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**Citation for published version:**

Chen, J, Cumming, D, Hou, W & Lee, E 2013, 'Executive Integrity, Audit Opinion, and Fraud in Chinese Listed Firms' *Emerging Markets Review*, vol 15, pp. 72-91. DOI: 10.1016/j.ememar.2012.12.003

**Digital Object Identifier (DOI):**

[10.1016/j.ememar.2012.12.003](https://doi.org/10.1016/j.ememar.2012.12.003)

**Link:**

[Link to publication record in Edinburgh Research Explorer](#)

**Document Version:**

Peer reviewed version

**Published In:**

*Emerging Markets Review*

**Publisher Rights Statement:**

© Chen, J., Cumming, D., Hou, W., & Lee, E. (2013). Executive Integrity, Audit Opinion, and Fraud in Chinese Listed Firms. *Emerging Markets Review*, 15, 72-91. 10.1016/j.ememar.2012.12.003

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# Executive Integrity, Audit Opinion, and Fraud in Chinese Listed Firms<sup>☆</sup>

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## Abstract

We examine the influence of auditors on corporate fraud in China. We find lower executive integrity firms are associated with higher propensity of regulatory enforcement actions against corporate fraud in the subsequent year. We then show that this effect is moderated by the issuance of modified audit opinion report by the auditors. This finding implies that auditors can serve an early warning role to discourage low integrity executives from engaging in corporate fraud. Our results have policy implications for further strengthening auditor independence in emerging countries like China.

JEL classification: G15; G30; K22; M41

Keywords: Integrity, auditor, earnings management, fraud, China

*Emerging Markets Review, Forthcoming*

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## 1. Introduction

We examine whether auditors contribute to corporate fraud deterrence in China. Over the past decade, a string of high profile corporate frauds and scandals have affected investor confidence and financial market stability in Western developed economies. Corporate fraud have serious consequences to stakeholders, employees, and the wider society (e.g. Szwajkowski, 1985; Davidson and Worrell, 1988; Zahra et al., 2005). For emerging countries like China, widespread corporate fraud can impede its aspiring economic development. Therefore, understanding what determines and deters corporate fraud in emerging economies are interesting research questions that deserves attention. China is especially relevant for these issues since it is currently a leading emerging country with rising prominence in world economy. However, existing literature on corporate fraud in China has so far focused extensively on the internal governance mechanisms (e.g. Chen et al., 2006; Jia et al., 2009; Hou and Moore, 2010; Ding et al. 2010) and provided less attention to external governance mechanism such as that of auditors. Financial statements provide crucial information to outside investors to facilitate their assessment of firms' future cash flow prospects and discount rates. Auditors serve the important role maintaining the credibility of financial statements information to ensure that they are true and fair reflection of firms' performance. As a transitional economy, China is assumed to have weak legal enforcement and investor protection. Since these institutional features are common in other emerging markets, our study has wider implications to other developing economies.

Erhard et al. (2009) define integrity as "a state or condition for being whole, complete, unbroken, unimpaired, sound, perfect condition". They distinguish integrity for an individual as being solely a matter of that person's word, and for a group or organizational entity as

being comprised solely of what is said by or on behalf of the group or organization. They argue that for these entities to have integrity, they must honor their words. Jensen et al., (2004) suggests some areas in finance theory and practice where integrity is lacking and one of this is financial reporting choices made to manage what the “street” expects and to give the street what it expects. They suggest that managers are motivated to do so because the reactions of investors to management performance play a crucial role in determination of a firm’s stock prices and capital acquisition ability, and therefore competitiveness. They argue that “managing earnings” amounts to lying to shareholders which managers have fiduciary responsibility, and taking actions that are anything other than those required to maximize the long-run value of the firm. Based on these intuitions, the degree in which firms manage their earnings can serve as an empirically observable proxy of executive integrity. Dikolli et al. (2012) provide empirical evidence of association between managerial integrity and earnings management. They measure CEO integrity based on employee surveys and annual shareholder letter. They find CEO integrity measure is positively related to earnings quality measured by accruals.

Corporate fraud is defined as the deliberate actions of management to deceive, swindle, or cheat investors or other stakeholders (Zahra et al., 2005). Existing literature suggest both internal and external determinants of corporate fraud. Some of the internal factors includes top management (e.g. Baucus, 1994; Ashforth and Anand, 2003), organization culture (e.g. McKendall and Wanger, 1997), and board composition (e.g. Dunn, 2004). Some of the external factors includes regulatory condition (e.g. Hou and Moore, 2010), environmental hostility (e.g. Baucus and Baucus, 1997), environmental dynamism (e.g. Hansen et al., 1996), industry cultures (e.g. Baucus and Near, 1991), industry concentration (e.g. McKendall and Wanger, 1997). Black (2005) classifies corporate fraud into opportunistic and reactive. The

former occurs when executives seize an opportunity for further gain by manipulating disclosure and the latter occurs when executives responds to declining firm performance by window dressing financial statements. In terms of fraud deterrence, the literature largely focuses on internal corporate governance mechanisms. For instance, board independence, the existence of an audit committee, and the presence of accounting and banking professionals on the committee have been found to decrease the incidence of fraudulent activities (see Beasley, 1996; Dechow et al., 1996; Beasley et al., 2000; Uzun et al., 2004). Denis et al. (2006) show that option intensity in CEO remuneration encourages risk taking and induces fraud, while Erickson et al. (2006) show that the exercise of executive options and sales of executive stocks are not significantly higher for fraudulent firms. External governance mechanisms such as investors, employees analysts, auditors, media, and regulators are relatively less examined in the literature. Among them, Dyck et al. (2010) provide evidence that investors and auditors contribute less to fraud detection in the US than employees, media and industry regulators.

China provides interesting setting to examine the efficacy of deterrence mechanisms against due to its institutional settings as a transitional economy. Compared to Western developed countries, China known to have weak legal enforcement and shareholder protection (Allen et al., 2005) as well as tight control of media (Besley and Prat, 2006) and labor unions. As a result, external governance mechanisms are expected to be less effective compared to internal governance mechanisms. Indeed, studies of fraud deterrence in China have so far also largely focus on internal governance mechanisms and reconfirm inferences of studies based on Western developed countries. For instance, lower corporate fraud propensity is documented among firms with more independent directors (Chen et al., 2006) and larger supervisory board (Jia et al., 2009). Thus, there is also limited study on the role and efficacy of external

fraud deterrence in China given its institutional background. Although such environment limits the power of investors, media, and employees, there is no explicit reason to believe that auditors cannot play their role as external deterrence mechanism against corporate fraud. In fact, we expect the contribution of auditors as fraud deterrence to be greater in China relative to Western developed countries where investors, media, and employees are more active.

Auditors play an important role in maintaining the credibility of financial statements issued by firms. Positive accounting theory (Watts and Zimmerman, 1990) stipulates that managers have the incentives to manipulate financial statements whenever contracts or regulations are based on accounting numbers. Financial statements are an important source of information to investors for securities valuation before they commit their capital and for monitoring purposes after they commit their capital. Therefore, auditor helps curb the motive of managers to window dress their performance and uphold the interest of outside investors due to their information disadvantage. The contribution of auditor to facilitate capital acquisition (Johnson and Lys, 1990) and reduction of information asymmetry (Datar et al., 1991) is more pronounced in weaker than stronger legal environments (Choi and Wong, 2007). Therefore, the value of auditors is expected to be high in China since due to the weak legal enforcement and shareholder protection.

Given the above discussion on managerial integrity, corporate fraud, Chinese setting, and auditors, we formulate our testable research hypotheses. First, we predict firms with lower managerial integrity are more likely to instigate corporate fraud. Second, auditors are more likely to detect financial statement problems among firms with lower managerial integrity. Finally, auditors are able to reduce the propensity of corporate fraud among firms with lower managerial integrity. To test these assertions, we apply a sample of Chinese listed firms over

the period of 2001 to 2008. We identify corporate fraud cases based on enforcement actions by Chinese Securities Regulatory Commission (CRSC), which is the main regulator of Chinese stock market. We measure managerial integrity based on earnings management proxies as non-operating income relative to sales. We capture the effect of auditors through the issuance of modified audit opinion against financial statements issued by firms. Our empirical findings are consistent with all three aforementioned predictions. Our results are robust to control of firm characteristics, governance variables, as well as industry and region fixed effects.

The main policy implications of our study is that in emerging countries like China, where external governance mechanisms are likely to be relatively weaker due to institutional background, it would be beneficial to strengthen the quality and independence of auditors. Government initiatives could be established to enhance the auditor profession through improved training and acquiring expertise from abroad. By increasing the credibility of financial statement information, the efficiency financial resource allocation in the capital market can be enhanced, and this in turn benefits economic development and growth. In terms of connection to other papers in the literature on this topic, our study complements other existing studies on auditor issues in China. Previous studies provide evidence that Chinese firms avoid more independent auditors (DeFond et al., 2000), and this effect is found to be more pronounced in less developed regions (Wang et al., 2008). These findings that Chinese firms opportunistically dodge the scrutiny of auditors in less developed regions can be interpreted as evidence that auditors are recognized as an influential external governance mechanism that outside investors in weak legal environment depend upon. Our findings essentially substantiate this conjecture. One potential limitation of our study the way managerial integrity is measured in our research design. Dikolli et al. (2012) suggest that it is

very difficult to come up with an empirical measure that captures the concept of “honoring one’s words”. Critiques may also argue that the earnings management we apply is only an indirect measure. For instance, it cannot distinguish between the integrity effects of the executives collectively or of the CEO, which perhaps matters more.<sup>2</sup>

This paper proceeds as follows. Section 2 reviews the literature and develops the hypotheses. The research design and sample data are introduced in Section 3. Section 4 reports and discusses the empirical findings and Section 5 concludes the paper.

## **2. Literature Review and Hypothesis Development**

### **2.1. Fraud and Executive Integrity**

Various board characteristics have been identified in the literature as the major determinants of fraud. For example, board independence, an audit committee, and directors with accounting and financial backgrounds help enhance the monitoring quality of the board (Beasley, 1996; Dechow et al., 1996; Beasley et al., 2000; Uzun et al., 2004; Chen et al., 2006; Firth et al., 2011). Jia et al. (2009) and Ding et al. (2010) find that the supervisory board in China has been found to only react passively to regulatory enforcement against fraud by increasing the meeting frequencies rather than deterring the occurrence of fraud *ex ante*. Regard the role of institutional blockholders, Hou et al. (2012b) document the effect of mutual fund ownership in reducing corporate fraud activities, especially among privatized Chinese listed firms. Hou and Moore (2010) show that the ownership of state shareholder in China aggregates agency problems in partially privatized firms, but brings about favorable regulatory conditions by playing down the inspection severity in state-controlled firms. For the effect of external governance mechanism, Cumming et al. (2011) show that in addition to

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<sup>2</sup> We thank the Editor for suggesting this.



the role of whistle blower discussed in Dyck et al. (2010), analysts can effectively deter fraud among the Chinese listed firms.

