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Managerial ability, political connections, and fraudulent financial reporting in China [☆]

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ABSTRACT

The primary objective of this paper is to examine the associations among managerial ability, political connections and enforcement actions for financial reporting misrepresentation (hereafter financial reporting fraud) in China. Using a sample of listed firms in China during 2007–2012, we first find that increased managerial ability leads to less financial reporting fraud. Second, political connections of firms can weaken or limit the effect of managerial ability on the likelihood of financial statement fraud. Further analyses indicate that the results are primarily driven by non-state-owned firms, rather than state-owned firms. Finally, we further find that firms with capable managers face less severe penalties by the regulatory agencies relative to those without capable managers.

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1. Introduction

China is the largest transitional economy, and plays an increasingly critical role in the global economy.¹ However, because of high-level political corruption and lax legal enforcement in China (Allen et al., 2005; La Porta et al., 2008), the incidence of financial and accounting scandals has increased dramatically over the past two decades. The resulting decline in investor confidence in the capital market and firm financial reporting has received increasing attention from academics, practitioners and regulators. In this paper, we explore two potentially crucial determinants of financial statement fraud in China: managerial ability and political connections. More specifically, we first examine the relation between managerial ability and the likelihood of fraudulent financial reporting. Next, because political connections play a major role in business activities in China, we further examine whether the association between managerial ability and fraud probability varies systematically across the degree of managerial political ties.

The first question to be addressed is whether managerial ability is associated with the likelihood that listed firms will face enforcement actions by the regulatory agencies (China Securities Regulatory Commission, hereafter CSRC, and stock exchanges). Whereas most archival work on financial scandals or financial reporting quality focuses mainly on firm-specific characteristics (e.g., Klein, 2002; Dechow et al., 2010), several recent papers in the accounting literature show that

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¹ If current trends continue, China will overtake the U.S. to become the largest economy in the world by 2025 (Allen et al., 2005).

managers' individual preferences have an effect on firms' voluntary disclosure and financial reporting outcomes (Bamber et al., 2010; Dejong and Ling, 2013; Dyreng et al., 2010; Ge et al., 2011; Yang, 2012; Demerjian et al., 2013). In this paper, we focus on a major manager-specific feature or "style", managerial ability. Because more capable managers are knowledgeable about their business and can therefore make effective judgments and estimates, they can better transform firm resources and thus achieve better business performance. In addition, the decreased risk of business failure due to better managerial ability will further mitigate the going concern risk and audit risk (Krishnan and Wang, 2015). Based on the "Fraud triangle" (Cressey, 1950; Szwajkowski, 1985; Weygandt et al., 2015),² the incentive for firms or managers to commit fraud is stronger when firms face larger financial pressure and needs. We predict that managerial ability would thus reduce firms' financial pressure and, in turn, the likelihood of committing fraud in general and financial reporting fraud in particular.

Next, the quality of a firm's management can have a certifying effect on firm value (Chemmanur and Paeglis, 2005). In this case, the staff of regulatory agencies, faced with time and resources constraints, will more likely be attracted to firms without able managers. Therefore, we predict that managerial ability will be expected to decrease the likelihood of being scrutinized and sanctioned by regulatory agencies (CSRC and stock exchanges).

Extant studies often use SEC enforcement actions or AAERs as a proxy for financial reporting fraud (Files, 2012). The main reason for this is that enforcement action has the advantage over other proxies based on financial statement information (e.g., earnings management) in that it provides a direct measure of financial reporting quality. Therefore, this measure is more objective and not subject to measurement error. Next, although high accruals may signal the poor quality of financial reporting, these accruals may not arise from a violation of GAAP. In contrast, enforcement actions by the regulatory agencies arise from the violation of GAAP, which arguably imposes greater costs on companies and managers (Chen et al., 2005). Following and extending prior studies, this paper focuses the analyses primarily on enforcement actions related to financial reporting (hereafter financial reporting fraud).

The second question to be addressed is whether the presence of political connections will weaken the effectiveness of managerial ability regarding the likelihood of reducing financial reporting fraud. In the Chinese setting, which is characterized by a relationship-based economy (Chan et al., 2012; Du et al., 2015), listed companies tend to resolve information asymmetry through connections, and thus have lower-quality financial reporting (Ball and Shivakumar, 2005) in the sense that financial reporting quality decreases with the level of political connections; therefore the likelihood of financial reporting fraud increases with the level of connections. In this case, political connections will weaken the ability of, and incentive for, a firm's manager to provide high-quality financial reporting. It follows that *ceteris paribus* the effectiveness of managerial ability in reducing fraud will decrease with the extent of political connections.

Next, connected firms typically derive gains from their connections over and above the payments they make.³ In an attempt to mislead investors so that insiders are able to make gains at the expense of investors, connected firms tend to remain more opaque and thus more likely commit financial reporting fraud than non-connected firms (e.g., Chaney et al., 2011; Fan et al., 2007; Gross et al., 2016; Hellman et al., 2003). Third, political rent-seeking is prevalent and highly lucrative in China. To reduce competitive rent-seeking from rivals and/or to avoid social sanctions, connected firms that extract substantial political benefits tend to deliberately remain less transparent by providing low quality accounting information. In particular, legal enforcement in China is weak and the penalties imposed for financial statement fraud tend to be too low to enhance the incentive for insiders to provide high quality financial reporting. Therefore, connected firms are more likely to be involved in financial reporting fraud.

According to the above arguments, political connections weaken or limit the effectiveness of managerial ability in reducing the likelihood of fraudulent financial reporting. Consequently, we hypothesize that the effectiveness of managerial ability in reducing the fraudulent financial reporting likelihood is weaker for firms with political connections than for firms lacking such connections.

We focus our analyses on China for the following reasons. First, unlike western countries where business is characterized by rules-based governance, the Chinese cultural context is widely recognized to be more relationship-based than rules-based (Sue-Chan and Dasborough, 2006; Chan et al., 2012; Du et al., 2015; Piotroski et al., 2015). Relationships play a critical and pervasive role in shaping and influencing the management of Chinese business. In contrast, western countries' relationships play a more surface-level impersonal role in shaping the operation of business. As such, in China, as relationships have a dominant effect on business operation, it is unclear whether the extant findings on the effect of managerial ability on business can be generalized to Chinese listed firms, in particular in the setting of fraud. For example, Ball and Shivakumar (2005) argue that unlike publicly listed firms in the U.K., Chinese listed firms tend to resolve information asymmetry via connections networks, and thus have lower demand for high quality financial reporting. Second, in the context of the "relations" culture in China, we can further examine whether the effect of managerial ability on fraud, if any, systematically varies with political connections, a very common type of connection in China. China provides us with a setting to test our predictions.

² According to fraud triangle theory, three elements contribute to fraudulent activities: financial pressure, opportunity and rationalization. In our setting, we focus on the first element: financial pressure. Specifically, we argue that because firms with capable managers outperform those without capable managers, they face less financial pressure; this in turn leads to the lower likelihood of committing fraud.

³ Regarding the benefits from political connections, see Khwaja and Mian (2005) for a discussion of preferential access to credit; Dinc (2005) for preferential treatment by government-owned banks; Agrawal and Knoeber (2001) for preferential treatment in the awarding of government contracts; and Faccio et al. (2006) for bailouts. With respect to the costs of political connections, Fan et al. (2007) discuss vote-buying behavior; Hellman et al. (2003) discuss bribe behavior.

Third, as mentioned above, China's legal enforcement is weak and the penalties imposed for financial statement fraud tend to be too low to enhance the incentive for insiders to provide high quality financial reporting. Listed firms thus tend to resort to illegal measures in their operations (Yu et al., 2015); this provides us with an opportunity to examine the effect of managerial ability on fraud. In addition, data on enforcement actions are made available by regulatory bodies in published media or on their websites on a periodic basis. Because of these features and the availability of fraud data, China provides an ideal institutional environment for examining our questions.

Our primary proxy for managerial ability is estimated following the measure developed by Demerjian et al. (2012), which is constructed using two steps. First, Demerjian et al. (2012) calculate firm efficiency by using data envelopment analyses (DEA); if firms generate more revenues from a given set of inputs, then they are viewed as an efficient firm. Second, because overall firm efficiency is affected by the firm and its managers, Demerjian et al. (2012) further distinguish managerial efficiency from firm-level efficiency. The resulting managerial efficiency, as a proxy for managerial ability, allows us to disentangle the effect of the manager from that of the firm, and to retain an ordinal ranking of quality in our sample.⁴

Our empirical results can be summarized as follows. First, we find that more capable managers are less likely to be involved in financial reporting fraud after controlling for confounding factors for fraud and other control variables, consistent with our prediction. The results indicate that even in a relation-based economy like China, managerial ability can play an important role in reducing the likelihood of fraud. Second, and more interestingly, we find that the effectiveness of managerial ability in reducing the likelihood of fraudulent financial statements is weaker when firms are politically connected than when firms are not. The results indicate that political connections limit the effect of managerial ability on financial reporting fraud. In short, managerial ability plays a relatively major role in reducing the likelihood of fraudulent financial reporting when firms have no political connections.

The predominant objective of a private entrepreneur in China is to maximize profit, whereas the main goals of managers of state-owned enterprises (SOEs) are political and social (Li et al., 2008). To examine the effect of SOEs and non-SOEs in our analyses, we partition our sample into SOE and non-SOE firms and then re-estimate our regression within each subsample. We find that the results hold only for non-SOE firms, in line with the existing literature (Li et al., 2008; Wu et al., 2012), suggesting that our main conclusions are primarily driven by non-SOEs. The results suggest that managerial ability plays a more important role in reducing the likelihood of fraud for non-SOE firms than for SOE firms.

In addition, when we use the degree of penalties imposed for fraud as an alternative proxy for financial reporting fraud, we find that firms with capable managers will face less severe punishment when penalized by the regulatory agencies. Furthermore, this effect is weaker when firms are politically connected.

One concern with our analysis is the endogeneity of managerial ability; to address this issue, we use propensity score matching to control for the potential differences in characteristics between firms with better managers and those lacking better managers. The results are broadly comparable to those using the full sample. Therefore, our results are not driven by the selection-bias of managers. Next, similarly, we also use the propensity score matching technique to address the endogeneity issue of the political connections. We find that the results remain qualitatively unchanged. Overall, these tests mitigate our concerns regarding the endogeneity issue.

Our paper contributes to the literature in several dimensions. First, we contribute to the managerial ability literature by linking managerial ability and enforcement actions. The extant studies on the association between managerial ability and financial reporting quality focus on discretionary accruals or management forecasts; in contrast, we focus exclusively on enforcement actions by regulatory bodies and the severity of penalties imposed for committing fraud.

