-0.231***	-2.65	-0.162	-0.63	-0.141**	-1.96
<i>BOARDSIZE</i>	-0.049	-1.27	-0.059**	-2.05	0.035	1.12	-0.088***	-2.71	0.000	-0.01	-0.034	-1.58
<i>OUTSIDE</i>	-1.747	-1.56	-0.415	-0.49	0.771	0.78	-0.967	-1.14	-1.814	-0.65	0.175	0.27
<i>ROE</i>	-1.339***	-5.35	-0.998***	-4.65	-0.181	-0.55	-1.036***	-5.21	-1.899***	-5.07	-1.167***	-6.10
<i>LEV</i>	0.421**	2.01	0.587***	3.27	0.379*	1.80	0.999***	5.60	-0.094	-0.24	0.624***	4.08
<i>AUDITOPINION</i>	-1.326***	-7.83	-1.090***	-7.71	-0.005	-0.02	-1.014***	-7.90	-2.389***	-9.52	-0.757***	-6.28
<i>AGE</i>	-0.004	-0.40	0.012	1.41	-0.016	-1.73	0.019**	2.51	-0.008	-0.36	0.002	0.33
<i>LARGESTSHARE</i>	-1.549***	-3.71	-1.316***	-4.15	-1.764	-5.31	-0.840***	-2.79	-0.419	-0.41	-1.072***	-4.41
<i>BIG4</i>	-0.219	-0.63	-0.952***	-2.71	-0.593**	-2.26	-0.664**	-2.48	-0.408	-0.51	-0.607***	-3.05
<i>SIZE</i>	-0.047	-0.95	0.197	0.51	-0.075*	-1.65	-0.024	-0.68	-0.005	-0.05	-0.003	-0.11
<i>ST</i>	0.125	0.50	-0.387*	-1.82	-0.503	-1.51	-0.107	-0.53	0.123	0.22	-0.185	-1.13
<i>LISTINGPLACE</i>	0.182	1.40	-0.0036	-0.35	0.410***	3.44	-0.150	-1.55	-0.331	-1.28	-0.044	-0.55
<i>Industry and year dummies</i>	YES		YES		YES		YES		YES		YES	
N	20,481		20,516		20,497		20,481		18,082		20,497	
Pseudo R²	0.0798		0.0714		0.0388		0.0688		0.1357		0.0584	

The z-statistics are based on robust standard error clustered by company (Petersen, 2009). All the variables are defined in Table 2. *Significant at the 10% level, using two-tailed tests.

Significant at the 5% level, using two-tailed tests. *Significant at the 1% level, using two-tailed test.