Although any good governance mechanisms still need to be implemented or coordinated by the executives and management continues to be seen as a major corporate governance actor, the role of executive integrity has been largely ignored. Cohen et al (2010) suggest that personality traits appear to be a major fraud-risk factor. Since CEOs are able to impose impediments to information flow to other board members, Nowak and McCabe (2003) point out that management integrity is central to the effectiveness of monitoring and control of the board. By summarizing a series of his recent works (Fuller and Jensen, 2002, Jensen et al., 2004, Erhard et al., 2007 and Jensen and Walking, 2010), Jensen (2011) advocates that integrity is essential for workability and thus becomes a necessary (but not sufficient) condition for value maximization. Instead of referring to a moral or ethical code, Jensen (2011) defines integrity as “keeping one’s commitment and promises on time, or acknowledging the failure and cleaning up the messy when one have failed to keep a commitment or promise”.

Regard the current financial crisis, Jensen and Walking, (2010) and Jensen (2011) further conjecture that agency problems might be only half of the story and the other missing half would be about integrity. The public also has serious concern about some executive integrity. For example, the protesters of the recent Occupy Wall Street campaign begun in late 2011 were against their insatiable greed. This went well beyond financial corporations and the United States. In China, the lack of integrity is also blamed by some minority shareholders as

the one of the major reason for the slumping stock market in China<sup>3</sup>. As a response to the public concern, the China Securities Regulatory Commission (CSRC) recently promulgated the first regulation about integrity named “*Interim Measures for the Supervision and Administration of Integrity in the Securities and Futures Markets*” which has been effective on 1<sup>st</sup> Sep 2012. The regulation implements an integrity track record for executives, board members as well as the employees of key service providers (e.g. underwriters, law firms, securities companies, IT service provider and public relations firms etc.)

Although integrity is valuable in both material and non-material terms (Bradford, 2007), when the potential gains for violation are believed to be greater than the reputational costs in the event the violation is detected, reputational concerns shrink. Jensen et al. (2004) and Jensen (2011) list some important areas where integrity is lacking such as usage of backdating of options, recommendations of overvalued stocks, and more importantly, earnings management in order to give the “street” what it expects. Graham et al. (2005) interviewed and surveyed more than 400 executives and find managers do want to meet or beat earnings benchmark, especially analyst consensus forecasts. 78% of surveyed executives admit to sacrificing long-term value to smooth earnings. Degorege et al. (1999) provides empirical evidence that executives act in self-interests to manage earnings in order to exceed 3 thresholds, namely reporting positive profits, sustaining recent performance and meeting analyst expectation.

Jensen (2011) regard earnings management as lying since it erodes integrity and destroys long-run value. Gleason and Mills (2008) provide evidence that the market discounts stock price for firms with managed earnings, and such discounts reflect information uncertainty.

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<sup>3</sup> “Slumping stock market is due to the lack of integrity” in *Yangcheng Evening News* on 12 Sep 2012. Link: [http://money.ycwb.com/2012-09/02/content\\_3941475.htm](http://money.ycwb.com/2012-09/02/content_3941475.htm) (in Chinese)

Louis (2004) attributes the post-merger underperformance anomaly to the pre-merger earnings management. Teoh et al. (1998b) and DuCharme et al. (2011) shows firms with extensive earnings management prior to IPOs or in IPO year tend to experience poor stock performance in the following three years. Yu et al. (2006) indicate that Chinese firms actively engaged in earnings management to meet the minimal ROE (return-on-equity) requirements to have rights issues. Rangan (1998) and Teoh et al. (1998a) find that earnings management around the year of seasoned equity offerings explains a portion of the subsequent lower stock and earnings performance. In addition, Skinner and Sloan (2002) show that compare to value stocks, growth stocks which enjoy overly optimistic expectations about future earnings experience sharper subsequent price decline when expectations are not met. This implies that the wealth of existing shareholders are “torpedoed” when the executive manage earnings to meet and inflate the expectation of the investors and analysts.

These empirical evidence reinforces Jensen (2011)’s assertion that earnings management amounts to lying to the investors to whom managers have a fiduciary responsibility and signals a breakdown in integrity. Therefore, we will apply earnings management to proxy the lack of integrity in this study. This will enable us to empirically examine the role of integrity in fraud occurrence and value maximization, in particular, whether the lack of integrity is an antecedent of fraud.

Some impediments of integrity have been identified in the literature. Jensen et al. (2004) note that the integrity problem cannot be handled by executive remuneration and the commonly used budget-based bonus and promotion systems instead motivate poor integrity. Since executives are rewarded in terms of compensation or promotion if they achieve the operating targets set in their contracts, Jensen (2003) point out that these budget-based systems reward

people for lying, and and punish them for telling the truth. The executive stock and option schemes have been also found to stimulate earnings management in that executives with high equity incentives are more likely to sell shares in the future and this motivates executives to engage in earnings management to increase the price of the shares to be sold (Cheng and Warfield, 2005, and Bergstresser and Philippon, 2006). Rost (2007) argues that the increasing trend to fill CEO openings through external hires in the external labor market also discourages executives from investing in integrity and encourages them to invest in networking, since a common past between a person and a firm downgrades their promotion prospects.

Attributes to promote integrity have also been discussed. The Sarbanes–Oxley Act has been found to significantly expand the responsibility of auditors and management. Cohen et al. (2010a) find that the requirement such as the executive certification of financial statements helps to improve integrity because it mandates the involvement of the managers. Graham et al. (2005) show that executives in the post-Sarbanes–Oxley environment become more reluctant to manage earnings. Li et al. (2008) document positive abnormal return around the SOX events among the firms which heavily manage earnings suggesting that the more extensively firms had managed earnings, the more SOX (Sarbanes–Oxley) would constrain earnings management, and positive abnormal return around the SOX event among these firms. Klein (2002), Kizirian et al. (2005), Martin (2007) and Cohen et al. (2011) find that both auditors and audit committees play an important role in assessing and ensuring integrity. Under Section 404 of the Sarbanes–Oxley Act, auditors are required to assess management integrity and issue an adverse internal control report noting any material weaknesses in internal control (Kizirian et al. 2005).

Although various factors encourage or discourage integrity, Fuller and Jensen (2002) point out that human choice is critical. Executives with the lack of integrity tend to ignore policies and procedures to pursue self-interests at the costs of other investors, and therefore unethical decisions and fraudulent behaviors are more likely to flourish among them. Jensen (2011) points out that the lack of executive integrity can hold back the workability in an organisation in that any theoretically sound governance mechanisms still need to be implemented or coordinated by the executives. Kizirian et al. (2005) believe the auditor's assessment of management integrity provides an indirect measure of management's attitude toward fraud. We therefore hypothesises the following

*H1: The lack of executive integrity is positively related to the incidence of fraud.*

## **2.2. Auditor and Executive Integrity**

The role of auditor in the assessment and assurance of executive integrity has been discussed in the literature. Martin (2007) indicates the demand and challenges for auditors to assess the integrity and ethical values of clients and suggests the view of ethical infrastructures to be used. Nelson et al. (2002) emphasise audit function in thwarting earnings management attempts. To evaluating the potential for unethical behaviour associated with fraud, Cohen et al. (2010) suggest that auditors should better integrate the managers' personalities. Audit effects and audit quality have been found important. Caramanis and Lennox (2008) show that audit effect reflected by audit hours can decrease the extent to which executives are able to manage earnings. Becker et al. (1998) find that the clients of Big 6 auditors tend to manage earnings to a lesser extent compare to the clients of other auditors, and Carey and Simnett (2006) show that the deterioration in audit quality associated with long period of audit partner tenure is positively related to the earnings management.

Since audit independence is essential for the auditors' function (Xiang, 1998), studies of Chinese auditing issues largely focus on this. DeAngelo (1981), Yang et al. (2003) and Krishnan et al. (1996) regard modified audit opinion (MAO) as a proxy for auditor independence. Until 1990s, audit independence in China was a big concern because auditors played the role of agents of the state audit bureau and bore little economic responsibility for their improper auditing actions, such as pleasing their clients or pursuing their own interests. (DeFond et al., 2000; Yang et al., 2001). In addition, the shortage of qualified accountants and auditors also held back the development of professional auditing (Xiao, 2000). Since then, a set of reforms has helped improve audit independence in China. DeFond et al. (2000) find that new auditing standards promulgated in 1995 which prescribed detailed auditing procedures has made auditors less likely to succumb to management pressure in issuing clean opinions when modified options are appropriate. A program launched in 1997 aimed to further enhance audit independence operationally by disaffiliating CPA firms from their sponsoring body and make them financially and operationally independent. Yang et al., 2001 document that the number (percentage) of modified aud increased from four to 152 (2.20% to 18%) following the reform because partners became liable for their auditing practices and profits are also retained within the firm for distribution among partners in disaffiliated firms.

These studies were conducted at the market level. For the determinants of audit opinion at the firm level in China, DeFond et al. (2000) find that clients receiving modified audit opinions tend to be those with poor operating performance, lower current ratios, and larger size, and the auditors issuing more modified opinions tend to be larger auditors and joint venture auditors. Firth et al. (2007) argue audit opinion also reflects the informativeness of earnings and find that private firms and firms with a larger supervisory board and a greater percentage

of independent directors are more likely to receive clean audit opinions. Firth et al. (2011a) show that auditors tend to issue qualified audit opinions for firms that incur financial restatements as a rational response to the increased audit risk. Firth et al. (2011b) note that the organizational form of audit firms can affect their opinion: A partnership firm (limited liability firm) has more (less) wealth at risk and larger (smaller) risk and liability exposure, and therefore tends to issue qualified (clean) audit opinions.