Second, the literature on the effect of managerial ability on financial reporting quality is mainly based on western countries where business is characterized by rule-based governance. In contrast, we focus our analyses in a Chinese setting, where business is characterized by connection-based governance, and examine managerial ability and enforcement actions, which arguably impose greater costs on companies and managers. We find that, even in a relationship-based economy, superior managerial ability can also help to reduce the likelihood of financial reporting fraud. This finding has important implications for a firm's board of directors' choice of managers because hiring a manager not only affects the future operating performance of the firm, but also the likelihood of fraud and the penalty costs, even in a relationship-based economy.

Third, we also contribute to the literature on both managerial ability and political connections. Our paper is the first, of which we are aware, to empirically examine whether and how the effects of managerial ability on financial reporting fraud and penalties imposed for fraud systematically vary across firms with and without political connections. Our results demonstrate that political connections of a firm weaken or limit the ability of managers to provide high-quality financial reporting. Therefore, managerial ability plays a less critical role in reducing the financial reporting fraud when firms are politically connected than when they are not.

The remainder of this paper is organized as follows. Section 2 describes the related literature and develops the hypotheses. Section 3 describes our research design. Section 4 describes our sample and data sources. Section 5 reveals the empirical results, and Section 6 presents the conclusions.

⁴ Demerjian et al. (2012) document that their measure outperforms existing measures of ability such as historical stock returns and media citations.

2. Related literature and hypotheses development

2.1. Institutions and related literature

2.1.1. Institutions

Because of the rapid rate of the economic transition in China, a large scope exists for securities and business fraud. Law enforcement institutions and market regulators play a crucial role in protecting investor rights and instilling confidence in the stock market (La Porta et al., 2000; DeFond and Hung, 2004).

When China's Securities Law was passed in December 1998 (becoming effective in July 1999), it was the first comprehensive securities legislation in the nation. Its enactment granted the CSRC the authority to implement centralized and unified regulations to ensure the lawful operations of nationwide securities markets (Friedman, 2002). The CSRC's core responsibilities are to establish policies and regulations, monitor China's centralized securities supervisory system, regulate securities issuing and trading, and investigate and enforce penalties on activities that are in violation of the securities or futures laws and regulations (Huang, 2008). The CSRC is also empowered to issue Opinions, Guideline Opinions, and non-legally Binding Guidance for publicly traded corporations (Friedman, 2002). The CSRC's role was further expanded when the Supreme People's Court declined to directly handle securities-related litigations and entrusted such judgments to the CSRC in 2004 (Yin, 2004). The functions of the CSRC are very similar to those of the Securities and Exchange Commission (SEC) in the U.S., the very system that it was modeled after.⁵

The CSRC is delegated to monitor, investigate and impose penalties on firms conducting fraud in securities or financial reporting. Examples of fraud include embezzlement by company officials or securities firms, the expropriation of assets, falsified financial statements, inadequate financial disclosures, and stock market manipulation. The CSRC regularly monitors companies and securities firms for fraud through periodic reviews, random inspections and surveys that look for "red flags." It may also initiate investigations according to information it receives from various sources, such as current and former employees, newspapers, insiders, legal proceedings, information and complaints from investors, police investigations, and stock exchanges. Similar to the New York Stock Exchange, China's stock exchanges are also allowed to issue their listing rules. In 1990, the *Shanghai Stock Exchange Listing* (*Shenzhen Stock Exchange Listing*) became effective. When listed firms are in violation of these listing rules and commit fraud, they will be sanctioned by the stock exchanges.

The enforcement actions by the CSRC or/stock exchanges can be classified into nine types: illegal share buybacks, inflated earnings, the fabrication of assets, the unauthorized change of fund usages, a delay in disclosure, false statements, violations of fund provisions, a major failure to disclose information, and embezzlement by a major shareholder. Five of these types of fraud are related to financial reporting and will serve as our focus; they are inflated earnings, the fabrication of assets, a delay in disclosure, false statements and a major failure to disclose information.

Although the regulatory agencies have the authority to enforce penalties on activities that are in violation of the securities regulations, their penalties tend to be too lenient to encourage compliance with accounting standards and related regulations (*Daily Economic News*, 2014; *Securities Time News Website*, 2014). According to their severity, the penalties on financial statement fraud from CRSC can be classified into the following seven types: public criticism, warnings, reprimands, fines, confiscations of illegal gains, revocation of business permit, and prohibiting access to security markets. However, in our sample, the major types of penalties imposed for financial statement fraud are public criticism and warnings, which are the first two among the least severe types of penalties. In addition, recent financial press and anecdotes also indicate that in China, current law enforcement is poor and the penalties structure is ineffective at preventing listed firms from fraudulent activities. For example, *Securities Time News* (2014) indicates that Nanjing Textile Imp/Exp Corp., Ltd. inflated their earnings of RMB 344 million for five consecutive years; however, the CRSC only imposed a penalty of "warnings and fines" on this financial statement fraud (*Securities Time News Website*, 2014).⁶

2.1.2. Related literature

The motivation for this paper is derived from two streams of literature. The first stream concerns the effect of managerial ability on financial reporting quality; the second examines the effect of political connections on financial reporting quality or fraud.

2.1.2.1. Managerial characteristics. The first stream concerns the effect of managerial ability on financial reporting quality. Early studies on earnings quality examine firm-specific characteristics (Dechow and Dechow, 2002; Doyle et al., 2007; Ashbaugh-Skaife et al., 2008; Klein, 2002). Recent accounting literature focuses on individual, manager-specific effects. For example, Bamber et al. (2010) show that individual managers appear to have their own styles that are related to their propensity to issue guidance and the characteristics of the resulting guidance (e.g., the precision of the guidance). In the same vein, Ge et al. (2011) explore manager fixed effects on certain financial reporting and find, similar to Bamber et al. (2010), that individual managers matter because firms' accounting policies systematically vary with manager fixed effects.

⁵ The CSRC's responsibilities include: formulating policies, laws and regulations concerning markets in securities and futures contracts; overseeing the issuing, trading, custody and settlement of equity shares, bonds and investment funds; supervising the listing, trading and settlement of futures contracts, futures exchanges, securities and futures firms.

⁶ Source: <http://kuaixun.stcn.com/2014/0725/11593875.shtml> and <http://www.mrjxw.com/shtml/mrjxw/20140523/50007.shtml>.

Although the fixed-effects approach allows researchers to find a manager-specific effect, it is subject to some limitations. For example, fixed effects tend to be constrained to larger firms because top managers within smaller firms often switch to private firms (Ge et al., 2011). To overcome these problems, recent studies directly examine the effect of managerial characteristics or “styles” on earnings quality. For example, Francis et al. (2008) find a negative relation between Chief Executive Officer (CEO) reputation and earnings quality. In recent years, some accounting researchers use the measure of managerial ability developed by Demerjian et al. (2012) to examine the effect of managerial ability on financial reporting quality. For example, Baik et al. (2011) find that the likelihood of issuing management earnings forecast and the frequency of forecasts increase with managerial ability. Demerjian et al. (2013) find that the earnings quality is higher for firms with more capable managers than for firms with less able managers. Krishnan and Wang (2015) show that the likelihood of issuing a going concern opinion and audit fees decrease in managerial ability.

2.1.2.2. Political connections. The second stream of literature concerns the effect of political connections on information quality. One line of literature documents that connected firms tend to derive gains from their political ties over and above the payments they make (e.g., Chaney et al., 2011; Hellman et al., 2003; Fan et al., 2007). To hide or delay reporting of the benefits received, politically connected firms tend to manage earnings with the purpose of misleading investors to gain at their expense (Schipper, 1989; Leuz et al., 2003). Leuz and Oberholzer-Gee (2006) argue that the higher transparency associated with foreign financing makes it harder for connected firms to extract benefits, so they are likely to choose to remain opaque by raising capital domestically. Chaney et al. (2011) find that connected firms disclose low quality information in an attempt to mislead investors so that insiders can gain at their expense. However, based on a sample from 28 countries, Guedhami et al. (2014) find that with rational expectation, politically connected firms prefer to appoint Big 4 audit firms, and thus have higher information quality.

Another line of literature on political connections examines the effect of political connections on SEC enforcement activities.⁷ Some studies examine the consequences of SEC enforcement actions. For example, Karpoff et al. (2007, 2008a, 2008b) and DeFond and Jiambalvo (1991) document the severe costs of enforcement action for a firm and its managers. Other studies use enforcement actions data to build a sample of fraud firms and to explore the factors associated with this behavior (e.g., Dechow et al., 1995, 1996, 2011). For example, Yu and Yu (2011) indicate that firms' lobbying activities make a significant difference in fraud detection. Correia (2014) reveals that firms and executives with long-term political contributions and lobbying are less likely to be involved in SEC enforcement actions and face lower penalties if they are prosecuted by the SEC.⁸

2.2. Hypothesis development

The neoclassical view of firms assumes that top managers are homogeneous and thus “different managers are regarded as perfect substitutes for one another” (Bertrand and Schoar, 2003). However, recent studies find that individual managers exert idiosyncratic influences on corporate decisions. In particular, several studies in the accounting literature reveal that managers' individual preferences have an effect on firms' voluntary disclosure and financial reporting outcomes (Bamber et al., 2010; DeJong and Ling, 2013; Dyreng et al., 2010; Ge et al., 2011).

Our first research question investigates the association between managerial ability and the likelihood of fraudulent financial reporting. The ability of managers to enhance the economic performance of a firm's overall resources rests on an integration of various skills such as technical skill, human skill and conceptual skill (Barney, 1991; Katz, 1955). This managerial ability not only affects firms' performance but also affects the likelihood of enforcement actions being taken by the CSRC. First, more capable managers tend to be knowledgeable about the firm's prospects, industry trends and macroeconomic conditions; thus, they can select better projects and implement them more ably. Therefore, firms hiring more capable managers tend to outperform those that do not have such capable managers (Penrose, 1959; Katz, 1955; Barney, 1991; Castanias and Helfat, 1991; Carmeli and Tishler, 2004; Chemmanur and Paeglis, 2005).