Table 8 Corporate renaming and financial reporting fraud by year

Variable	Dependent Variable: $FRAUD_i$															
	2010		2011		2012		2013		2014		2015		2016		2017	
	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-stat.
<i>RENAMING</i>	0.422*	0.68	0.609***	1.65	0.740**	1.83	0.492*	1.33	0.756***	2.80	0.444**	2.09	0.792***	3.47	0.152	0.40
<i>DUAL</i>	0.148	0.90	-0.092	-0.72	-0.239**	-2.03	-0.076	-0.61	-0.168	-1.30	-0.122	-1.04	-0.345***	-2.67	0.072	0.46
<i>BOARDSIZE</i>	-0.012	-0.29	-0.015	-0.40	-0.069	-1.98	-0.037	-0.98	-0.048	-1.21	-0.037	-0.99	0.002	0.04	-0.013	-0.25
<i>OUTSIDE</i>	-0.390	-0.29	1.134	1.06	-0.672	-0.67	-0.875	-0.77	-0.053	-0.04	0.882	0.81	-3.374**	-2.51	-1.245	-0.77
<i>ROE</i>	-0.531	-0.95	-0.955***	-2.64	-2.083***	-4.18	-0.750	-1.75	-0.800*	-1.92	-0.782**	-2.32	-1.918***	-3.96	-1.715***	-2.84
<i>LEV</i>	0.624***	2.85	0.763***	2.93	1.302***	4.39	1.356***	4.26	1.175***	3.74	1.349***	4.38	0.849**	2.50	1.533***	3.94
<i>AUDITOPINION</i>	-0.236	-0.74	-0.229	-0.73	-1.349***	-5.54	-1.272***	-5.40	-1.212	-4.93	-0.938	-4.07	-0.908***	-4.11	-0.317	-1.05
<i>AGE</i>	-0.007	-0.54	-0.008	-0.72	-0.042***	-3.97	-0.017	-1.59	0.003	0.33	0.015*	1.74	0.024***	2.60	0.005	0.42
<i>LARGESTSHARE</i>	-1.920***	-4.17	-0.478	-1.26	-1.298***	-3.61	-1.041	-2.71	-1.818***	-4.50	-0.948**	-2.49	-1.640***	-3.59	-1.755***	-3.25
<i>BIG4</i>	-0.100	-0.27	-0.488	-1.50	-0.474	-1.61	-0.689*	-1.93	-0.714**	-2.19	-0.402	-1.44	-0.465	-1.48	-1.000*	-2.18
<i>SIZE</i>	-0.122**	-2.10	-0.061	-1.10	-0.048	-0.87	-0.141**	-2.40	-0.038	-0.72	-0.113**	-2.16	-0.050	-0.92	-0.018	-0.28
<i>ST</i>	0.098	0.14	-0.307	-0.70	-0.422	-0.88	-0.590	-1.29	-0.423	-1.05	0.091	0.26	0.240	0.74	0.920**	2.03
<i>LISTINGPLACE</i>	0.415***	2.77	0.584***	4.48	0.133	1.06	0.123***	0.99	-0.185	-1.48	-0.239**	-2.09	-0.476***	-3.77	-0.490***	-3.53
<i>Industry and year dummies</i>	YES		YES		YES		YES		YES		YES		YES		YES	
N	1,949		2,262		2,428		2,400		2,488		2,689		2,906		3,327	
Pseudo R²	0.0455		0.0367		0.0636		0.0543		0.0672		0.0599		0.0891		0.0646	

The z-statistics are based on robust standard error clustered by company (Petersen, 2009). All the variables are defined in Table 2 *Significant at the 10% level, using two-tailed tests.

Significant at the 5% level, using two-tailed tests. *Significant at the 1% level, using two-tailed tests.

Table 9 Corporate renaming and financial reporting fraud: extended testing windows

Variable	Dependent Variable: <i>FRAUD</i>							
	<i>FRAUD_t</i>		<i>FRAUD_{t+1}</i>		<i>FRAUD_{t+2}</i>		<i>FRAUD_{t+3}</i>	
	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-stat.
<i>RENAMING</i>	0.520***	5.05	0.363***	3.00	0.020	0.12	0.248	1.38
<i>DUAL</i>	-0.145**	-2.44	-0.178***	-2.83	-0.143**	-2.04	-0.127	-1.58
<i>BOARDSIZE</i>	-0.027	-1.44	-0.031	-1.56	-0.028	-1.28	-0.021	-0.90
<i>OUTSIDE</i>	-0.470	-0.86	-1.082*	-1.89	-1.183*	-1.90	-0.760	-1.06
<i>ROE</i>	-1.188***	-7.04	-1.030***	-5.52	-1.002***	-5.24	-0.685***	-3.26
<i>LEV</i>	0.782***	5.46	0.631***	4.22	0.569***	3.67	0.636***	3.71
<i>AUDITOPINION</i>	-0.835***	-7.72	-1.030***	-8.68	-0.759***	-5.49	-0.452***	-2.86
<i>ST</i>	-0.149	-1.00	-0.139	-0.84	0.228	1.13	-0.112	-0.52
<i>AGE</i>	0.001	0.23	-0.007	-1.17	-0.006	-0.87	0.000	0.04
<i>LARGESTSHARE</i>	-1.200***	-6.05	-1.078***	-5.34	-1.033***	-4.73	-1.059***	-4.31
<i>BIG4</i>	-0.550***	-3.46	-0.666***	-3.93	-0.734***	-3.74	-0.673***	-3.13
<i>SIZE</i>	-0.046*	-1.70*	-0.038	-1.33	-0.061**	-2.00	-0.110***	-3.31
<i>LISTINGPLACE</i>	0.003	0.05	-0.083	-1.18	-0.198***	-2.57	-0.245***	-2.85
<i>Industry and year dummies</i>	YES		YES		YES		YES	
N	20,516		17,011		13,852		11,037	
Pseudo R²	0.0594		0.0562		0.0502		0.0493	