Since the executives with lower levels of integrity have higher preliminary risk assessments (Kizirian et al., 2005) and Chen et al. (2001) provide empirical evidence that earnings management for meeting the regulatory profitability requirements increases the frequency of receiving modified audit opinion (MAO) in China, we argue that executives with the lack of integrity are less likely to give a true and fair view in financial statements that complies with relevant regulations and requirements. We thereby hypothesize the following

*H2: The lack of executive integrity is associated with a higher incidence of modified audit opinion.*

### **2.3. Auditor and Fraud Prevention**

Academics, investors, and policy makers focus on the role of auditors as fraud whistleblowers, capable of and responsible for detecting and reporting fraudulent activities. Dyck et al. (2010) document that auditors account for 10% of detected fraud, which is larger than the figure from the regulatory commission (7%) and smaller than that from employees (17%), non-financial market regulators (13%), and the media (13%). On the one hand, auditors who blow the whistle are more likely to lose the accounts of the fraud-committing

firms; on the other hand, if they fail to report fraud, the regulatory commission imposes administrative sanctions in the form of warnings, fines, and the withdrawal of auditors' licenses. Yang et al. (2001) show that the number of administrative sanctions against auditors increased from 100 to about 500 during 1994–1997. During the sample period 1996–2002 of Firth et al. (2005), 72 auditors, which are less competent and independent, are sanctioned by the regulatory commission for failing to identify material misstatement frauds from listed companies (e.g., revenue-related frauds).

We argue that auditors can intervene in the process in which the lack of integrity is developed into serious fraudulent activities by issuing modified audit opinion (MAO). Chen et al. (2000) document that MAO could lead to negative cumulative abnormal returns showing it MAO is interpreted by the market as bad news about the company, and the MAOs attract a lot of attention from the investors and the media presumably because of the lack of competing information sources in China. Haw et al. (2003) show that in addition to the pricing effect, MAOs could delay the annual earnings announcement. Such delay may further build up the suspicions and concern from the investors. Therefore, we argue that the increased attention brought by MAOs can put executives under closer scrutiny of the investors, media and the board and allow fewer chances for executives with poor integrity to commit fraud. On the contrary, if executives with the lack of integrity do not incur MAO as a warning from auditors, the poor integrity could further deteriorate into more serious malpractice. We thereby hypothesize the following

*H3: Modified audit opinion helps deter executives with the lack of integrity from committing fraud.*



### 3. Sample and Research Design

There are two categories of audit opinions in China: standard unqualified opinions and nonstandard ones. Standard unqualified opinions are issued when a financial statement is true and free from material misstatements, whereas the nonstandard ones are issued when audit firms identify some problem therein (See Yang et al. 2001). The nonstandard opinion is also known as modified audit opinion (MAO) which refers to both qualified opinions and unqualified opinions with explanatory notes in China. Chen et al. (2000) indicate that the latter serves as an alternative form of a qualified opinion in China, and no significant difference in market reaction is documented between the qualified opinions and unqualified opinions with explanatory notes. The data of modified audit opinions are mainly from China Securities Market & Accounting Research (GTA/CSMAR). We include all Chinese listed firms in Shanghai and Shenzhen stock exchanges (excluding firms listed in ChiNext board, the China's second board market for small and medium enterprises launched in 2009, and B-stocks which are denoted in Hong Kong or US dollars). The final observation is 10,317 firm-year. The sample covers the period from 2001 to 2008, because most of the corporate governance variables used in this paper are only available since 2001. In addition, the sample of corporate fraud is from the China Center for Economic Research (CCER). Both databases are commonly used in studies of the Chinese capital market.

To empirically test the predictions in H1, we apply the following logistic regression model

$$Fraud_{t+1} = \alpha_0 + \alpha_1 EM_t + \sum_{k=1}^k \alpha_{k+1} Control_{k,t} + Year + Industry + Region + \varepsilon \quad (1)$$

where *Fraud* is a one-year led dummy variable that is equal to one if the firm is subject to regulatory enforcement against fraud, and zero otherwise. It is worth to notice that to what

extend the detected fraud could proxy the committed fraud depends on the inspection severity. Hou and Moore (2010) show that the inspection severity in China has been substantially improved as a result of regulatory reform: the state-controlled firms became much less likely to enjoy favourable regulatory conditions. This finding helps us to justify the proxy in that firms tend to experience indifferent inspection severity.

Following the intuition of Jensen (2011), the lack of integrity is proxied by two earnings management measures. The variable *EM* is the ratio of non-operating income relative to sales (Bertrand et al., 2002). It is estimated on yearly basis. Chen and Yuan (2004), Jian and Wong (2004), and Ding et al. (2007) argue that this variable is superior to accruals for measuring earnings management in China for two reasons. First, related-party transactions are commonly observed in China, making it easy for firms to use non-core operating income to manipulate earnings. Second, Jian and Wong (2004) and Ding et al. (2007) add that China's traditionally tax-oriented accounting system makes firms unlikely to adjust their earnings via non-cash accruals. Ding et al. (2007) further show that the significant correlation between the ratio of non-operating income to sales and discretionary accruals is as large as 0.5. To account for industry traits, we propose another measure for robustness checks, namely *DEM*, a dummy variable equal to 1 if *EM* is equal to or above the median value of *EM* from the firms within the same industry in the same year, and 0 otherwise. The industry is classified based on the first two digits of the Global Industry Classification Standard (GICS) codes. The dummy variable *DEM* is also estimated yearly. To support the Hypothesis 1, we need observe significantly positive coefficients of *EM* and *DEM*.

A set of control variables is incorporated to control for the effects of firm characteristics, performance, and corporate governance, including the natural logarithm of market

capitalization (*Size*), the price-to-book ratio (*PB*), a dummy variable of delisting risk (*ST* is equal to one if a listed firm experiences at least two consecutive year losses and labelled as Special Treatment by the regulatory commission in the Chinese stock market, and zero otherwise), analyst following (*Analysts* is obtained as the natural logarithm of result of one plus the number of analysts who write reports on the firm), fund ownership (*Fund* is the number of shares held by open- and closed-end funds relative to the total number of shares), the number of restricted shares relative to the total number of shares (*Restricted*), the Herfindahl index of the 10 largest firm blockholders (*Ownership*), a dummy variable of duality (*Duality* is equal to one if the CEO also holds the position of board chair, and zero otherwise), a dummy variable for board meeting frequency (*Meeting* is equal to one if the number of board meetings is above the median value of yearly observations, and zero otherwise), a dummy variable of board size (*Bosize* is equal to one if the number of board members is above the median value of yearly observations, and zero otherwise), a dummy variable of board independence (*Indep* is equal to one if the ratio of independent directors is above the median value of yearly observations, and zero otherwise), and a dummy variable for supervisory board size (*Supsize* is equal to one if the number of supervisory board members is above the median value of yearly observations, and zero otherwise). Regional and industry effects are also controlled for. Corporate fraud, industry codes, delisting risk (*ST*), the ratio of restricted to total shares (*Restricted*), and ownership concentration (*Ownership*) data are from the China Center for Economic Research (CCER), and the rest of the variables are constructed based on data from China Securities Market & Accounting Research (GTA/CSMAR). Most of the control variables in the list have been empirically tested in the literature. Board meeting frequency (*Meeting*) and ownership concentration (*Ownership*) have been found to be negatively related to the fraud incidence, whereas the delisting risk (*ST*) to be positively related (Hou and Moore, 2010). The restricted shares ratio

(*Restricted*) is incorporate to capture the impact of the institutional shareholders (mainly state shareholders and its agencies) in China. Hou et al. (2012a) find that restricted shares in China deteriorate the information environment presumably because restricted shareholders have greater incentives to conceal their self-serving deeds.

Following Firth et al. (2006), firms are grouped into four regions based on levels of economic development to construct the regional dummy variables: (1) firms located in Shanghai and Shenzhen, (2) firms located in more developed areas, including the open cities and provinces along the coast, (3) firms located in the inland provinces, and (4) firms located in the least developed area, in the northwestern part of the country. The industry dummy variables are constructed based on the first two digits of the Global Industry Classification Standard (GICS) codes. Year dummy is also incorporated to control for the time trend, and clustering of standard errors is adjusted for the panel data. To support our Hypothesis 1, we need observe a significant and positive  $\alpha_1$ , showing the lack of integrity is associated with a higher incidence of fraudulent activities.

To test H2, we apply the following logistic model with the dependent variable as a dummy variable of modified audit opinions (*MAO* is equal to one if a modified audit opinion is issued, and zero otherwise):

$$MAO_t = \alpha_0 + \alpha_1 EM_t + \sum_{k=1}^k \alpha_{k+1} Control_{k,t} + Year + Industry + Region + \varepsilon \quad (2)$$

where the lack of executive integrity is proxied by *EM* and *DEM*, as defined earlier. We do not take one-year lead for *MAO* because it is issued for the problems in the financial report of the same year. The corporate governance measures contain such external features as analyst following (*Analyst*), fund ownership (*Fund*), and internal features such as the ratio of

restricted to total shares (*Restricted*), ownership concentration (*Ownership*), CEO duality, (*Duality*), board meeting frequency (*Meeting*), board size (*Bosize*), board independence (*Indep*), and supervisory board size (*Supsize*). Firm characteristics (*Size*, *PB*), delisting risk (*ST*) and regional and industry effects are also controlled. Chen et al. (2001) and Firth et al. (2011) find that delisting risk increase the incidence of modified audit opinion. To support our Hypotheses 2 that executives are more likely to receive modified audit opinion when they are associated with worse integrity reflected by more extensive earnings management, we need to observe positive coefficients  $\alpha_1$  for *EM* and *DEM*.

Finally, H3 can be tested by using the the following logistic regression model:

$$\begin{aligned}
 Fraud_{t+1} = & \alpha_0 + \alpha_1 EM_t + \alpha_2 MAO_t + \alpha_3 EM_t \times MAO_t + \sum_{k=3}^k \alpha_{k+1} Control_{k,t} \\
 & + Year + Industry + Region + \varepsilon
 \end{aligned} \quad (3)$$

where the one-year lead dependent dummy variable *Fraud* is equal to one if the firm is subject to regulatory enforcement against fraud, and zero otherwise; poor integrity is proxied by two earnings management measures *EM* and *DEM*; and *MAO* is equal to one if a modified audit opinion is issued to indicate problems with a financial statement, and zero otherwise. The variable *MAO* is also interacted with *EM* and *DEM*, respectively, and the same set of control variables is incorporated. To support H3, the coefficient of the interaction term  $\alpha_3$  needs to be significantly negative, showing that when executives with lower integrity receive warning from the auditors in the form of modified audit opinion, they become less likely to take a turn for the worse to exacerbate their unethical behaviour.