According to the “fraud triangle” (Cressey, 1950), financial pressure and needs can stimulate managerial fraudulent activities. This holds true particularly in transition economies like China because a weak legal environment provides firms with an opportunity to engage in fraudulent behaviors. For example, in China, publicly listed firms are required to achieve a 10% ROE

⁷ Because the Chinese government tightly controls the stock market and business activities, political connections play a significant and critical role in the Chinese economy (Chen et al., 2011a, 2011b). For example, the existing literature reveals that political connections influence listed firms' financing and performance (Fan et al., 2007; Tu et al., 2013), tax burden (Kusnadi and Yang, 2014) and cross-listing decisions (Hung et al., 2012). In addition, audit firms' connections with regulators may reduce the initial-public-offering rejection rate for their clients, and thereby adversely affect capital allocation efficiency (Yang, 2013). The results of studies on firm performance are mixed; although many studies find that political connections have a positive effect on firm performance (Fisman, 2001; Goldman et al., 2009; Li et al., 2008), others document that political connections have negative effects (Faccio, 2006; Boubakri et al., 2008). In the Chinese context, the extant studies find that politically connected firms underperform non-connected firms (Fan et al., 2007; Tu et al., 2013).

⁸ There are two strand lines of literature on political connections. The first focuses mainly on whether firms engage government officers as their CEOs or to serve on their board of directors, which is the focus of most research on political connections. The second examines whether firms *directly* lobbying the SEC are less likely to be involved in SEC enforcement actions and face lower penalties. When the latter reveals that firms with direct lobbying are likely to be involved in SEC enforcement actions, so far there is no evidence as to whether firms with connected CEOs or directors can also reduce the likelihood of being sanctioned by the SEC. One plausible reason for this is that such connected firms do not necessarily have direct relations with the SEC commander or members. In China, the existing literature on political connections focuses exclusively on whether firms engage government officers as their CEOs or to serve on their board of directors, rather than on whether firms use contributions and lobbying to obtain favors from regulators (i.e. the CSRC and stock exchanges). Therefore, it is an empirical question whether connected firms (i.e. firms with connected CEOs or directors) are less likely to be sanctioned by regulatory bodies in China.

threshold in each of the previous three years when they apply for permission to issue additional shares. This rule leads to a concentration of ROEs in the area just above 10%. To mitigate investors' concern, the regulatory agencies have increasingly scrutinized firms using non-operating income to reach the ROE threshold (Chen and Yuan, 2004). In another China setting, if one firm reports losses in two consecutive years, or its net assets per share are negative in the most recent year, its stock will be put under "special treatment (ST)" status.⁹ In fear of being put under ST status, firms with poor performance are more likely to commit fraud, such as inflated earnings, fabrication of assets and a major failure to disclose information. This will in turn increase the likelihood of enforcement actions by the CSRC or stock exchanges. This argument, coupled with the positive effect of managerial ability on its firm performance, leads to our prediction that firms with capable managers are less likely to produce fraudulent financial reporting than those without capable managers.

Second, high-level managerial ability can also reduce the risk of firm failure and, in turn auditor's risk. Since managerial ability tends to be related to better current and future performance, it can alleviate the risks of poor performance and firm failure. In addition, an able manager is associated with future higher earnings quality (Demerjian et al., 2013). As such, Krishnan and Wang (2015) find that the likelihood of issuing a going concern opinion and audit fees decrease with managerial ability. In a fraud context, this further implies that managerial ability can reduce the likelihood of financial reporting fraud.

Third, prior studies (e.g., Chemmanur and Paeglis, 2005) indicate that the quality of a firm's management can have a certifying effect on firm value. As a result, more capable managers can convey the value of their firm more credibly to outsiders. As mentioned earlier, in addition to regular investigations, regulatory agencies might monitor firms for fraud through random inspections, surveys that look for "red flags", news reports and various other sources. Therefore, staffs of regulatory agencies, faced with time and monetary constraints, often rely on these sources to determine which law violations merit additional scrutiny (Files, 2012). Given the certifying effect of managerial ability, regulatory agencies will put relatively more diagnostic investigative focus on the financial reporting of firms with less capable managers, relative to that of firms with more able managers; this will lead to the decreased likelihood of being scrutinized and sanctioned by the regulatory agencies.

In light of these arguments, we formulate our first hypothesis as follows:

H1. Firms with capable managers are less likely to produce fraudulent financial reporting than those without capable managers.

In a relationship-based economy like China, if an able manager can reduce the likelihood of fraudulent financial reporting, one may naturally ask the following question: Does the effect of managerial ability on the likelihood of fraud differ between connected and non-connected firms?

Financial reporting quality differs substantially due to different market demand because different countries' financial reporting plays different economic roles.¹⁰ In a Chinese setting, publicly listed firms tend to resolve information asymmetry through connections, and thus have lower reporting quality (Ball and Shivakumar, 2005). This suggests that, *ceteris paribus*, the incentive of firms to supply high-quality financial reporting decreases with the extent of political connections and, in turn, the likelihood of committing financial reporting fraud increases with the extent of political connections. As such, it stands to reason that an able manager plays a less important role in managing business in general and reducing the likelihood of fraud in particular for connected firms than for non-connected firms.

Second, political rent seeking is prevalent and highly lucrative in East Asia (e.g., China).¹¹ Connected firms in China typically derive gains from their connections over and above the payments they make. Due to weaker investor protection and lax regulation enforcement, firms tend to employ illegal measures, indicating a higher likelihood of fraud (Yu et al., 2015); furthermore, insiders' expropriation of minority shareholders is more severe for connected firms in China than for those in other countries (Qian et al., 2011). Accordingly, connected firms have a stronger incentive to intentionally remain opaque to prevent rival completion and/or social sanctions (Fan and Wong, 2005) and mislead investors at their expense (Qian et al., 2011); this can reduce the incentive for managers to avoid fraud. As mentioned above, when the penalties by regulatory agencies for fraudulent firms are set relatively low as in China, the punishment enforced by regulatory agencies will not be enough to increase the incentives for firms to avoid financial reporting fraud.¹² This, coupled with weaker property rights protection and lax enforcement, will further exacerbate this situation.

⁹ There are various financial and trading restrictions on special treatment stock. For example, its daily stock price movement is restricted to be no more than 5%; unlike other non-ST firms, its semi-annual report must be audited by auditors; it cannot raise additional capital from stock market. Finally, if the ST firm reports one more loss, it is suspended from trading on the stock exchange, and after a fourth annual loss, the stock will be delisted (Jiang and Wang, 2008).

¹⁰ Ball and Shivakumar (2005) indicate that, relative to the UK listed firms, firms in some countries are more likely to resolve information asymmetry between firms and the public through an "insider access" model rather than "arm's length" public disclosure. For example, listed firms in Germany tend to resolve information asymmetry via the "stakeholder" system, while those in South Korea and Japan tend to resolve information asymmetry via *chaebol* and the *keiretsu* system, respectively.

¹¹ Political connections can benefit firms in China; for example, Wu et al. (2012) find that connected managers of private firms help their firms to attain tax benefits. Tu et al. (2013) indicate that politically connected acquirers tend to receive preferential treatment and obtain higher quality firms during full privatization, while paying a lower premium.

¹² For example, as discussed in Section 2.1.1, although the penalties imposed on firms for financial reporting fraud can be classified into seven types, most of the penalties in our sample are "public criticism" and "warnings"; low penalty costs for fraudulent financial reporting do not effectively enhance the incentive for managers to improve their financial reporting quality.

According to the above arguments, we propose the second hypothesis as follows:

H2. Political connections will weaken the effect of managerial ability on the likelihood of financial reporting fraud.

However, as mentioned earlier, political connections can bring benefits from the government such as government bailouts in face of financial distress (Faccio et al., 2006), favorable tax treatment (Faccio, 2006), access to key resources (Dinc, 2005; Leuz and Oberholzer-Gee, 2006; Khwaja and Mian, 2005) and a higher initial public offering (IPO) price (Francis et al., 2009). These benefits associated with political connections will reduce a firm's financial pressure and needs, in turn mitigating the likelihood of committing fraud in general and financial reporting in particular. Therefore, according to fraud triangle theory (Cressey, 1950), firms with able managers have less incentive to commit fraud than those lacking able managers. If this is the case, it would bias our results against the hypothesis that political connections limit the effect of managerial ability on reducing the likelihood of fraud.

3. Research design

3.1. Variable measurement

3.1.1. Managerial ability

We follow the approach of Demerjian et al. (2012), who estimate managers' efficiency in generating firm's revenues, to construct our primary proxy for managerial ability, *MAABILITY*. Demerjian et al. (2012) use a two-stage process to estimate managerial ability, and find that *MAABILITY* is strongly associated with manager fixed effects, and that stock price reactions to manager turnovers are negative (positive) when they assess the outgoing managers as having a high (low) ability in their validity checks of this measure. Following Demerjian et al. (2012), in the first stage, we use data envelope analyses (DEA) to measure the relative efficiency of peer decision-making units in a multiple input-output setting. More specifically, we use a nonlinear optimization procedure to evaluate firm efficiency within industries by comparing sales generated by each firm, conditional on the following seven inputs: (1) the cost of goods sold (*COGS*), (2) selling and administrative expenses (*SG&A*), (3) net fixed assets (*PPE*), (4) net operating leases (*Opslease*), (5) net research and development expenses (*R&D*), (6) purchased goodwill (*Goodwill*) and (7) other intangible assets (*OtherIntan*).

This firm efficiency measure (*FIRM EFFICIENCY*), however, is affected by both firm-specific factors and management characteristics. In the second stage, we thus use Tobit regression to regress the firm-level efficiency measure on a set of key firm-specific characteristics expected to aid or hinder management's efforts to isolate manager-specific effects. These firm-specific characteristics include: market share, size, cash availability, firm age, business segment concentration, foreign operations, and firm fixed effects by industry. The residual from this regression is the managerial ability score (hereafter, the *MAABILITY*), which captures the effect of firm efficiency attributed to managerial ability.

Demerjian et al. (2012) perform a number of validity tests to ensure that their measure reflects managerial ability. For example, they reveal that the measure is significantly related to manager fixed effects; second, they find that this measure is negatively associated with stock price reactions when able CEOs announce that they are leaving firms. Third, they document that this measure is positively related to the subsequent performance at CEOs' new appointment. Fourth, they find that this measure outperforms several alternative managerial ability measures, such as CEO tenure, CEO pay, historical return on assets, historical returns, and media citations. They also indicate that although their managerial ability measure (i.e. *MAABILITY*) is correlated with a number of measures of ability, it dominates these alternative measures in a number of ways. Taken together, these validity tests show that their managerial ability measure captures an economically significant manager-specific component of ability, and contains less noise than existing proxies of managerial ability; therefore, this measure is widely used in accounting and financial literature (e.g., Krishnan and Wang, 2015; Chen et al., 2015; Demerjian et al., 2013; Baik et al., 2011).