The z-statistics are based on robust standard error clustered by company (Petersen, 2009). All the variables are defined in Table 2 *Significant at the 10% level, using two-tailed tests. **Significant at the 5% level, using two-tailed tests. ***Significant at the 1% level, using two-tailed tests.

Table 10 Financial reporting fraud and subsequent corporate renaming behaviour

Panel A: Financial reporting fraud and subsequent corporate renaming behaviour								
Variable	Dependent Variable: <i>RENAMING</i>							
	<i>RENAMING_t</i>		<i>RENAMING_{t+1}</i>		<i>RENAMING_{t+2}</i>		<i>RENAMING_{t+3}</i>	
	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-stat.
<i>FRAUD</i>	0.533***	5.03	0.264***	3.39	0.208**	2.40	0.257***	2.74
<i>DUAL</i>	-0.113	-1.11	0.130	1.57	0.067	0.74	0.084	0.86
<i>BOARDSIZE</i>	-0.064**	-2.00	-0.044*	-1.75	-0.022	-0.80	-0.033	-1.03
<i>OUTSIDE</i>	-1.520	-1.61	-0.293	-0.40	-0.033	-0.04	0.300	0.35
<i>ROE</i>	0.985**	2.05	-1.073***	-4.22	-3.485***	-11.58	-2.084***	-8.24
<i>LEV</i>	-0.307	-1.07	1.298***	7.90	1.207***	5.82	0.888***	4.79
<i>AUDITOPINION</i>	-0.516***	-2.70	-0.249*	-1.70	-0.810***	-5.27	-1.228***	-8.08
<i>ST</i>			2.090**	19.27	0.713***	4.77	0.653***	4.17
<i>AGE</i>	0.050***	7.01	0.055***	8.70	0.043***	5.54	0.034***	4.06
<i>LARGESTSHARE</i>	-0.599*	-1.81	-0.407	-1.62	-0.359	-1.24	-0.274	-0.92
<i>BIG4</i>	-0.485**	-2.06	-0.067	-0.32	0.026	0.11	-0.249	-0.91
<i>SIZE</i>	0.172***	3.69	-0.271***	-8.21	-0.330***	-8.25	-0.225***	-5.44
<i>LISTINGPLACE</i>	0.432***	4.45	0.096	1.31	0.126	1.41	0.184*	1.89
<i>Industry and year dummies</i>	YES		YES		YES		YES	
N	19,753		16,992		13,813		11,003	
Pseudo R²	0.0553		0.1689		0.1694		0.1208	