## 4. Empirical Findings

### 4.1. Descriptive Statistics

[Insert Figure 1 about here]

Figure 1 shows that the number (ratio) of modified audit opinions (MAOs) in the beginning of the sample period, from 2001 to 2002, was around 140 (12%). The figures are slightly smaller than these reported by Yang et al. (2001) for the year of 1998. One year later, the number (ratio) dropped to around 80 (7%) in 2003, then reverted back in 2005, and fell again in the end of the sample period in 2008. The trend is different from the upward one documented by Yang et al. (2001). Given that corporate governance, audit independence, and regulatory supervision have been improved in China in the past decade, the downward diagram may imply that the quality of financial statements has improved at the market level, consistent with the finding in Hou et al. (2012a) that the informativeness of Chinese stocks has been improved.

[Insert Table 1 about here]

Table 1 presents the summary statistics of the variables used in this study. The ratio of modified audit opinions is 9.31%, on average, and the ratio of fraud is smaller, at about 4%. The ratio of non-operating profits to sales is around 2%. Table 1 also reports the summary statistics for the split sample, namely, firms with standard opinions and these with modified audit opinions. Firms with modified audit opinion are associated with a substantially higher incidence of fraud in the subsequent period (21.12% versus 2.16%), lower executive integrity as reflected by more severe earnings management (5.86% versus 1.53%), smaller firms, growth firms, much higher delisting risk, lower analyst following, lower fund ownership (0.33% versus 3.00%), lower ownership concentration, a higher incidence of CEO duality; lower board meeting frequencies, and lower board independence. These findings are in

favour of our Hypothesis 2 that the incidence of modified audit opinions is associated with poor integrity.

[Insert Table 2 about here]

Table 2 presents the correlation matrix for the variables used in this study. Fraud and earnings management are positively related to each other, providing supporting evidence for our Hypothesis 1 that poor integrity tends to induce subsequent fraud. Modified audit opinion and earnings management are found to be positively related as predicted in Hypothesis 2. In addition, both fraud and modified audit opinion are negatively related to the delisting risk (*ST*) and external corporate quality as indicated by the analyst following and fund ownership.

#### **4.2. Test of H1**

[Insert Table 3 about here]

Table 3 presents the results of the test of H1. We examine whether lower executive integrity tend to commit fraud in the subsequent period. The lack of integrity is measured by earnings management, the ratio of non-operating profits to sales (*EM*) in regression I to III and by the dummy variable (*DEM*) indicating whether the level of earnings management (*EM*) is equal to or above the industry median level of the yearly observation in regressions IV to VI. The regressions I and IV only incorporate the key variable and firm characteristics, regressions II and V also consider the corporate governance and delisting risk, and the regression III and VI control for year, industry and region effects. We find that the coefficients of *EM* are significantly positive as 2.2355, 0.9538, and 1.2296, respectively in regression I, II, and III, and therefore support our hypothesis H1, suggesting the lack of executive integrity tends to

be the antecedent of future fraud at firm level. In other words, fraud is more likely to be instigated in firms with poor executive integrity. For robustness checks, we replicate the test by replacing *EM* with *DEM*, and consistent results are documented in regressions IV to VI. This suggests that the executives who manage earnings more severe than the median level of firms from the same industry of the same year are more likely to commit fraud in the following year.

In addition, firms with imminent delisting risk ( $ST=1$ ) are more likely to commit fraud presumably because they may take opportunistic actions to prevent for being delisted (Hou and Moore, 2010). Analyst following, ownership concentration, firm size, and board meeting frequency are found to help deter fraudulent activities. Cumming et al. (2011) suggests financial analysts help to form a part of the external governance mechanism to enhance the monitoring and therefore reduce the incidence of fraud. Uzun et al. (2004) argue that increased meeting frequency could also make the board better perform their monitoring duty. Chung et al. (2002) find that the presence of large institutional shareholdings promotes the monitoring of executives.

### **4.3. Test of H2**

[Insert Table 4 about here]

Table 4 presents the test of whether the auditor could effectively identify the executive with poor integrity who manage earnings and issue modified opinion to them as a warning. We regress a dummy variable of modified audit opinion (*MAO* is equal to one if modified opinion report is issued by the auditor, and zero otherwise) against the lack of integrity and a set of control variables. The lack of integrity is measured by the ratio of non-operating



income relative to revenue (*EM*) in regression I to III and by dummy variable *DEM* in regression IV to VI. The coefficient of *DM* is significantly positive as 4.5384 in regression I. When we control the corporate governance and delisting risk in regression II as well as year, industry, and region effects in regression III, the results remain consistent and support Hypothesis 2 that executive with poor integrity is like to receive warning from auditors. This finding also confirms the monitoring role played by the auditors. For robustness checks, we again replace *EM* with *DEM* and find that its coefficients remain significantly positive across three regressions IV to VI. In addition, the results show that delisting risk (*ST*) increases the incidence of modified audit opinion. Analyst following and fund ownership are found to decrease the incidence. Similar results were documented in Firth et al. (2007). Regard the internal governance features, ownership concentration, board meeting frequency and board independence are found to reduce the incidence of modified opinions. This is consistent with the finding in Chen et al. (2012).

#### **4.4. Test of H3**

[Insert Table 5 about here]

The results for the test of H3 are reported in Table 5. To investigate whether auditors can intervene in the deteriorating process of poor executive integrity into fraud, we regress the one-year lead dependent dummy variable *Fraud* against the lack of executive integrity, modified audit opinion (*MAO*), and their interaction term. Again, the executive integrity is measured by *EM* and *DEM*. The coefficients of *EM* are significantly positive at 3.2992 from regressions I. These findings reinforce Hypothesis 1 that executives with poor integrity tend to commit fraud if they do not receive warning from auditors. When the delisting risk,

governance quality are incorporated and year, industry, region effects are controlled in regressions II and III, the results remain consistent.

More importantly, capturing the intervention effects of audits, the coefficient of the interaction term (*EM.MAO*) is significantly negative across regressions I to III. This supports our Hypothesis 3 that the modified audit opinion issued on the executives with poor integrity could effectively deter them aggravate their unethical behaviour into fraud. As shown earlier, auditors could effectively identify and warn the executives with poor integrity by issuing modified audit opinion. Such opinion can depress the stock performance, attract attention from investors and media (Chen et al., 2000), and delay the annual earnings announcement (Haw et al., 2003), implying a modified audit opinion can alert the public and thus put the executives lacking integrity under closer scrutiny, leaving them fewer chances for malpractice. The results suggest a crucial role played by auditor's role in enhancing the disciplining the executive with poor integrity and intervene the deterioration of unethical behaviour. We again replicate the tests by replacing *EM* with *DEM* in regressions IV to VI for robustness checks and obtain consistent results as shown in Table 5, further supporting Hypothesis 3.

It is also worth to note that in addition to the role of disciplining executives, modified audit opinion is also found to predict fraud as indicated by the significant positive coefficients of *MAO* across the regressions, which suggest a positive association between the modified audit opinions on firms which less manage earnings and the future fraud. Firth et al. (2005) the reasons other than the earnings management for a firm to receive modified audit opinion, such as external loan guarantees and litigation cases. A possible explanation for the result is that these unethical behaviours, which normally involve other parties, tend to be much more

serious and beyond the personal integrity issues of the executives. Even the executives are caught and received warning, they find them much more difficult to correct or deal with compare to the earnings management. This may imply that the monitoring role of auditors is effective on the break-down of personal integrity such as earnings management, but not on the serious unethical behaviours which are possibly due to the governance system failure. Another possible explanation is that firms with different levels of earnings management react to the modified audit opinion asymmetrically. For example, the modified audit opinion fails to trigger adequate scrutiny of managerial actions on the firms with low earnings management as a result of the misplaced trust<sup>4</sup>. There could be other possible explanations and this could be an issue for future research.

#### 4.5. Robustness Checks

[Insert Table 6 about here]

In untabulated tests, the results do not materially change when we replace the dummy variables of the governance quality by using the continuous value, replace the restricted share ratio by state share ratio or a dummy variable to indicate whether the listed firm is a state-controlled or not, control for the audit quality measured by whether the listed firm is audited by one of the Big 4 auditing firms. More importantly, we replicate the test by replacing *EM* with the change in earnings management, *ChEM* which is calculated as the difference between the earnings management in year *t* and year *t-1*. The executive integrity is not constant, but influenced by various external factors such as governance mechanism (Jensen, 2003), human resource management (Rost, 2007) as discussed earlier and possibly also personal experience. The results are reported in Table 6. The coefficients of *ChEM* are

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<sup>4</sup> We thank the anonymous referee for making this point.

significantly positive across the three regressions, showing that the deterioration of integrity leads to an increase in the incidence of future fraud. This again empirically verifies our Hypothesis 1. Capturing the role of modified audit opinion in fraud deterrence, the coefficients of the interaction term (*ChEM.MAO*) are significantly negative across even after controlling for delisting risks, governance, and year, industry and region fixed effects. This again supports Hypothesis 3 that when when auditors detect the worsened executive integrity and impose warning on them, these executives become less likely to commit fraud in the subsequent period.

## **5. Conclusion**

This study examines the efficacy of auditors as external governance mechanism to curb corporate fraudulent behaviour among Chinese listed firms with higher earnings manipulation, which we use as proxy of low managerial integrity. Corporate fraud reduces the confidence of outside investors and the stability of capital market, which in turn hampers the growth and development of emerging countries. China is a leading emerging economy and provides suitable setting to study the contribution of auditors to corporate fraud deterrence because it has weak legal enforcement and investor protection along with tight control of media and labor union. Under this institutional environment, other external governance mechanisms such as investors, media, and employees are expected to be less effective in deterring managerial opportunism as their counterparts in Western developed economies. This leaves auditors to serve as one of the few credible sources of external governance mechanisms capable of discouraging opportunistic behaviour of managers.

Indeed, our empirical evidence suggest that Chinese listed firms with greater degree of earnings manipulation, which we assume have lower managerial integrity, are associated with

greater likelihood of regulatory enforcement actions against corporate fraud, but this effect is moderated by issuance of modified audit opinion moderates. Since the underlying motive of earnings manipulation and corporate fraud is broadly similar, one would argue that it is not surprising to find a significant relationship between the former and latter. Critics could also argue that the correlation between of managerial integrity and corporate fraud is not an unexpected finding either, irrespective of the empirical proxy of the former that we apply. However, what is interesting from our observation is that, on the average, the issuance of modified audit opinion for firms with high earnings manipulation or low managerial integrity significantly reduces subsequent occurrence of corporate fraud identification by regulatory authority. What this suggests is that auditors in China serve as effective early warning mechanism to expose and discourage managerial opportunism from escalating into corporate fraud.