However, to ensure that this measure of managerial ability can be used in a China setting, we first examine whether the variable *MAABILITY* estimated using Chinese data has similar distribution to that estimated using American data. Our analyses (shown in more detail in the "descriptive statistics" section) reveal that the managerial ability variable estimated using Chinese data has similar distribution as that estimated using the American data. Next, we perform several validity analyses and find that our primary inferences are the same as those in the main tests.¹³

¹³ Following Demerjian et al. (2012), we alternatively use several other proxies for managerial ability, including historical industry-adjusted stock returns (*HISTOCK_INDADJ*), historical industry-adjusted ROA (*HISTOROA_INDADJ*), CEO cash compensation (*CEOCASHCOMP*), CEO tenure (*CEOTENURE*), overall firm efficiency measure (*FIRM EFFICIENCY*), and firm size (*SIZE*). The untabulated results indicate that our managerial ability measure (*MAABILITY*) is also significantly correlated with all alternative measures of managerial ability. Additionally, to ensure that their measure also reflects managerial ability in a China setting, we follow Demerjian et al. (2012) and conduct a validity check by examining the association between the score and announcement returns to CEO turnovers. We find that the announcement returns to CEO turnovers are negatively associated with the CEO's ability score. Economically, a one-standard-deviation shift in manager ability is associated with a return of -0.32% for both the $(-1, 1)$ and $(-5, 1)$ windows, respectively, indicating that these effects appear to be economically significant. To compare our ability measure with these alternative measures, we explore whether a similar relation exists for the alternative measures of ability. The untabulated results, in line with Demerjian et al. (2012), show that we fail to document a negative association between turnover announcement returns and any of the alternative measures. Therefore, evidence in Demerjian et al. (2012) and our analyses indicate that this ability measure captures an economically significant manager-specific component of ability and dominates these alternative measures.

3.1.2. Political connections

In China, the top two executives of a company are the chairman of the board and the general manager. As a result, the literature on political connections in China consistently focuses on the connected ties of the CEO or chairman of the board (Fan et al., 2007, 2014; Wu et al., 2012; Hung et al., 2012; Yu et al., 2015).¹⁴ Following these papers, we define a Chinese company as having political connections if its CEO or chairman of the board is a current or former officer of the government, the military, a member of the people's congress or Chinese People's Political Consultative Conference, hereafter CPPCC). *POLITICAL* is an indicator variable that equals one if the insider (i.e. the CEO or chairman of the board) has political connections, and zero otherwise.

3.1.3. Financial reporting fraud

In this paper, we focus on the enforcement actions by the China Securities Regulatory Commission (CSRC) and/or two national stock exchanges (Shanghai and Shenzhen Stock Exchanges), rather than other proxies for earnings quality (such as accruals). Enforcement actions data are made available by the CSRC and two stock exchanges, which publicly release lists of fraudulent firms in published media or on their website on a periodic basis.

We obtain enforcement actions data from the China Securities Markets and Accounting Research (CSMAR). The CSMAR database provides various types of enforcement actions by the regulatory agencies, including illegal share buybacks, inflated earnings, fabrication of assets, unauthorized change of fund usages, delay in disclosure, false statements, violations of fund provisions, a major failure to disclose information, and embezzlement by a major shareholder. Among these, the following five types are related to financial reporting (referred to as financial reporting fraud): inflated earnings, fabrication of assets, delay in disclosure, false statements and a major failure to disclose information.

In this paper, we select financial reporting fraud to study. To examine our predictions, we construct an indicator variable, *FRAUD*, that equals one if a firm-year observation commits financial reporting fraud in the current year, and zero otherwise. In the sensitivity analyses section, we also include all enforcement actions in our analyses and find that the results are the same as those in our main tests.

3.2. Empirical models

To test H1, we estimate a probit regression of fraudulent financial reporting on managerial ability and a set of control variables documented to be related to the likelihood of fraud in prior literature (Beasley, 1996; Carcello and Nagy, 2004; Chen et al., 2006; Sheng et al., 2014; Cressey, 1950):

$$\begin{aligned} \text{Prob}(FRAUD_{t+1} = 1) = & F(\beta_0 + \beta_1 MAABILITY_t + \beta_2 BIG10_t + \beta_3 DA_t + \beta_4 PRICESTD_t + \beta_5 INSIDER_t + \beta_6 SIZE_t \\ & + \beta_7 LEV_t + \beta_8 ROE_t + \beta_9 MB_t + \beta_{10} LARSHARE_t + \beta_{11} INSTITU_t + \beta_{12} CEOSHARE_t \\ & + \beta_{13} DUAL_t + \beta_{14} BOARDSIZE_t + \beta_{15} AGE_t + \beta_{16} TOPMANCOMP_t + \beta_{17} EMP_SALARY_t \\ & + \delta \cdot INDUSTRY + \phi \cdot YEAR + e_t), \end{aligned} \quad (1)$$

where *FRAUD* is a measure of financial reporting fraud (i.e. enforcement actions for financial reporting misrepresentation). We predict that the coefficient of *MAABILITY*, β_1 , is negative, which indicates that able managers are less likely to commit financial reporting fraud.

The other explanatory variables in Eq. (1) are control variables. The first set of control variables is included to control for the opportunity to engage in fraud: audit quality (*BIG10*), internal oversight (*BOARDSIZE*) and external oversight (*LARSHARE* and *INSTITU*). We control for auditor type used by the company (Dechow et al., 1996; Gul et al., 2003) because companies audited by high-quality audit firms are less likely to commit financial reporting fraud (Carcello and Nagy, 2004). As such, following prior studies focusing on Chinese setting (Gul et al., 2003), we use the *BIG10* audit firms as a proxy for higher-quality auditors. *BIG10* is an indicator variable that equals one if the audit firm is among the top ten audit firms, and zero otherwise.¹⁵ We include the percentage of shares held by the largest shareholder (*LARSHARE*) in our regression because largest shareholder can effectively monitor a firm and thus reduce the likelihood of fraud. Finally, we also include the percentage of shares held by institutional investors (*INSTITU*) in our regression; however, we do not predict its sign because extant literature

¹⁴ In the process of earlier privatization, the Chinese government possesses the right to appoint the CEO of a listed firm. The boards of China's listed firms have almost no, or very few, directors who represent public stock investors (Fan et al., 2007). As a result, much literature uses the CEO's political ties as a proxy for political connections, rather than the largest shareholders (i.e. Fan et al., 2007, 2014). In China, the top two executives of a company are the chairman of the board and the general manager (CEO) (Wu et al., 2012; Hung et al., 2012). The general manager is elected by, and responsible to, the board (Fan et al., 2007). In contrast to the US, in China the chairman is the legal representative of the firm. The chairman is endowed with the highest authority in the firm, is responsible for overall operations and is the highest paid employee of their firm. For these reasons, some studies regard the chairman as the top manager of a firm (Firth et al., 2006; Liao et al., 2009). Recently, literature on political connections in China almost focuses solely on the connecting ties of the CEO or chairman of the board. Accordingly, political connections are consistently defined as the connected ties of chairman or/and CEO in China.

¹⁵ While Big N audit firms are well-documented to be higher-quality auditors in the U.S., the use of such a construct in China is problematic. Although the B and H share markets are dominated by Big N auditors, local auditors in China still dominate the A share market (Gul et al., 2003). As such, the literature on auditing in China consistently follows Gul et al. (2003) and uses Big 10 or Big 8 as a proxy for higher-quality auditors (e.g., Gul et al., 2003; Wang et al., 2008; Yang, 2013).

in China setting provides mixed evidence on the influence of institutional ownership on earnings management (Koh, 2007; Li et al., 2011; Niu et al., 2013; Xiao, 2015).¹⁶

We also include the second set of variables in Eq. (1) to control for attitude to rationalize dishonest actions. Prior literature (e.g., Weygandt et al., 2015) indicates that employees justify their dishonest actions because they believe they are underpaid while firms make lots of money. We include two proxies for attitude to rationalize fraud: (1) *TOPMANCOMP*, measured by the natural log of compensation of top executives, and (2) *EMP_SALARY*, measured by the natural log of employees' salaries (other than compensation of top executives).

Previous studies find that the likelihood of fraudulent financial reporting is positively associated with board size (Carcello and Nagy, 2004), so we include *BOARDSIZE*, measured by the number of directors on the board, in our model. The extant studies (Dechow et al., 1996; Carcello and Nagy, 2004) find a positive relation between financial fraud and the same individual holding the positions of board chair and CEO. We include an indicator variable, *DUAL*, which equals one if the same person holds a dual position as the board chair and CEO of the company, and zero otherwise. Extant literature (Beneish, 1999; Carcello and Nagy, 2004) indicates that firms committing financial fraud generally have more recently been listed on a national stock exchange (Beneish, 1999; Carcello and Nagy, 2004). Accordingly, we expect a negative relation between financial reporting fraud and natural log of the number of years a firm's stock has been traded on a national securities exchange (*AGE*).

Because prior studies indicate that fraud is more prevalent among smaller companies (Beasley et al., 1999; Carcello and Nagy, 2004), we measure company size (*SIZE*) using the natural log of total assets. Prior research also indicates that companies in poor financial health are more likely to commit financial reporting fraud (Beasley, 1996; Carcello and Nagy, 2004; Chen et al., 2006). We consider two measures related to financial health: leverage and return on equity. *LEV* is the total liabilities divided by total assets. *ROE* is the return on equity. Sheng et al. (2014) find that both discretionary accruals and insider trading are associated with the likelihood of financial reporting fraud. In Eq. (1), we include lagged discretionary accruals DA_{t-1} in our model; discretionary accruals (*DA*) are calculated according to Kothari et al. (2005); we also include *INSIDER*, measured by the number of inside trading transactions, in our model.

We include the standard deviation of the stock price, *PRICESTD*, because greater stock price volatility is likely to be subject to close scrutiny by regulators. Because the likelihood of fraudulent financial reporting is negatively associated with company growth (Chen et al., 2006), we include *MB*, measured as the market-to-book ratio, in our model. In addition, we also include the percentage of shares held by the CEO (*CEOSHARE*) in Eq. (1). Finally, *YEAR* is a set of dummy variables that represent the year, and *INDUSTRY* is a set of dummy variables that represent industry.¹⁷ The subscripts for each company are suppressed for the sake of simplicity.