Panel B: Financial reporting fraud declaration and subsequent corporate renaming behaviour								
Variable	Dependent Variable: <i>RENAMING</i>							
	<i>RENAMING_t</i>		<i>RENAMING_{t+1}</i>		<i>RENAMING_{t+2}</i>		<i>RENAMING_{t+3}</i>	
	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-stat.	Coef.	z-stat.
<i>FRAUD declare year</i>	0.133	1.10	0.212**	2.41	0.178**	1.78	-0.018	-0.15
<i>DUAL</i>	-0.127	-1.24	0.120	1.45	0.059	0.66	0.074	0.76
<i>BOARDSIZE</i>	-0.066**	-2.06	-0.045*	-1.77	-0.024	-0.83	-0.036	-1.13
<i>OUTSIDE</i>	-1.557	-1.63	-0.307	-0.42	-0.045	-0.06	0.258	0.30
<i>ROE</i>	0.870*	1.84	-1.099***	-4.29	-3.504***	-11.60	-2.119***	-8.28
<i>LEV</i>	-0.228	-0.81	1.288***	7.82	1.204***	5.76	0.911***	4.80
<i>AUDITOPINION</i>	-0.604	-3.14	-0.268*	-1.83	-0.829***	-5.37	-1.285***	-8.39
<i>ST</i>			2.093**	19.36	0.715***	4.78	0.661***	4.22
<i>AGE</i>	0.050***	7.00	0.055***	8.72	0.043***	5.54	0.033***	3.95
<i>LARGESTSHARE</i>	-0.683**	-2.05	-0.432*	-1.72	-0.378	-1.30	-0.338	-1.13
<i>BIG4</i>	-0.509**	-2.16	-0.074	-0.35	0.021	0.09	-0.271	-0.98
<i>SIZE</i>	0.164***	3.59	-0.271***	-8.17	-0.329***	-8.18	-0.223***	-5.38
<i>LISTINGPLACE</i>	0.419***	4.32	0.095	1.30	0.127	1.41	0.194**	1.99
<i>Industry and year dummies</i>	YES		YES		YES		YES	
N	19,753		16,992		13,813		11,003	
Pseudo R²	0.0509		0.1682		0.169		0.1194	

Panel C: Financial reporting fraud declaration and subsequent corporate renaming behaviour

Variable	Dependent Variable: <i>RENAMING</i>	
	Coef.	z-stat.
<i>PUNISHMENT</i>	0.459**	1.99
<i>DUAL</i>	-0.261	-1.34
<i>BOARDSIZE</i>	-0.110	-1.51
<i>OUTSIDE</i>	-2.539	-1.40
<i>ROE</i>	1.474	1.43
<i>LEV</i>	-1.408***	-3.02
<i>AUDITOPINION</i>	-0.613**	-2.01
<i>ST</i>		
<i>AGE</i>	0.049***	3.05
<i>LARGESTSHARE</i>	-0.974	-1.33
<i>BIG4</i>	-0.876	-1.04
<i>SIZE</i>	0.202***	2.29
<i>LISTINGPLACE</i>	0.588***	2.78
<i>Industry and year dummies</i>	YES	
N	3,223⁵	
Pseudo R²	0.0982	

The z-statistics are based on robust standard error clustered by company (Petersen, 2009). All the variables are defined in Table 2. *Significant at the 10% level, using two-tailed tests. **Significant at the 5% level, using two-tailed tests. ***Significant at the 1% level, using two-tailed tests.

⁵ Because of collinearity, STATA dropped 248 observations during the regression.

Table 11 Corporate renaming and financial reporting fraud: Heckman Test

Variable	Dependent	Variable:
	<i>FRAUD</i>	
	Coef.	z-stat.
<i>RENAMING</i>	1.564***	5.78
<i>DUAL</i>	-0.008	-1.02
<i>BOARDSIZE</i>	0.004*	1.73
<i>OUTSIDE</i>	0.038	0.59
<i>ROE</i>	-0.242***	-8.98
<i>LEV</i>	0.169***	10.38
<i>AUDITOPINION</i>	-0.133***	-7.47
<i>ST</i>	-1.442***	-5.50
<i>AGE</i>	-0.003***	-4.48
<i>LARGESTSHARE</i>	-0.097***	-4.40
<i>BIG4</i>	-0.015	-0.99
<i>SIZE</i>	-0.023***	-7.00
<i>LISTINGPLACE</i>	-0.019**	-2.45
<i>Industry and year dummies</i>	YES	
N	20,525	
Inverse Mills Ratio	0.153***	-1.50
Predicted value of Instrument Variable (Merge) in the first stage	0.307***	10.88

The z-statistics are based on robust standard error clustered by company (Petersen, 2009). All the variables are defined in Table 2. *Significant at the 10% level, using two-tailed tests. **Significant at the 5% level, using two-tailed tests. ***Significant at the 1% level, using two-tailed tests.