As an increasingly influential emerging economy, the challenges and experiences of China's development have useful implications to other developing countries. The main policy implication of our study is that in countries with similar institutional background as China, it is important to strengthen the quality and independence of the auditing profession in order to realize its full potential and value as external governance mechanism. Auditors can play a crucial role to improve the credibility of financial statements issued by firms, which in turn reduces the information disadvantage of outside investors. Armed with better financial information, outside investors are more capable of making correct investment decisions to channel their capital to firms with growth opportunities, which in turn benefits the wider economy.

## Appendix. Variable Definitions

<i>Fraud</i>	A dummy variable equal to one if the firm is subject to regulatory enforcement against fraud, and zero otherwise.
<i>EM</i>	Earnings management is the ratio of non-operating income relative to revenue. It is used to proxy for the lack of integrity of executives.
<i>DEM</i>	A dummy of earnings management. It is equal to one if the ratio of non-operating income relative to revenue is above the median value of the firms in the same industry of the same year, and zero otherwise.
<i>MAO</i>	A dummy variable equal to one if a modified audit opinion is issued by the auditor, which indicates (potential) problems with a financial statement, and zero otherwise.

The following control variables are lagged for one year to resolve the causality problem:

<i>Size</i>	The natural logarithm of market capitalization.
<i>PB</i>	Price-to-book ratio.
<i>ST</i>	A dummy variable equal to one if a listed firm experiences two or more consecutive years of loss and labelled as Special Treatment by the regulatory commission, and zero otherwise.
<i>Analyst</i>	The natural logarithm of one plus the number of analysts following the firm.
<i>Fund</i>	The number of shares held by mutual funds relative to the total number of shares.
<i>Restricted</i>	The number of restricted shares relative to the total number of shares.
<i>Ownership</i>	The Herfindahl index of the top 10 largest firm blockholders.
<i>Duality</i>	A dummy variable equal to one if the CEO holds the position of board chair, and zero otherwise.
<i>Meeting</i>	A dummy variable equal to one if the number of board meetings is above the median value of yearly observations, and zero otherwise.
<i>Bosize</i>	A dummy variable equal to one if the number of board members is above the median value of yearly observations, and zero otherwise.
<i>Indep</i>	A dummy variable equal to one if the ratio of independent directors is above the median value of yearly observations, and zero otherwise.
<i>Supsize</i>	A dummy variable equal to one if the number of supervisory board members is above the median value of yearly observations, and zero otherwise.

The following industry and regional dummies are also incorporated in our empirical analyses.

The industry dummies are constructed based on the first two digits of the GICS codes.

The regional dummies are constructed according to Firth et al. (2006), who group firms into four different regions by level of economic development: (1) Shanghai and Shenzhen, (2) the more developed areas, including the open cities and provinces along the coast, (3) the inland provinces, and (4) the least developed area, in the northwestern part of the country.

## References

- Allen F., Qian, J., and Qian, M. (2005). 'Law, finance, and economic growth in China', *Journal of Financial Economics*, 77, 57–116.
- Ashforth, B. and Anand, V. (2003). 'The normalization of corruption in organizations', *Research in Organization Behavior*, 25, 1–52
- Baucus, M. (1994). 'Pressure, opportunity, and predisposition: A multivariate model of corporate illegality', *Journal of Management*, 20, 699–721.
- Baucus, M. and Baucus, D. (1997). 'Paying the piper: An empirical examination of longer-term financial consequences of illegal corporate behavior', *Academy of Management Journal*, 40, 139–151.
- Baucus, M. and Near, J. (1991). 'Can illegal corporate behavior be predicted? An event history analysis', *Academy of Management Journal*, 34, 9–36.
- Beasley, M., J. V. Carcello, D. R. Hermanson, and P. D. Lapidès, 2000, Fraudulent financial reporting: consideration of industry traits and corporate governance mechanisms. *Accounting Horizons*, 14: 441–452.
- Beasley, M. S., 1996, An empirical analysis of the relation between the board of director composition and financial statement fraud. *Accounting Review*, 71, 443–455.
- Beasley, M., J. V. Carcello, D. R. Hermanson and P. D. Lapidès: 2000, 'Fraudulent Financial Reporting: Consideration of Industry Traits and Corporate Governance Mechanisms', *Accounting Horizons* 14, 441–452.
- Becker, L. C., M. L. Defond, J. Jambalvo, and K R. Subramanyam, 1998, The effect of audit quality on earnings management, *Contemporary Accounting Research*, 15(1), 1-24
- Bergstresser, D., and T. Philippon, 2006, CEO incentives and earningsmanagement, *Journal of Financial Economics* 80, 511-529
- Bertrand, M., P. Mehta, and S. Mullainathan, 2002, Ferreting out tunneling: An application to Indian business groups. *Quarterly Journal of Economics*, 117, 121–148.
- Besley, T. and A. Prat, 2006. Handcuffs for the grabbing hand? Media capture and government accountability. *American Economic Review* 96, no. 3: 720-736.
- Black, W. (2005). 'Control fraud as financial super-predators: How pathogens make financial market inefficient', *Journal of Socio-Economics*, 34, 734–755.
- Bradford, W., 2007, Because that's where the money is: Toward a theory and strategy of corporate legal compliance. SSRN working paper, <http://ssrn.com/abstract=955428>.
- Caramanis C., and C. Lennox, 2008, Audit effort and earningsmanagement, *Journal of Accounting and Economics*, 45(1), 116–138
- Carey P., and R. Simnett, 2006, Audit Partner Tenure and Audit Quality, *The Accounting Review* 81(3), 653-676

- Chen, G., M. Firth, D. Gao, and O. Rui, 2006, Ownership structure, corporate governance, and fraud: Evidence from China. *Journal of Corporate Finance*, 12, 424–448.
- Chen, J., R. Ding, W. Hou and E. Lee, 2012, Analyst Coverage, Corporate Governance and Financial Reporting Quality: Evidence from China, Working Paper , Available at SSRN: <http://ssrn.com/abstract=2039672>
- Chen, K. C. W., and H. Yuan, 2004, Earnings management and capital resource allocation: Evidence from China's accounting-based regulation of rights issue. *The Accounting Review*, 79, 645–665.
- Chen, J. P. C., S. Chen and X. Su, 2001, Profitability regulation, earnings management, and modified audit opinions: Evidence from China, *Auditing: A Journal of Practice & Theory*, 20(2) , 9-30
- Chen, J. P. C., X. Su, R. Zhao, An Emerging Market's Reaction to Initial Modified Audit Opinions: Evidence from the Shanghai Stock Exchange, *Contemporary Accounting Research*, 17(3), 429–455,
- Cheng, Q., and T. D. Warfield, 2005, Equity Incentives and Earnings Management, *The Accounting Review*: 80(2), 441-476.
- Chung, R., M. Firth, and J. Kim, 2002, Institutional monitoring and opportunistic earnings management. *Journal of Corporate Finance* 8, 29–48.
- Choi, J. H., and T. J. Wong. 2007. Auditors' governance functions and legal environments: An international investigation. *Contemporary Accounting Research* 24 (1): 13–46.
- Cohen, J., G. Krishnamoorthy, and A. Wright, 2010a, Corporate governance in the post-Sarbanes–Oxley era: Auditors' experience. *Contemporary Accounting Research*, 27, 751–786.
- Cohen, J., L. Gaynor, G. Krishnamoorthy, and A. Wright, 2011, The impact of auditor judgments of CEO influence on audit committee independence and management incentives. *Auditing: A Journal of Practice & Theory*, 30, 129–147.
- Cohen, J., Y. Ding, C. Lesage and H. Stolowy, 2010, Corporate Fraud and Managers' Behavior: Evidence from the Press, *Journal of Business Ethics* 95, 271-315
- Cumming, D., W. Hou, and E. Lee, 2011, Does the external monitoring effect of financial analysts deter corporate fraud in China? SSRN working paper, <http://ssrn.com/abstract=1874114>.
- Datar, S., G. Feltham, and J. Hughes. 1991. The role of audits and audit quality in valuing news issues. *Journal Accounting and Economics* 14 (1): 3–49.
- Davidson, W. and D. Worrell (1988) 'The impact of announcements of corporate illegalities on shareholder returns', *Academy of Management Journal*, 31, 195–200.
- DeAngelo, L. E., 1981. Auditor size and audit quality. *Journal of Accounting and Economics*. 3: 183-199
- Dechow, P. M., R. G. Sloan, and A. P. Sweeney, 1996, Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research*, 13, 1–21.
- DeFond, M., T. J. Wong, and S. Li, 2000, The impact of improved auditor independence on audit market concentration in China. *Journal of Accounting and Economics*, 28, 269–305.



- DeGeorge, F., J. Patel and R. Zeckhauser, 1999, Earnings Management to Exceed Thresholds, *The Journal of Business* 72, 1-33
- Denis, D., P. Hanouna, and A. Sarin, 2006, Is there a dark side to incentive compensation? *Journal of Corporate Finance*, 12, 467–488.
- Dikolli, S. S., W. J. Mayew, T. D. Steffen, Honoring One's Word: CEO Integrity and Accruals Quality, Working Paper, Available at SSRN: <http://ssrn.com/abstract=2131476>
- Ding, S., C. Jia, Y. Li, and Z. Wu: 2010, Reactivity and passivity after enforcement actions: Better late than never. *Journal of Business Ethics*, 95, 337–359.
- Ding, Y., H. Zhang, and J. Zhang, 2007, Private vs state ownership and earnings management: Evidence from Chinese listed companies. *Corporate Governance: An International Review*, 2, 223–238.
- DuCharme, L. L., P. H. Malatesta, and S. E. Sefcik, 2011, Earnings Management: IPO Valuation and Subsequent Performance, *Journal of Accounting, Auditing & Finance* 16: 369-396
- Dunn, P. (2004). 'The impact of insider power on fraudulent financial reporting', *Journal of Management*, 30, 397–412.
- Dyck, A., A. Morse, and L. Zingales, 2010, Who blows the whistle on corporate fraud? *Journal of Finance*, 65, 2015–2444.
- Erhard, W., M. Jensen, S. Zaffron, 2007, Integrity: A Positive Model that Incorporates the Normative Phenomena of Morality, Ethics and Legality, Harvard Business School NOM Working Paper No. 06-11, Available at SSRN: <http://ssrn.com/abstract=920625>
- Erickson, M., M. Hanlon, and E. L. Maydew, 2006, Is there a link between executive equity incentives and accounting fraud? *Journal of Accounting Research*, 44, 113–143.
- Firth, M., P. Fung, and O. Rui, 2006, Corporate performance and CEO compensation in China. *Journal of Corporate Finance*, 12, 693–714.
- Firth, M., P. Fung, and O. Rui, 2007, Ownership, two-tier board structure, and the informativeness of earnings – Evidence from China. *Journal of Accounting and Public Policy*, 26, 463–496.
- Firth, M., P. Mo, and R. Wong, 2005, Financial statement frauds and auditor sanctions: An analysis of enforcement actions in China. *Journal of Business Ethics*, 62, 367–381.
- Firth, M., P. Mo, and R. Wong, 2011b, Auditors' organizational form, legal liability, and reporting conservatism: Evidence from China. *Contemporary Accounting Research*. forthcoming.
- Firth, M., O. Rui, and W. Wu, 2011a, Cooking the books: Recipes and costs of falsified financial statements in China. *Journal of Corporate Finance*, 17, 371–390.
- Fuller, J., and M. Jensen, 2002, What's a director to do? Harvard NOM Research Paper No. 02-38.
- Gleason G., and L. Mills, 2008, Evidence of differing market responses to beating analysts' targets through tax expense decreases, *Review of Accounting Studies*, 13, 295-318