To test H2, we add *POLITICAL* and *MAABILITY * POLITICAL* to Eq. (1) and estimate the following regression:

$$\begin{aligned} \text{Prob}(\text{FRAUD}_{t+1} = 1) = & F(\beta_0 + \beta_1 \text{MAABILITY}_t + \beta_2 \text{POLITICAL}_t + \beta_3 \text{MAABILITY}_t * \text{POLITICAL}_t + \beta_4 \text{BIG10}_t + \beta_5 \text{DA}_t \\ & + \beta_6 \text{PRICESTD}_t + \beta_7 \text{INSIDER}_t + \beta_8 \text{SIZE}_t + \beta_9 \text{LEV}_t + \beta_{10} \text{ROE}_t + \beta_{11} \text{MB}_t + \beta_{12} \text{LARSHARE}_t \\ & + \beta_{13} \text{INSTITU}_t + \beta_{14} \text{CEOSHAR}_t + \beta_{15} \text{DUAL}_t + \beta_{16} \text{BOARDSIZE}_t + \beta_{17} \text{AGE}_t + \beta_{18} \text{TOPMANCOMP}_t \\ & + \beta_{19} \text{EMP.SALARY}_t + \delta \cdot \text{INDUSTRY} + \phi \cdot \text{YEAR} + e_t), \end{aligned} \quad (2)$$

where *POLITICAL* is an indicator for political connections. Prior studies (e.g., Correia, 2014) find that firms directly lobbying the SEC can reduce the likelihood of enforcement actions by the SEC. However, there is thus far no evidence regarding whether politically connected firms whose top managers and/or board members have relations with government officials can reduce the likelihood of being sanctioned by the SEC.¹⁸ As a result, we do not predict the sign of *POLITICAL.MAABILITY* is defined as in Eq. (1). All other variables are as previously defined. To be consistent with H2 that the effect of managerial ability on the likelihood of financial reporting fraud is weaker for connected firms than for non-connected firms, the coefficient of *MAABILITY * POLITICAL* in Eq. (2) is expected to be positive.

¹⁶ Xiao (2015), Niu et al. (2013) and Li et al. (2011) find in China setting that institutional investors are not associated with aggressive earnings management. The possible reason for the results is that different groups of institutional investors have differential influences on earnings management (Bushee, 1998, 2001; Koh, 2007). Therefore, institutional investors, on average, are not related to financial reporting quality (Koh, 2007).

¹⁷ Our industry classification is based on the industry codes issued by the CSRC. In the primary analyses, we use a broader definition of industry which classifies the sample into 22 industries. The empirical results are similar when we use more detailed classifications for more than 80 industries.

¹⁸ As mentioned earlier, there are two strand lines of literature on political connections. While recent studies (Correia, 2014) find that firms with long political contributions and direct lobbying are less likely to be involved in SEC enforcement actions, there is no direct evidence on whether firms with connected CEO or directors can also reduce the likelihood of fraud. In particular, the extant studies on political connections in China focus exclusively on whether firms engage government officers as their CEOs or to serve on their boards, rather than on whether firms use contributions and lobbying, to obtain favors from regulators. Therefore, it is an empirical question whether political connections in China are associated with the likelihood of fraud.

4. Data

4.1. Data sources and sample selection

Our initial sample consists of all publicly traded nonfinancial firms that have A-shares traded on the Shanghai and Shenzhen stock exchanges from 2007 to 2012.¹⁹ The sample period starts in 2007 because Chinese Accounting Standards based on the International Financial Reporting Standards (hereafter IFRS-based CAS) became effective that year. We obtain financial data, political connection data and enforcement actions data from the China Stock Market and Accounting Research (CSMAR) database.

Table 1, Panel A, shows the selection process for the full sample. We start with 11,502 firm-years that have A-shares traded on the Shanghai and Shenzhen stock exchanges. We delete 1182 financial sector observations because of their different data structures. We further delete 4806 observations because of insufficient data on their financial statements. The final sample consists of 5514 observations.

Panel B of Table 1 shows a breakdown of the types of financial reporting fraud classified by the types of violation (the classifications come from the CSMAR). The two main types of violations relate to a major failure to disclose information and a delay in disclosure; they account for approximately 38.8% and 33.8% of financial reporting fraud, respectively.

4.2. Descriptive statistics

Panel A of Table 2 displays the descriptive statistics for all variables used in our regressions. The mean *FRAUD* is about 10%, indicating that about 10% of listed firms in China during our period are detected for fraud by the regulatory agencies. It can be seen that the 25th percentile, mean, median, 75th percentile, and standard deviation of *MAABILITY* are -0.0706 , -0.0038 , -0.0088 , 0.0530 and 0.1099 , respectively.²⁰ As such, the managerial ability variable estimated using Chinese data has similar distribution as that estimated using American data.

The mean *POLITICAL* is 52%, suggesting that about half of our sample have political ties with government officers and/or members of the people's congress, etc. During our period, about 34% of listed firms have Big 10 auditors.

Panel B of Table 2 shows the descriptive statistics for the variables used in our regressions, tabulated by firm-years with financial reporting fraud and without financial reporting fraud. All continuous variables are winsorized at the top and bottom 1% of the distribution. The results document a negative association between managerial ability and financial reporting fraud ($p < 0.01$), consistent with our first hypothesis that firms with capable managers are less likely to commit fraud. Fraud is more likely for firms with political connections than for firms lacking such connections; however, the difference in mean is insignificant. This result provides preliminary evidence that there is no association between the likelihood of fraud and political connections. We also find that financial reporting fraud is more likely for firms with greater stock price volatility ($p < 0.01$), but less likely for firms with more insider trading ($p < 0.01$).

Fraud is less likely for larger firms ($p < 0.01$) and more likely for more leveraged firms ($p < 0.01$). Firms are less likely to commit fraud when they are more profitable ($p < 0.01$). Fraud is less likely for firms with a higher percentage of shares held by the largest stockholders ($p < 0.01$), while fraud is more likely for firms with a higher percentage of shares held by the CEO ($p < 0.05$). Fraudulent financial reporting is more likely when the same person holds a dual position as the board chair and CEO of the firm ($p < 0.01$). Finally, we find that firms are more likely to commit fraud when their employees are comparably paid less ($p < 0.01$).

Table 3 shows the Pearson correlation coefficients for the variables used in our regressions. We observe that *FRAUD* is negatively correlated with *MAABILITY* ($p < 0.01$), providing preliminary evidence that managerial ability can reduce the likelihood of a company committing financial fraud. We also find that *FRAUD* is positively correlated with *POLITICAL*, but insignificantly, in line with the result in Table 2.

5. Empirical results

This section shows the results of the multivariate regression of *FRAUD* on managerial ability, political connections and other control variables well-documented to be related to *FRAUD*. We report test statistics and significance levels based on standard errors clustered by firm.

¹⁹ A-shares can only be owned and traded by Chinese citizens. Some companies that issue A-shares also have B-shares (which are traded on the Shanghai and Shenzhen stock exchanges but can only be owned by qualified foreigners with a security account in China), H-shares (traded in Hong Kong), or N-shares (traded in New York).

²⁰ Demerjian et al. (2013) reveals that the 25th percentile, mean, median, 75th percentile, and standard deviation of *MAABILITY* are -0.09 , 0.00 , -0.01 , 0.07 and 0.15 , respectively.

Table 1

Sample selection and distribution of financial reporting fraud sample.

Panel A: Sample selection		
Number of company-years that have A-shares traded on the stock exchanges in Shanghai and Shenzhen from 2007 to 2012		11,502
Less: the following observations		
Financial industry listed companies		(1182)
Missing financial statement data		(4806)
Number of firm-years in the full sample		5514
Types of frauds	Frequency of frauds	%
Panel B: Distribution of all types of financial reporting fraud		
Inflated earnings	11	1.29
Fabrication of assets	18	2.12
Delay in disclosure	287	33.77
False statements	204	24.00
Major failure to disclose information	330	38.82
Total	850	100.00

5.1. Effect of managerial ability on financial reporting fraud

Model (1) of Table 4 shows the results of the probit regression of *FRAUD* on managerial ability and control variables for the full sample. Both Pearson goodness-of-fit statistics (Value/DF = 0.9942) and Hosmer–Lemeshow goodness-of-fit statistics (12.1914) are not statistically significant ($p = 0.617$ and $p = 0.143$, respectively), suggesting that the data fit the model well.

Consistent with H1, we find that the coefficient for *MAABILITY* is negative and significant at the 1% level, indicating that firms with more capable managers are less likely to commit financial reporting fraud. To interpret the economic importance of this result, we estimate the change in the odds of a company having fraudulent financial reporting in response to a one-unit increase in the corresponding independent variable, *MAABILITY*. Economically, we find that if *MAABILITY* increases by one standard deviation, the probability of fraudulent financial reporting decreases by about 8.2% ($-0.746 * 0.1099$).

Regarding the control variables, Model (1) of Table 4 indicates that the coefficient for *BIG10* is significantly negative, suggesting that clients of the top ten audit firms are less likely to commit fraud. It can be seen that the coefficient for *LEV* is positive and significant, indicating that highly leveraged firms are more likely to create fraudulent financial reports. The significantly negative coefficient for *LARSHARE* suggests that the likelihood of financial reporting fraud decreases with the shares held by the largest shareholders; however, the significantly positive coefficient for *CEOSHARE* indicates that the likelihood of financial reporting fraud increases with the shares held by the CEO. The coefficient of *DUAL* is significant and positive, suggesting that when the CEO is also the board chair, firms are more likely to commit financial reporting fraud.²¹

To provide further insights into the differential effects between SOEs and privately owned enterprises (non-SOEs), we add one indicator variable, *SOE*, to Eqs. (1) and (2). *SOE* is equal to one for SOEs, and zero for non-SOEs. The untabulated results indicate that our primary conclusions are qualitatively the same as those in Table 4. In Section 5.3, we examine the effects of SOEs and non-SOEs in more detail.

5.2. Mitigating effect of political connections

Model (2) of Table 4 presents the results of estimating Eq. (2). We can observe that the coefficient for *MAABILITY* continues to be negative and significant, as predicted. Notably, the coefficient for *POLITICAL* is insignificant, indicating that political connections are not associated with fraud likelihood. The plausible explanation for this is that although connected managers (e.g., CEO or chairman of board) have relations with government officers, it does not necessarily mean that they have direct ties with the officers of CSRC or stock exchanges.²²

More importantly, consistent with H2, we find that the coefficient for *POLITICAL * MAABILITY* is positive and significant ($p < 0.05$), suggesting that the effectiveness of managerial ability in reducing financial reporting fraud is lower for politically connected firms than for non-connected firms.

To provide further insights into H2, we partition our sample according to whether firms are politically connected, and estimate the probit model within each subsample. Splitting the sample rather than estimating the interaction terms allows

²¹ We conduct collinearity diagnostics tests by computing Variance Inflation Factors for all variables used in Eq. (1). Untabulated results indicate that none of these variance inflation factors displays a value greater than 4.6, suggesting that collinearity is not a serious problem (Kennedy, 1992).