- Graham, J., C. Harvey, and S. Rajgopal, 2005, The economic implications of corporate financial reporting, *Journal of Accounting and Economics*, 40, 3-73
- Hansen, J., McDonald, J., Messier, W., and Bell, T. (1996). 'A generalized qualitative response model and the analysis of management fraud', *Management Science*, 42, 1022–1032.
- Haw, G. I., K. Park, D. Qi, and W. Wu, 2003, Audit qualification and timing of earnings announcements: evidence from China, *Auditing: A Journal of Practice and Theory*, 22(2), 121-146
- Hou, W., J. Kuo, and E. Lee, 2012a, State ownership and stock price informativeness: Evidence of the Split Share Structure Reform in China. *British Accounting Review*, forthcoming.
- Hou, W., E. Lee, and K. Stathopoulos, 2012b, The role of mutual funds in deterring corporate fraud in China. SSRN working paper, <http://ssrn.com/abstract=1978573>.
- Hou, W., and G. Moore, 2010, Player and referee roles held jointly: The effect of state ownership on China's regulatory enforcement against fraud. *Journal of Business Ethics*, 95, 317–335.
- Jensen, M., 2003, Paying People to Lie: the Truth about the Budgeting Process, *European Financial Management*, 9(3), 379–406
- Jensen, M. 2011, Putting integrity into finance theory and practice: a positive approach, Harvard NOM Working Paper No. 06-06, Available at SSRN: <http://ssrn.com/abstract=876312>
- Jensen, M., K. Murphy, and E. Wruck, 2004, Remuneration: Where we've been, how we got to here, what are the problems, and how to fix them. Harvard NOM Working Paper No. 04-28. Available at SSRN: <http://ssrn.com/abstract=561305>
- Jensen, M., and R. Walkling, 2010, Pioneers in finance: An interview with Michael C. Jensen – Part 2. Harvard Business School NOM Unit Working Paper.
- Jia, C., S. Ding, Y. Li, and Z. Wu, 2009, Fraud, enforcement action, and the role of corporate governance: Evidence from China. *Journal of Business Ethics*, 90, 561–576.
- Jian, M., and T. J. Wong, 2004, Earnings management and tunneling through related party transactions: Evidence from Chinese corporate groups. Working paper, Nanyang Technological University and Hong Kong University of Science and Technology.
- Johnson, W. B., and T. Lys. 1990. The market for audit services: Evidence from voluntary auditor changes. *Journal of Accounting and Economics* 12 (1–3): 281–308.
- Kizirian, T. G., B. W. Mayhew, and J. Sneathen, 2005, The impact of management integrity on audit planning and evidence. *Auditing: A Journal of Practice & Theory*, 24(2), 49–67.
- Klein, A., 2002, Audit committee, board of director characteristics, and earnings management, *Journal of Accounting and Economics* 33(3), 375-400
- Krishnan, J., J. Krishnan, and R. Stephens, 1996. The simultaneous relation between auditor and audit opinion: An empirical analysis. *Accounting and Business Research*, 26, 224-236

- Li, H., M. Pincus, S. O. Rego, 2008, Market Reaction to Events Surrounding the Sarbanes - Oxley Act of 2002 and Earnings Management, *Journal of Law and Economics* 51(1), 111-134
- Louis, H., 2004, Earnings management and the market performance of acquiring firms, *Journal of Financial Economics*, 74, 121-148
- Martin, D. R., 2007, Through the Ethics Looking Glass: Another View of the World of Auditors and Ethics, *Journal of Business Ethics*, 70(1), 5-14
- McKendall, M. and Wagner, J. (1997) 'Motive, opportunity, choice, and corporate illegality', *Organization Science*, 8, 614-647.
- Nelson, W. M., J. A. Elliott, R. L. Tarpley, 2002, Evidence from Auditors about Managers' and Auditors' Earnings Management Decisions, *The Accounting Review*, 77(s1), 175-202
- Nowak, M. J., and M. McCabe, 2003, Information costs and the role of the independent corporate director. *Corporate Governance: An International Review*, 11, 300-307.
- Rangan, S. 1998, Earnings management and the performance of seasoned equity offerings, *Journal of Financial Economics* 50(1), 101-122
- Rost, K., 2007, CEO pay and appointments: Putting integrity back into hiring decisions. SSRN working paper, <http://ssrn.com/abstract=1019743>.
- Skinner, J. D., and R. G. Sloan, 2002, Earnings Surprises, Growth Expectations, and Stock Returns or Don't Let an Earnings Torpedo Sink Your Portfolio, *Review of Accounting Studies*, 7, 289-312
- Szwajkowski, E. (1985) 'Organizational illegality: Theoretical integration and illustrative application', *Academy of Management Review*, 10, 558-567
- Teoh, S. H., I. Welch, and T. J. Wong, 1998a, Earnings management and the underperformance of seasoned equity offerings, *Journal of Financial Economics*, 50(1), 63-99
- Teoh, S. H., I. Welch, and T. J. Wong, 1998b, Earnings Management and the Long-Run Market Performance of Initial Public Offerings, *Journal of Finance*, 53(6), 1935-1974
- Uzun, H., S. H. Szewczyk, and R. Varma, 2004, Board composition and corporate fraud. *Financial Analyst Journal*, 60, 33-43.
- Wang, Q., T. J. Wong, L. Xia, 2008, State ownership, the institutional environment, and auditor choice: Evidence from China, *Journal of Accounting and Economics* 46(1), 112-134
- Watts, L. R., and J. L. Zimmerman, 1990, Positive Accounting Theory: A Ten Year Perspective, *The Accounting Review*, 65(1), 131-156
- Xiang, B., 1998, Institutional factors influencing China's accounting reforms and standards. *Accounting Horizons*, 12, 105-119.
- Xiao, J. Z., Y. Zhang, and Z. Xie, 2000, The making of independent auditing standards in China. *Accounting Horizons*, 14, 69-89.
- Yang, L., A. Dunk, A. Kilgore, Q. Tang, and Z. J. Lin, 2003, Auditor independence issues in China. *Managerial Finance*, 29, 57-64.

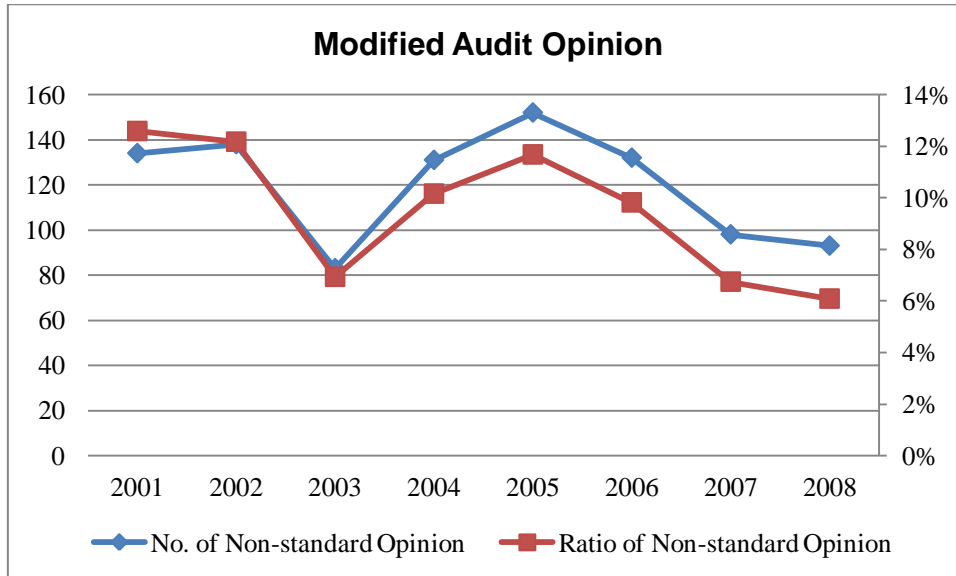
Yang L., Q. Tang, A. Kilgore, and Y. H. Jiang, 2001, Auditor–government associations and auditor independence in China. *British Accounting Review*, 33, 175–189.

Yu, Q., B. Du, and Q. Sun, 2006, Earnings management at rights issues thresholds – evidence from China, *Journal of Banking and Finance* 30, 3453-3468

Zahra, S., R. Priem, and A. Rasheed (2005) ‘The antecedents and consequences of top management fraud’, *Journal of Management*, 31, 803–828.

**Figure 1**

This figure shows the number and ratio of modified audit opinion (MAO) from 2001 to 2008 in the Chinese stock market. Modified audit opinions indicate (potential) problems with financial statements.



**Table 1**  
Summary statistics

	All firms			Firms with MAO			Firms without MAO			Difference in Mean Test	
	Median	Mean	Std.Dev.	Median	Mean	Std.Dev.	Median	Mean	Std.Dev.	Difference	t-Value
<i>MAO</i>	0.0000	0.0931	0.2907								
<i>Fraud</i>	0.0000	0.0393	0.1942	0.0000	0.0216	0.1453	0.0000	0.2112	0.4084	-0.1896	-30.06***
<i>EM</i>	0.0032	0.0193	0.0655	0.0030	0.0153	0.0501	0.0054	0.0586	0.1415	-0.0433	-19.87***
<i>DEM</i>	0.0000	0.4998	0.5000	0.0000	0.4834	0.4998	1.0000	0.6587	0.4744	-0.1753	-10.40***
<i>Size</i>	20.4613	20.5797	0.9999	20.5170	20.6397	0.9931	19.9633	19.9955	0.8694	0.6443	19.36***
<i>PB</i>	2.6209	3.7035	3.9615	2.6144	3.6124	3.3787	2.7808	4.5902	7.5187	-0.9778	-7.31***
<i>ST</i>	0.0000	0.0802	0.2716	0.0000	0.0470	0.2117	0.0000	0.4027	0.4907	-0.3557	-41.81***
<i>Analyst</i>	0.0000	0.6386	0.9133	0.0000	0.6908	0.9355	0.0000	0.1310	0.3887	0.5597	18.38***
<i>Fund</i>	0.0009	0.0275	0.0626	0.0016	0.0300	0.0650	0.0000	0.0033	0.0187	0.0267	12.68***
<i>Restricted</i>	0.5702	0.5397	0.1651	0.5706	0.5395	0.1661	0.5692	0.5420	0.1550	-0.0025	-0.46
<i>Ownership</i>	0.1708	0.2062	0.1367	0.1773	0.2104	0.1374	0.1251	0.1659	0.1221	0.0445	9.66***
<i>Duality</i>	0.0000	0.0098	0.0985	0.0000	0.0091	0.0949	0.0000	0.0166	0.1280	-0.0076	-2.27**
<i>Meeting</i>	1.0000	0.5776	0.4940	1.0000	0.5838	0.4930	1.0000	0.5172	0.5000	0.0666	3.98***
<i>Bosize</i>	0.0000	0.3726	0.4835	0.0000	0.3751	0.4842	0.0000	0.3486	0.4768	0.0265	1.62
<i>Indep</i>	1.0000	0.7754	0.4173	1.0000	0.7830	0.4122	1.0000	0.7014	0.4579	0.0817	5.79***
<i>Supsize</i>	1.0000	0.8991	0.3012	1.0000	0.8997	0.3004	1.0000	0.8928	0.3095	0.0069	0.68
Obs.		10,317			9,356			961			

This table presents the descriptive statistics for the total sample and firm subsamples with and without modified audit opinion. The variable *MAO* equals one if a modified audit opinion is issued by the auditor, which indicates (potential) problems with a financial statement, and zero otherwise; *Fraud* is equal to one if the firm is subject to regulatory enforcement against fraud, and zero otherwise; *EM* is the ratio of non-operating income relative to revenue; and *DEM* is a dummy variable equal to one if *EM* is above the industry median value of yearly observations, and zero otherwise. Other variables are defined in the Appendix. The sample period covers 2001 to 2008.

**Table 2**  
Correlation analyses

	<i>Fraud</i>	<i>EM</i>	<i>DEM</i>	<i>MAO</i>	<i>Size</i>	<i>PB</i>	<i>ST</i>	<i>Analyst</i>	<i>Fund</i>	<i>Restricted</i>	<i>Ownership</i>	<i>Duality</i>	<i>Meeting</i>	<i>Bosize</i>	<i>Indep</i>	<i>Supsiz</i>
<i>Fraud</i>	1															
<i>EM</i>	0.0687*	1														
<i>DEM</i>	0.0535*	0.2752*	1													
<i>MAO</i>	0.2838*	0.1920*	0.1019*	1												
<i>Size</i>	-0.0990*	-0.0603*	-0.0821*	-0.1873*	1											
<i>PB</i>	0.0266*	0.1136*	0.0442*	0.0717*	0.1636*	1										
<i>ST</i>	0.1131*	0.3329*	0.1183*	0.3807*	-0.2203*	0.1845*	1									
<i>Analyst</i>	-0.1048*	-0.0840*	-0.0850*	-0.1781*	0.5078*	-0.004	-0.1696*	1								
<i>Fund</i>	-0.0700*	-0.0619*	-0.0808*	-0.1238*	0.4860*	0.1036*	-0.1215*	0.6094*	1							
<i>Restricted</i>	-0.0022	-0.0474*	-0.0257*	0.0045	-0.3319*	0.0223	-0.0094	-0.1297*	-0.1840*	1						
<i>Ownership</i>	-0.0692*	-0.0788*	-0.0817*	-0.0947*	0.0244	-0.0484*	-0.1016*	0.0490*	-0.0443*	0.5724*	1					
<i>Duality</i>	0.0002	0.0336*	0.0109	0.0223	-0.0012	0.0148	0.0105	-0.0208	-0.0026	-0.0316*	-0.0351*	1				
<i>Meeting</i>	-0.0515*	-0.0402*	-0.0620*	-0.0392*	-0.0482*	-0.0334*	-0.0525*	-0.0246	-0.0222	0.0459*	0.0391*	-0.0126	1			
<i>Bosize</i>	-0.0082	-0.0512*	-0.0165	-0.0159	0.0367*	-0.0400*	-0.0555*	0.0648*	0.0052	0.1020*	0.0239	0.0048	0.0510*	1		
<i>Indep</i>	-0.0252	0.0143	0.0004	-0.0569*	0.0445*	-0.0596*	-0.0019	0.2142*	0.1199*	-0.1517*	-0.0882*	0.004	-0.0445*	-0.1272*	1	
<i>Supsiz</i>	-0.0135	-0.0437*	-0.0243	-0.0067	0.0380*	-0.0124	-0.0410*	-0.0429*	-0.0047	-0.0241	0.0351*	-0.0223	-0.0194	-0.0067	-0.0345*	1

This table presents the correlation matrix of the variables. The variable *Fraud* is equal to one if the firm is subject to regulatory enforcement against disclosed fraud, and zero otherwise; *EM* is the ratio of non-operating income relative to revenue; *DEM* is a dummy variable equal to one if *EM* is above the median value of yearly observations, and zero otherwise; and *MAO* equals one if a modified audit opinion is issued by the auditor, which indicates (potential) problems with a financial statement, and zero otherwise. The other variables are defined in the Appendix. The sample period covers 2001 to 2008. The superscript \* denote the 1% level of significance.

**Table 3**

Relationship between fraud and earnings management (test of hypothesis H1)

	Regression I			Regression II			Regression III			Regression IV			Regression V			Regression VI		
<i>EM</i>	2.2355	(4.83)	***	0.9538	(1.80)	*	1.2296	(2.13)	**									
<i>DEM</i>										0.4566	(4.25)	***	0.305	(2.81)	***	0.3052	(2.56)	***
<i>Size</i>	-0.6031	(-9.12)	***	-0.3341	(-3.93)	***	-0.2013	(-1.58)		-0.6027	(-9.00)	***	-0.3241	(-3.83)	***	-0.1976	(-1.56)	
<i>PB</i>	0.0294	(2.91)	***	0.0096	(0.97)		0.0180	(1.53)		0.0341	(3.40)	***	0.0098	(0.99)		0.0179	(1.52)	
<i>ST</i>				0.538	(3.43)	***	0.5901	(3.65)	***				0.5785	(3.97)	***	0.6464	(4.32)	***
<i>Analyst</i>				-0.718	(-5.89)	***	-0.7244	(-5.29)	***				-0.7156	(-5.89)	***	-0.7206	(-5.28)	***
<i>Fund</i>				-4.2348	(-1.37)		-4.6779	(-1.46)					-4.1589	(-1.35)		-4.6182	(-1.45)	
<i>Restricted</i>				0.036	(0.09)		-0.3442	(-0.59)					0.0533	(0.13)		-0.3005	(-0.52)	
<i>Ownership</i>				-2.7719	(-5.26)	***	-2.6523	(-3.90)	***				-2.761	(-5.23)	***	-2.6405	(-3.87)	***
<i>Duality</i>				-0.3086	(-0.60)		-0.2227	(-0.44)					-0.3039	(-0.59)		-0.2053	(-0.41)	
<i>Meeting</i>				-0.5113	(-4.91)	***	-0.5258	(-4.83)	***				-0.4966	(-4.77)	***	-0.5108	(-4.67)	***
<i>Bosize</i>				0.0328	(0.30)		-0.0343	(-0.25)					0.0277	(0.25)		-0.0405	(-0.30)	
<i>Indep</i>				-0.1765	(-1.47)		-0.1429	(-1.00)					-0.1751	(-1.46)		-0.1424	(-0.99)	
<i>Supsize</i>				-0.1907	(-1.20)		-0.2177	(-1.28)					-0.1969	(-1.24)		-0.2192	(-1.29)	
<i>Constant</i>	8.8909	(6.64)	***	4.7972	(2.60)	***	1.9946	(0.73)		8.6666	(6.34)	***	4.4279	(2.39)	**	1.7709	(0.65)	
Industry effect		No			No			Yes			No			No			Yes	
Region effect		No			No			Yes			No			No			Yes	
Year effect		No			No			Yes			No			No			Yes	
Pseudo-R <sup>2</sup>		0.0424			0.0914			0.1076			0.0427			0.0929			0.1085	
Obs.		10,317			10,317			10,317			10,317			10,317			10,317	

This table present the empirical results of the logistic regression model as follows:

$$Fraud_{t+1} = \alpha_0 + \alpha_1 EM_t + \sum_{k=1}^k \alpha_{k+1} Control_{k,t} + Year + Industry + Region + \varepsilon$$

where the one-year lead dependent dummy variable *Fraud* is equal to one if the firm is subject to regulatory enforcement against fraud, and zero otherwise; the lack of integrity is proxied by following the two earning management measures: *EM* is the ratio of non-operating income relative to revenue, and *DEM* is a dummy variable equal to one if *EM* is above the median value of the firms from the same industry in the same year, and zero otherwise. Other control variables are defined in the Appendix. The sample period covers 2001 to 2008. All t-statistics are reported and adjusted for heteroskedasticity. The superscripts \*, \*\*, and \*\*\* denote the 10%, 5%, and 1% levels of significance, respectively.