²² Untabulated results indicate that the sum of the coefficients of both *POLITICAL* and *MAABILITY * POLITICAL* is positive and significant ($t = 2.26$, $p < 0.05$). The results indicate that connected firms are more likely to provide low-quality financial reporting and in turn to commit fraud than non-connected firms. Given the fact legal enforcement is weak and the penalties imposed for financial statement fraud is too low in China, our findings are thus consistent with prior studies, which find that connected firms tend to provide low-quality financial reporting (e.g., fraudulent financial statements) to hide their private control benefits. In other words, in our fraud context, the positive association between the presence of political connections and fraud likelihood provides indirect evidence that political connections can benefit firms in China.

Table 2
Summary statistics.

Variables	Mean	Std. dev.	P1	Q1	Median	Q3	P99
<i>Panel A: Full sample (n = 5514)</i>							
FRAUD	0.0963	0.2950	0	0	0	0	1
MAABILITY	-0.0038	0.1099	-0.2525	-0.0706	-0.0088	0.0530	0.3450
POLITICAL	0.5158	0.4998	0	0	1	1	1
BIG10	0.3397	0.4736	0	0	0	1	1
DA	0.0610	0.0589	0.0009	0.0193	0.0439	0.0823	0.2912
PRICESTD	0.0340	0.0089	0.0178	0.0274	0.0329	0.0399	0.0541
INSIDER	2.5065	1.2483	0	1.7918	2.7081	3.4012	4.7958
SIZE	21.6747	1.1026	19.2728	20.9093	21.6092	22.3429	24.6137
LEV	0.5144	0.1890	0.0926	0.3827	0.5262	0.6514	0.9253
ROE	0.0599	0.1476	-0.5633	0.0157	0.0586	0.1125	0.4632
MB	1.9972	1.2875	0.7873	1.2100	1.5867	2.3038	7.6824
LARSHARE	0.3547	0.1512	0.0909	0.2329	0.3344	0.4683	0.7251
INSTITU	0.1894	0.1921	0	0.0316	0.1225	0.3004	0.7335
CEOSHARE	0.0061	0.0376	0	0	0	0.0001	0.1999
DUAL	0.1273	0.3334	0	0	0	0	1
BOARDSIZE	2.1725	0.3081	0	2.1972	2.1972	2.1972	2.7081
AGE	2.0992	0.5610	0	1.7918	2.1972	2.4849	2.8904
EMP_SALARY	18.4964	1.2627	15.2745	17.7262	18.4747	19.2760	21.5937
TOPMANCOMP	15.2611	1.6848	12.8892	14.2566	14.8930	15.6702	21.2831
Variables	FRAUD = 0 (n = 4983)		FRAUD = 1 (n = 531)		Diff. in mean values		
	Mean	Median	Mean	Median			
<i>Panel B: Subsample of frauds</i>							
MAABILITY	-0.0017	-0.0080	-0.0233	-0.0216			0.0215***
POLITICAL	0.5135	1	0.5367	1			-0.0232
BIG10	0.3468	0	0.2731	0			0.0737***
DA	0.0611	0.0438	0.0603	0.0448			0.0008
PRICESTD	0.0338	0.0328	0.0350	0.0337			-0.0011***
INSIDER	2.5384	2.7081	2.2070	2.3979			0.3314***
SIZE	21.7061	21.6430	21.3796	21.2459			0.3266***
LEV	0.5118	0.5230	0.5379	0.5415			-0.0260***
ROE	0.0629	0.0611	0.0317	0.0349			0.0312***
MB	1.9898	1.5850	2.0666	1.5981			-0.0768
LARSHARE	0.3585	0.3377	0.3189	0.2992			0.0395***
INSTITU	0.1888	0.1212	0.1952	0.1365			-0.0064
CEOSHARE	0.0056	0	0.0108	0			-0.0052**
DUAL	0.1220	0	0.1770	0			-0.0550***
BOARDSIZE	2.1720	2.1972	2.1760	2.1972			-0.0040
AGE	2.1029	2.1972	2.0642	2.1972			0.0387
EMP_SALARY	18.5256	18.5050	18.2216	18.2195			0.3040***
TOPMANCOMP	15.2684	14.9093	15.1933	14.7162			0.0751

FRAUD = 1 if a firm-year observation commits financial reporting fraud in the current year, and 0 otherwise; MAABILITY = the managerial ability score which is the residual resulting from a Tobit regression in the spirit of Demerjian et al. (2012) by regressing firm efficiency score on a set of industry and firm-specific variables; POLITICAL = 1 if CEO or chairman of the board is a current or former officer of the China government, the military, the member of people's congress, or CPPCC and 0 otherwise; BIG10 = 1 if the audit firm is among the top ten audit firms and 0 otherwise; DA = discretionary accruals calculated according to Kothari et al. (2005); PRICESTD = the standard deviation of the stock price; INSIDER = the number of inside trading transactions; SIZE = the natural log of total assets; LEV = the total liabilities divided by total assets at the end of the previous year; ROE = the return on equity; MB = the market-to-book ratio; LARSHARE = the percentage of shares held by the largest shareholder; INSTITU = the percentage of shares held by institutional investors; CEOSHARE = the percentage of shares held by the CEO; DUAL = 1 if the same person holds a dual position as the board chair and CEO of the company and 0 otherwise; BOARDSIZE = the number of directors on the board; AGE = the natural log of the number of years a firm's stock has been traded on a national securities exchange; EMP_SALARY = the natural log of employees' salaries (other than compensation of top executives); TOPMANCOMP = the natural log of compensation of top executives.

the coefficients for all control variables to vary between the two groups (Armstrong et al., 2010). The results are presented in Models (3) and (4) of Table 4, respectively.

From Model (3), we observe that the coefficient for MAABILITY is insignificant for firms with political connections, suggesting that managerial ability has no effect on the likelihood of financial reporting fraud among connected firms; however, in Model (4), the coefficient for MAABILITY is negative and significant at the 1% level, indicating that the presence of more capable managers leads to less fraudulent financial reporting. The last column of Table 4 shows the differences in the coefficient of all variables used in Eq. (1) between connected firms and non-connected firms. It reveals that the difference in the coefficient of MAABILITY is significant at the 5% level, consistent with H2. These results indicate that the association between managerial ability and the likelihood of fraudulent financial reporting are driven mainly by firms without political connections.

Table 3
Correlation matrix.

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	
(1) FRAUD	1.000																			
(2) MAABILITY	-0.058***	1.000																		
(3) POLITICAL	0.014	0.010	1.000																	
(4) BIG10	-0.046***	0.005	-0.031**	1.000																
(5) DA	-0.004	0.073***	0.021	-0.034**	1.000															
(6) PRICESTD	0.038***	0.013	-0.011	-0.101***	0.083***	1.000														
(7) INSIDER	-0.078***	0.013	-0.043***	0.156***	-0.062***	-0.052***	1.000													
(8) SIZE	-0.087***	-0.007	0.016	0.170***	-0.081***	-0.192***	0.416***	1.000												
(9) LEV	0.041***	-0.044***	-0.005	0.042***	0.087***	0.010	0.212***	0.303***	1.000											
(10) ROE	-0.062***	0.216***	0.034**	0.025	-0.062***	-0.087***	0.033	0.166**	-0.153***	1.000										
(11) MB	0.018	0.069***	-0.017	0.006	0.096***	0.021	-0.199***	-0.372***	-0.265***	0.076***	1.000									
(12) LARSHARE	-0.077***	0.114***	-0.069***	0.061***	0.021	0.011	0.252***	0.265***	0.047***	0.070***	-0.134***	1.000								
(13) INSTITU	0.010	0.086***	-0.021	-0.045***	-0.006	0.100***	-0.132***	-0.032**	-0.027**	0.079***	0.110***	-0.018	1.000							
(14) CEOSHARE	0.041***	0.034**	0.019	0.041***	0.005	-0.024	-0.081***	-0.053**	-0.058**	0.036**	0.039***	-0.122***	-0.009	1.000						
(15) DUAL	0.049***	-0.010	0.041***	0.002	0.050***	-0.011	-0.114***	-0.098**	-0.053**	-0.014	0.065***	-0.084**	0.015	0.170***	1.000					
(16) BOARDSIZE	0.004	0.017	0.003	0.024	-0.037**	-0.044**	0.113***	0.171***	0.042**	0.046**	-0.061**	0.016	0.009	-0.032**	-0.082***	1.000				
(17) AGE	-0.020	-0.091**	-0.052**	0.061***	0.025*	-0.139***	-0.030*	0.160**	0.112**	-0.030*	0.058**	-0.050*	-0.081**	-0.195***	-0.046**	-0.053**	1.000			
(18) EMP_SALARY	-0.071***	-0.033**	-0.049**	0.201***	-0.168***	-0.183***	0.429***	0.763***	0.174***	0.183***	-0.227***	0.240***	-0.006	-0.020	-0.091**	0.178***	0.085***	1.000		
(19) TOPMANCOMP	-0.013	0.074***	0.117***	0.128**	-0.047**	-0.123***	0.002	0.247**	-0.071**	0.210**	0.043**	-0.148**	0.057**	0.461***	0.091**	0.070**	-0.190**	0.283***	1.000	

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

* 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 4
Managerial ability, political connections, and financial reporting fraud.