**Table 4**

Relationship between modified audit opinion and earnings management

	Regression I			Regression II			Regression III			Regression IV			Regression V			Regression VI		
<i>EM</i>	4.5384	(11.6)	***	1.6750	(4.41)	***	1.8054	(4.18)	***									
<i>DEM</i>										0.5977	(8.20)	***	0.3861	(4.94)	***	0.3819	(4.23)	***
<i>Size</i>	-0.8172	(-17.6)	***	-0.3600	(-6.14)	***	-0.4134	(-3.87)	***	-0.8169	(-17.73)	***	-0.3440	(-5.90)	***	-0.4100	(-3.84)	***
<i>PB</i>	0.0485	(5.63)	***	0.0061	(0.73)		0.0010	(0.09)		0.0569	(6.90)	***	0.0066	(0.79)		0.0011	(0.10)	
<i>ST</i>				1.8802	(18.96)	***	1.9762	(15.45)	***				1.9589	(20.6)	***	2.0474	(15.99)	***
<i>Analyst</i>				-0.6805	(-7.21)	***	-0.5821	(-5.35)	***				-0.6850	(-7.28)	***	-0.5933	(-5.47)	***
<i>Fund</i>				-10.6891	(-2.57)	***	-12.1155	(-2.19)	**				-10.6397	(-2.54)	**	-11.8917	(-2.16)	**
<i>Restricted</i>				-0.1139	(-0.37)		-0.7155	(-1.33)					-0.1007	(-0.32)		-0.6559	(-1.21)	
<i>Ownership</i>				-1.9086	(-4.95)	***	-1.7725	(-3.04)	***				-1.9139	(-4.95)	***	-1.7651	(-3.00)	***
<i>Duality</i>				0.3521	(1.04)		0.2685	(0.58)					0.3789	(1.12)		0.2927	(0.64)	
<i>Meeting</i>				-0.1972	(-2.61)	***	-0.1860	(-2.04)	**				-0.1774	(-2.35)	**	-0.1685	(-1.85)	*
<i>Bosize</i>				0.0742	(0.92)		0.0752	(0.69)					0.0649	(0.81)		0.0705	(0.64)	
<i>Indep</i>				-0.3610	(-4.19)	***	-0.1861	(-1.69)	*				-0.3569	(-4.14)	***	-0.1914	(-1.74)	*
<i>Supsize</i>				0.0601	(0.50)		0.1243	(0.77)					0.0504	(0.43)		0.1218	(0.77)	
<i>Constant</i>	13.9877	(15.01)	***	5.6618	(4.47)	***	6.3279	(2.77)	***	13.7383	(14.83)	***	5.1405	(4.08)	***	6.0920	(2.67)	***
Industry effect		No			No			Yes			No			No			Yes	
Region effect		No			No			Yes			No			No			Yes	
Year effect		No			No			Yes			No			No			Yes	
Pseudo-R <sup>2</sup>		0.1019			0.21			0.2259			0.0884			0.2109			0.2263	
Obs.		10,317			10,317			10,317			10,317			10,317			10,317	

This table presents the empirical results of following logistic regression model about the determinants of modified audit opinion (MAO)

$$MAO_t = \alpha_0 + \alpha_1 EM_t + \sum_{k=1}^k \alpha_{k+1} Control_{k,t} + Year + Industry + Region + \varepsilon$$

which *MAO* is equal to 1 if a modified audit opinions are issued to indicates (potential) problems with a financial statement, and zero otherwise; the lack of executive integrity is measured by two proxies: *EM* is the ratio of non-operating income relative to revenue; and *DEM* is a dummy variable equal to one if *EM* is above the median value from the firms within the same industry in the same year, and zero otherwise. Other control variables are defined in the Appendix. The sample period covers 2001 to 2008. All t-statistics are reported and adjusted for heteroskedasticity. The superscripts \*, \*\*, and \*\*\* denote the 10%, 5%, and 1% levels of significance, respectively.

**Table 5**

Relationship between fraud and earnings management conditional on modified audit opinion (test of hypothesis H3)

	Regression I			Regression II			Regression III			Regression IV			Regression V			Regression VI		
<i>MAO</i>	2.4218	(20.1)	***	2.2543	(16.83)	***	2.3209	(16.36)	***	2.5852	(14.25)	***	2.3664	(12.37)	***	2.4390	(11.85)	***
<i>EM</i>	3.2992	(4.71)	***	2.8999	(3.80)	***	3.3595	(4.33)	***									
<i>DEM</i>										0.4595	(3.14)	***	0.3636	(2.48)	**	0.3777	(2.56)	***
<i>EM</i> × <i>MAO</i>	-4.0126	(-4.36)	***	-3.4746	(-3.63)	***	-3.8494	(-4.05)	***									
<i>DEM</i> × <i>MAO</i>										-0.4994	(-2.25)	**	-0.3869	(-1.70)	*	-0.4117	(-1.77)	*
<i>Size</i>	-0.3137	(-4.99)	***	-0.2003	(-2.40)	**	-0.0342	(-0.28)		-0.3121	(-4.92)	***	-0.1998	(-2.40)	**	-0.0362	(-0.30)	
<i>PB</i>	0.007	(0.79)		0.0035	(0.38)		0.0126	(1.15)		0.0085	(0.95)		0.005	(0.55)		0.0146	(1.33)	
<i>ST</i>				-0.3112	(-1.83)	*	-0.2680	(-1.56)					-0.2994	(-1.80)	*	-0.2449	(-1.43)	
<i>Analyst</i>				-0.5904	(-4.68)	***	-0.6103	(-4.36)	***				-0.5891	(-4.71)	***	-0.6062	(-4.36)	***
<i>Fund</i>				-2.6351	(-1.00)		-3.0392	(-1.11)					-2.7468	(-1.03)		-3.1747	(-1.16)	
<i>Restricted</i>				0.049	(0.11)		-0.2317	(-0.42)					0.032	(0.07)		-0.2236	(-0.41)	
<i>Ownership</i>				-2.1577	(-4.06)	***	-2.0691	(-3.13)	***				-2.131	(-4.03)	***	-2.0358	(-3.09)	***
<i>Duality</i>				-0.4818	(-0.94)		-0.3097	(-0.63)					-0.4779	(-0.93)		-0.2976	(-0.61)	
<i>Meeting</i>				-0.4441	(-4.11)	***	-0.4528	(-4.07)	***				-0.4457	(-4.14)	***	-0.4520	(-4.04)	***
<i>Bosize</i>				0.008	(0.07)		-0.0707	(-0.53)					0.0001	(0.00)		-0.0814	(-0.61)	
<i>Indep</i>				-0.0605	(-0.48)		-0.0751	(-0.51)					-0.0663	(-0.53)		-0.0834	(-0.57)	
<i>Supsiz</i>				-0.2223	(-1.34)		-0.2765	(-1.59)					-0.2262	(-1.37)		-0.2764	(-1.58)	
<i>Constant</i>	2.519	(1.96)	**	1.4006	(0.77)		-2.0364	(-0.77)		2.3032	(1.76)		1.2666	(0.69)		-2.0637	(-0.79)	
Industry effect		No			No			Yes			No			No			Yes	
Region effect		No			No			Yes			No			No			Yes	
Year effect		No			No			Yes			No			No			Yes	
Pseudo-R <sup>2</sup>		0.1525			0.1776			0.1944			0.1509			0.1759			0.1921	
Obs.		10,317			10,317			10317			10,317			10,317			10,317	

This table present the empirical results of the following logistic regression model

$$Fraud_{t+1} = \alpha_0 + \alpha_1 EM_t + \alpha_2 MAO_t + \alpha_3 EM_t \times MAO_t + \sum_{k=3}^k \alpha_{k+1} Control_{k,t} + Year + Industry + Region + \varepsilon$$

where the one-year lead dependent dummy variable *Fraud* is equal to one if the firm is subject to regulatory enforcement against fraud, and zero otherwise; the lack of executive integrity is proxied by following two earning management measures; *EM* is the ratio of non-operating income relative to revenue; *DEM* is a dummy variable equal to one if *EM* is above the median value of the firms within the same industry of the same year, and zero otherwise; and *MAO* equals one if a modified audit opinion is issued by the auditor, which indicates (potential) problems with a financial statement, and zero otherwise. Other control variables are defined in the Appendix. The sample period covers 2001 to 2008. All t-statistics are reported and adjusted for heteroskedasticity. The superscripts \*, \*\*, and \*\*\* denote the 10%, 5%, and 1% levels of significance, respectively.

**Table 6**

Relationship between fraud and change in earnings management conditional on modified audit opinion (test of hypothesis H3)

	Regression I			Regression II			Regression III		
<i>ChEM</i>	3.1601	(3.57)	***	2.8156	(3.11)	***	3.2223	(3.34)	***
<i>MAO</i>	2.2810	(19.45)	***	2.1450	(16.05)	***	2.2091	(15.46)	***
<i>ChEM</i> × <i>MAO</i>	-2.7065	(-2.7)	***	-2.3220	(-2.27)	***	-2.6762	(-2.44)	**
<i>Size</i>	-0.3457	(-5.41)	***	-0.2185	(-2.59)	***	-0.0480	(-0.39)	
<i>PB</i>	0.0090	(0.99)		0.0053	(0.57)		0.0148	(1.32)	
<i>ST</i>				-0.2972	(-1.78)	*	-0.2496	(-1.47)	
<i>Analyst</i>				-0.5342	(-4.16)	***	-0.5657	(-3.93)	***
<i>Fund</i>				-3.1508	(-1.16)		-3.5358	(-1.25)	
<i>Restricted</i>				0.1991	(0.44)		-0.1045	(-0.18)	
<i>Ownership</i>				-2.2729	(-4.21)	***	-2.1906	(-3.26)	***
<i>Duality</i>				-0.4044	(-0.78)		-0.2184	(-0.44)	
<i>Meeting</i>				-0.4305	(-3.93)	***	-0.4354	(-3.84)	***
<i>Bosize</i>				0.0368	(0.32)		-0.0404	(-0.29)	
<i>Indep</i>				-0.0508	(-0.4)		-0.0460	(-0.31)	
<i>Supsiz</i>				-0.2619	(-1.55)		-0.3082	(-1.72)	*
<i>Constant</i>	3.2632	(2.5)	**	1.7817	(0.96)		-1.7087	(-0.64)	
Industry effect		No			No			Yes	
Region effect		No			No			Yes	
Year effect		No			No			Yes	
Pseudo-R <sup>2</sup>		0.1530			0.1768			0.1944	
Obs.		9,678			9,678			9,678	

This table present the empirical results of the following logistic regression model

$$Fraud_{t+1} = \alpha_0 + \alpha_1 ChEM_t + \alpha_2 MAO_t + \alpha_3 ChEM_t \times MAO_t + \sum_{k=3}^k \alpha_{k+1} Control_{k,t} + Year + Industry + Region + \varepsilon$$

where the one-year lead dependent dummy variable *Fraud* is equal to one if the firm is subject to regulatory enforcement against fraud, and zero otherwise; the lack of executive integrity is proxied by the change of earnings management, *ChEM* which is the difference between *EM* in year *t* and *EM* in year *t-1*; *MAO* equals one if a modified audit opinion is issued by the auditor, which indicates (potential) problems with a financial statement, and zero otherwise. Other control variables are defined in the Appendix. The sample period covers 2001 to 2008. All t-statistics are reported and adjusted for heteroskedasticity. The superscripts \*, \*\*, and \*\*\* denote the 10%, 5%, and 1% levels of significance, respectively.