Variable	Dependent variable: Financial reporting fraud									
	Model (1)		Model (2)		Model (3)		Model (4)		Model (3) vs. Model (4)	
	Full sample		Full sample		Sample with political connections		Sample without political connections		Diff. in coef.	
	Coef.	(Z-stat.)	Coef.	(Z-stat.)	Coef.	(Z-stat.)	Coef.	(Z-stat.)	Coef.	(Z-stat.)
<i>Intercept</i>	0.947	(1.31)	0.927	(1.28)	2.098**	(2.20)	0.050	(0.03)	2.049	(1.38)
<i>MAABILITY</i>	-0.746***	(-3.03)	-1.317***	(-3.80)	-0.144	(-0.42)	-1.338***	(-3.83)	1.194**	(2.45)
<i>POLITICAL</i>			0.064	(1.28)						
<i>MAABILITY</i> × <i>POLITICAL</i>			0.980**	(2.17)						
<i>BIG10</i>	-0.105*	(-1.93)	-0.107**	(-1.96)	-0.135*	(-1.72)	-0.103	(-1.32)	-0.032	(-0.29)
<i>DA</i>	-0.456	(-1.06)	-0.474	(-1.10)	-0.704	(-1.16)	-0.081	(-0.13)	-0.624	(-0.71)
<i>PRICESTD</i>	0.933	(0.19)	1.402	(0.28)	2.875	(0.46)	-1.913	(-0.24)	4.788	(0.47)
<i>INSIDER</i>	-0.060***	(-2.67)	-0.059***	(-2.63)	-0.064**	(-2.08)	-0.061*	(-1.80)	-0.003	(-0.06)
<i>SIZE</i>	-0.060	(-1.32)	-0.063	(-1.37)	-0.169***	(-2.82)	0.043	(0.58)	-0.212**	(-2.22)
<i>LEV</i>	0.759***	(5.23)	0.756***	(5.19)	1.134***	(5.50)	0.461**	(2.10)	0.673**	(2.23)
<i>ROE</i>	-0.206	(-1.22)	-0.203	(1.19)	-0.311	(-1.25)	-0.152	(-0.64)	-0.159	(-0.46)
<i>MB</i>	0.006	(0.24)	0.005	(0.23)	-0.006	(-0.16)	0.021	(0.65)	-0.027	(-0.57)
<i>LARSHARE</i>	-0.563***	(-3.12)	-0.548***	(-3.04)	-0.781***	(-3.00)	-0.378	(-1.46)	-0.403	(-1.10)
<i>INSTITU</i>	0.119	(0.86)	0.114	(0.82)	-0.153	(-0.76)	0.311	(1.62)	-0.464*	(-1.67)
<i>CEOSHARE</i>	1.149*	(1.71)	1.198*	(1.75)	1.724	(1.52)	0.816	(1.04)	0.907	(0.66)
<i>DUAL</i>	0.148**	(2.14)	0.150**	(2.17)	0.110	(1.12)	0.238**	(2.34)	-0.128	(-0.91)
<i>BOARDSIZE</i>	0.143	(1.48)	0.150	(1.54)	0.119	(0.91)	0.215	(1.32)	-0.097	(-0.46)
<i>AGE</i>	-0.025	(-0.49)	-0.020	(-0.38)	0.013	(0.18)	-0.032	(-0.40)	0.045	(0.42)
<i>TOPMANCOMP</i>	-0.053	(-1.35)	-0.051	(-1.31)	-0.007	(-0.13)	-0.109*	(-1.72)	0.041	(1.08)
<i>EMP_SALARY</i>	-0.005	(-0.26)	-0.007	(-0.37)	0.011	(0.40)	-0.031	(-1.10)	0.102	(1.26)
Industry and year dummies	Yes		Yes		Yes		Yes		Yes	
<i>n</i>	5514		5514		2844		2670		5514	
Pseudo R ²	0.036		0.037		0.049		0.039		0.044	

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

The z-statistics are based on robust standard errors clustered by firm (Peterson, 2009).

* 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.

Collectively, these analyses in Table 4 indicate that increased managerial ability leads to lower likelihood of financial reporting fraud; however, this effect is weaker when firms are politically connected. The results suggest that managerial ability plays a less critical role in reducing the probability of fraudulent financial reporting when firms are politically connected.

5.3. Further analyses

5.3.1. Effects of SOEs and non-SOEs on the effectiveness of managerial ability

In China, SOEs typically carry a greater policy burden; thus, their managers tend to detract from firm performance when they need to implement the government's social and political objectives. In contrast, the predominant goal of a private entrepreneur is to maximize profit. As a consequence, firm performance is more sensitive to managerial ability in private firms than in SOEs. In this section, following the same logic, we predict that the effect of managerial ability on the likelihood of fraud is more pronounced for private firms than for SOEs.^{23,24}

State ownership tends to represent a more direct relation with the government than having connected managers; as such, the benefits from political connections may be diluted and smaller for SOEs. Previous studies (e.g., Bartels and Brady, 2003) indicate that SOEs have a variety of channels for communicating with the government and its officials; hence, political connections are less related to their operating and reporting activities in SOEs. In contrast, political connections affect non-SOE enterprises more. In general, non-SOEs lack political ties with the government and are thus in a disadvantageous position relative to SOEs; this is particularly the case in China, which is characterized by the lack of property rights protection and

²³ SOEs are different from firms with political connections in China. The former refers to enterprises owned by the state; however, the latter refers to firms where its CEO or chairman has political connections. Zhang et al. (2015) indicate that politically connected firms, measured by the same proxy as ours, are not the same as SOEs. They further find that the diversification level of politically connected firms is significantly higher than that of non-politically connected firms, and the relation is more pronounced in non-state-owned enterprises than in SOEs. A recent study indicates that the effect of political connections on firm performance is different between SOEs and non-SOEs (Wu et al., 2012). Similarly, other papers use the same proxy for political connections as ours, and also find that the percentage of firms with political connections is very similar between SOEs and non-SOEs (Tian and Zhang, 2013; Tang and Sun, 2014; He et al., 2014).

²⁴ Untabulated analyses indicate that in our sample, about 48.56% of SOEs are politically connected, while about 57.14% of non-SOEs are politically connected.

market-supporting institutions needed by private firms (McMillan, 1995). Consequently, hiring politically connected managers can help overcome these disadvantages and seek more benefits for non-SOEs than for SOEs (Wu et al., 2012; Chen et al., 2011a, 2011b). Thus, recent studies (Li et al., 2008; Wu et al., 2012; Chen et al., 2011a, 2011b) indicate that connected managers in non-SOEs tend to help firms obtain more favorable treatment from China's government, relative to connected managers in SOEs. Chen et al. (2011b) also indicate that political connections reduce investment efficiency in SOEs, while they do not find such evidence in non-SOEs.

In the same vein, we predict, in the context of fraud, that the effect of political connections on the association between manager's ability and the likelihood of fraud will be diluted more for SOEs than for non-SOEs. More specifically, we hypothesize that the effect of political connections is primarily attributable to non-SOE enterprises, as opposed to SOE enterprises.

To test this prediction, we partition the sample according to whether firms are SOEs or non-SOEs. The results are presented in Table 5. Models (1)–(3) and (4)–(6) show the results for SOEs and non-SOEs, respectively, when regressing *FRAUD* on *MAABILITY*, *POLITICAL*, the interaction item *MAABILITY * POLITICAL* and a set of control variables. We observe that the coefficient for *MAABILITY* is negative and significant in all specifications, in line with those in Table 4. More importantly, as shown in Model (3), the coefficient for *MAABILITY * POLITICAL* is insignificant for SOEs; however, the coefficient is positive and significant for non-SOEs (Model (6)). Therefore, the mitigating effect of political connections on the association between managerial ability and the likelihood of financial reporting fraud is attributable primarily to non-SOEs. The results suggest that compared to non-SOEs, politically connected managers of SOEs tend to take into consideration governmental goals; thus, their ability plays a relatively less significant role in reducing the likelihood of fraud.

5.3.2. Managerial ability and penalty levels

H1 states that firm with able managers are less likely to commit fraud than those without able managers. In this section, based on the same line of reasoning as hypothesis 1, we further argue that firms with able manager tend to face less severe enforcement actions than firms without able manager. The rationale for this argument is that the extent to which firms committing fraud are punished depends on the severity of the violation. Since more capable managers are knowledgeable about their business and can therefore make effective judgments and estimates, they are less likely to commit fraud. Even though firms with more capable managers commit fraud, we argue that on average these firms will commit less severe types of fraud and in turn face less severe penalties by regulatory agencies.

To examine this issue, we obtain the penalty data from CSMAR. As mentioned earlier, the penalties for fraud are classified into seven types; however, some observations in CSMAR data cannot be classified into any of the seven types. Accordingly, we restrict our sample to firm-year observations which can be classified into any of the seven types. We construct an ordered variable, *PENALTYLEVEL*, which measures the severity of penalties imposed on firms for financial reporting fraud. More specifically, *PENALTYLEVEL* equals 1 for public criticism, 2 for warnings, 3 for reprimands, 4 for fines, 5 for confiscations of illegal gains, 6 for revocations of the business permit, 7 for prohibiting access to security markets, and 0 otherwise.

Using this restricted subsample, we perform ordered probit regression by replacing *FRAUD* with *PENALTYLEVEL*. The results are shown in Table 6. Model (1) indicates that the coefficient for *MAABILITY* is negative and significant, suggesting that firms with capable managers face lower level punishment if their firms are detected for fraud and be penalized by the regulatory agencies. Model (3) indicates that managerial ability is significantly and negatively associated with the severity of imposed penalties for non-connected firms, while Model (2) indicates that managerial ability is not significantly related to the severity of penalty for politically connected firms. Similar to Models (2) and (3), Model (4) shows that the association between managerial ability and the severity of imposed penalties is weaker for connected firms than for non-connected firms.

To provide insights into whether the above results differ between SOEs and non-SOEs firms, we partition our sample into SOEs and non-SOEs firms and re-estimate Eq. (2) using the ordered probit model within each subsample. As shown in Models (5) and (6), the coefficient of *MAABILITY * POLITICAL* is significantly positive for non-SOE firms, but not significantly positive for SOE firms, in the sense that the effect of political connections on the association between managerial ability and severity of punishment is attributable mainly to non-SOEs firms, contrary to SOEs firms.

Overall, the findings in Table 6 can be summarized as follows. First, high ability managers can reduce the degree of punishment once their firms are detected for fraud and are penalized by the regulatory agencies; the effect of managerial ability is less pronounced when firms are politically connected. Second, the effect of political connections on the relation between managerial ability and the degree of punishment is driven primarily by non-SOEs firms.

5.4. Sensitivity analyses

5.4.1. Managerial ability and endogeneity

Thus far, our empirical results indicate that high ability managers are associated with a lower likelihood of financial reporting fraud. However, one concern with our analysis is the endogeneity of the managerial ability. For example, one may argue that the board of directors deliberately engages managers with specific skills (e.g., skills in operating and market strategies) that a firm considers important for its success; as a result, managers are not randomly distributed across firms. If this is the case, we cannot rule out the possibility that our results are driven by the endogeneity issue.

To ensure the robustness of our inferences, we use propensity-score matching (PSM) proposed by Rosenbaum and Rubin (1983) to address self-selection bias. Using a PSM design that achieves maximum variation in the variable of interest, while

Table 5
Managerial ability, political connections, and financial reporting fraud: the effect of SOEs/non-SOEs.

Variable	Dependent variable: Financial reporting fraud											
	SOEs						Non-SOEs					
	Model (1)		Model (2)		Model (3)		Model (4)		Model (5)		Model (6)	
	Coef.	(Z-stat.)	Coef.	(Z-stat.)	Coef.	(Z-stat.)	Coef.	(Z-stat.)	Coef.	(Z-stat.)	Coef.	(Z-stat.)
<i>Intercept</i>	1.204	(1.31)	1.175	(1.28)	1.163	(1.26)	1.010	(0.82)	1.039	(0.83)	1.061	(0.85)
<i>MAABILITY</i>			−0.774**	(−2.32)	−1.183**	(−2.43)			−0.746*	(−1.91)	−1.804***	(−3.37)
<i>POLITICAL</i>	0.021	(0.34)	0.020	(0.33)	0.035	(0.56)	0.126	(1.43)	0.123	(1.38)	0.136	(1.51)
<i>MAABILITY × POLITICAL</i>					0.755	(1.23)					1.635**	(2.22)
<i>BIG10</i>	−0.047	(−0.71)	−0.048	(−0.72)	−0.049	(−0.73)	−0.258**	(−2.44)	−0.255**	(−2.41)	−0.269**	(−2.51)
<i>DA</i>	−0.588	(−1.07)	−0.522	(−0.94)	−0.504	(−0.90)	−0.808	(−1.10)	−0.664	(−0.90)	−0.747	(−1.02)
<i>PRICESTD</i>	−0.690	(−0.11)	−1.302	(−0.21)	−0.774	(−0.12)	6.727	(0.79)	5.659	(0.65)	5.807	(0.67)
<i>INSIDER</i>	−0.067**	(−2.20)	−0.065**	(−2.12)	−0.064*	(−2.11)	−0.022	(−0.57)	−0.022	(−0.57)	−0.022	(−1.10)
<i>SIZE</i>	−0.146**	(−2.36)	−0.146**	(−2.38)	−0.150**	(−2.44)	0.072	(1.01)	0.075	(1.05)	0.078	(1.10)
<i>LEV</i>	0.839***	(4.29)	0.842***	(4.37)	0.835***	(4.32)	0.526**	(2.15)	0.525**	(2.16)	0.540**	(2.19)
<i>ROE</i>	−0.213	(−0.98)	−0.112	(−0.51)	−0.106	(−0.47)	−0.559**	(−2.01)	−0.443	(−1.61)	−0.446	(−1.63)
<i>MB</i>	0.020	(0.57)	0.023	(0.65)	0.022	(0.61)	−0.007	(−0.19)	−0.007	(−0.23)	−0.009	(−0.27)
<i>LARSHARE</i>	−0.630***	(−2.92)	−0.561**	(−2.55)	−0.551**	(−2.50)	−0.913***	(−2.66)	−0.855**	(−2.49)	−0.863**	(−2.46)
<i>INSTITU</i>	0.146	(0.87)	0.169	(1.00)	0.164	(0.98)	0.037	(0.14)	0.075	(0.28)	0.052	(0.19)
<i>CEOSHARE</i>	−0.891	(−0.78)	−0.777	(−0.81)	−0.636	(−0.83)	1.785*	(1.83)	1.775*	(1.78)	1.779*	(1.75)
<i>DUAL</i>	0.215**	(2.28)	0.211**	(2.23)	0.216**	(2.28)	0.088	(0.81)	0.085	(0.78)	0.090	(0.81)
<i>BOARDSIZE</i>	0.152	(1.36)	0.150	(1.34)	0.158	(1.42)	0.071	(0.36)	0.090	(0.46)	0.083	(0.43)
<i>AGE</i>	−0.069	(1.09)	−0.077	(−1.21)	−0.072	(−1.13)	0.051	(0.51)	0.046	(0.45)	0.044	(0.43)
<i>TOPMANCOMP</i>	−0.059	(−1.09)	0.057	(1.06)	0.058	(1.09)	−0.228***	(−3.64)	−0.238***	(−3.76)	−0.244***	(−3.81)
<i>EMP_SALARY</i>	−0.034	(−0.94)	−0.030	(−0.83)	−0.030	(−0.82)	0.019	(0.69)	0.021	(0.78)	0.021	(0.79)
Industry and year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
<i>n</i>	3575		3575		3575		1939		1939		1939	
Pseudo R ²	0.041		0.043		0.043		0.057		0.059		0.061	

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

The z-statistics are based on robust standard errors clustered by firm (Petersen, 2009).

* 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 6
Managerial ability, political connections, and the severity of punishment.

Variables	Dependent variable: Severity of punishment											
	Full sample		Subsample with political connections		Subsample without political connections		Full sample		SOEs		Non-SOEs	
	Model (1)		Model (2)		Model (3)		Model (4)		Model (5)		Model (6)	
	Coef.	(Z-stat.)	Coef.	(Z-stat.)	Coef.	(Z-stat.)	Coef.	(Z-stat.)	Coef.	(Z-stat.)	Coef.	(Z-stat.)
MAABILITY	−0.880*	(−1.89)	−0.216	(−0.38)	−1.825*	(−1.94)	−1.742**	(−2.24)	−0.280	(−0.26)	−3.106**	(−2.18)
POLITICAL							−0.002	(−0.02)	−0.103	(−0.59)	0.018	(0.10)
MAABILITY × POLITICAL							1.432	(1.59)	−0.755	(−0.57)	2.989*	(1.77)
BIG10	0.074	(0.57)	0.233	(1.19)	−0.076	(−0.39)	0.062	(0.48)	−0.041	(−0.22)	0.376	(1.60)
DA	0.879	(0.91)	−0.097	(−0.07)	2.150	(1.31)	0.827	(0.85)	−0.377	(−0.28)	2.983*	(1.84)
PRICESTD	2.808	(0.34)	1.477	(0.11)	1.789	(0.16)	2.533	(0.30)	4.669	(0.32)	−1.376	(−0.11)
INSIDER	0.064	(1.13)	0.029	(0.38)	0.101	(1.13)	0.065	(1.16)	0.107	(1.32)	0.028	(0.27)
SIZE	0.110	(1.32)	−0.007	(−0.05)	0.389**	(3.03)	0.097	(1.16)	0.097	(0.81)	0.130	(0.88)
LEV	−0.596**	(−1.97)	−0.093	(−0.22)	−1.478***	(−2.80)	−0.589*	(−1.94)	−0.476	(−1.16)	−0.279	(−0.53)
ROE	−0.043	(−0.14)	−0.059	(−0.14)	−0.369	(−0.64)	−0.047	(−0.15)	0.092	(0.22)	−0.146	(−0.24)
MB	0.049	(0.86)	−0.081	(−0.98)	0.146*	(1.77)	0.043	(0.78)	0.143	(1.42)	−0.018	(−0.23)
LARSHARE	−0.862*	(−1.93)	−0.009	(−0.01)	−1.810***	(−2.79)	−0.872*	(−1.93)	−0.928	(−1.32)	−1.024	(−1.39)
INSTITU	0.141	(0.45)	0.204	(0.44)	−0.131	(−0.27)	0.098	(0.31)	0.148	(0.34)	−0.041	(−0.08)
CEOSHARE	−0.427	(−0.30)	−0.615	(−0.29)	−2.058	(−0.94)	−0.453	(−0.31)	−4.107	(−1.02)	−1.273	(−0.75)
DUAL	−0.174	(−1.11)	−0.256	(−1.37)	0.109	(0.41)	−0.171	(−1.08)	−0.075	(−0.35)	−0.300*	(−1.27)
BOARDSIZE	0.196	(0.98)	0.399	(1.41)	0.094	(0.33)	0.194	(0.97)	0.026	(0.09)	0.380	(1.24)
AGE	−0.232**	(−2.31)	−0.105	(−0.75)	−0.269*	(−1.70)	−0.238**	(−2.37)	−0.309*	(−1.88)	−0.260*	(−1.75)
TOPMANCOMP	−0.211**	(−2.80)	−0.262**	(−2.21)	−0.258**	(−2.23)	−0.203***	(−2.70)	−0.216*	(−1.77)	−0.195	(−1.55)
EMP_SALARY	−0.037	(−1.10)	0.021	(0.46)	−0.170***	(−2.76)	−0.037	(−1.07)	−0.014	(−0.21)	−0.063**	(−2.21)
Intercept6	0.342	(0.24)	1.344	(0.64)	−0.320	(−0.13)	0.514	(0.36)	0.891	(0.47)	−0.608	(−0.26)
Intercept5	0.436	(0.31)	1.385	(0.66)	−0.147	(−0.06)	0.608	(0.43)	0.975	(0.51)	−0.483	(−0.20)
Intercept4	0.854	(0.61)	1.908	(0.90)	0.237	(0.10)	1.028	(0.72)	1.464	(0.76)	−0.087	(−0.04)
Intercept3	0.906	(0.65)	1.959	(0.93)	0.307	(0.13)	1.081	(0.76)	1.513	(0.79)	−0.022	(−0.01)
Intercept2	0.994	(0.71)	2.032	(0.96)	0.436	(0.18)	1.169	(0.82)	1.584	(0.82)	0.101	(0.03)
Intercept1	1.411	(1.00)	2.480	(1.17)	0.902	(0.37)	1.588	(1.12)	1.996	(1.03)	0.582	(0.24)
Industry and year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
n	697		377		320		697		413		284	
Pseudo R ²	0.131		0.170		0.261		0.134		0.181		0.216	

This table presents the results from estimating an ordered probit model with *PENALTYLEVEL* as the dependent variable, which is defined to be the severity of penalties imposed on firms for financial reporting. *PENALTYLEVEL* equals 1 for public criticism, 2 for warning, 3 for reprimands, 4 for fines, 5 for confiscations, 6 for revocations of the business permit, and 7 for prohibiting to security markets.

The z-statistics are based on robust standard errors clustered by firm (Petersen, 2009).

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

* 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.

minimizing variation in the control variables, is a superior econometric approach to matching on the outcome variable (Armstrong et al., 2010; Jayaraman and Milbourn, 2015).

The matched-pair design consists of two steps. First, we model a firm's choice of capable manager as a function of a set of variables reflecting a firm's operation and market strategies, such as R&D intensity, degree of diversification, and growth opportunities, while controlling for the firms' size, leverage and SOE. Specifically, we estimate the following probit model:

$$\text{Prob}(MCAPMANAGERS = 1) = F(\beta_0 + \beta_1 \text{SIZE} + \beta_2 \text{LEV} + \beta_3 \text{MB} + \beta_4 \text{SOE} + \beta_5 \text{INNOINDEX} + \beta_6 \text{DIVERS} + \delta \cdot \text{INDUSTRY} + \phi \cdot \text{YEAR} + e_t), \quad (3)$$

where the dependent variable *MCAPMANAGERS* is our measure as to whether or not a firm's managers are classified as being capable. Following prior studies (e.g., Cohen and Zarowin, 2010), we define *MCAPMANAGERS* as one if the firm has measure of managerial ability score (i.e. *MAABILITY*) greater than the median of the whole sample, and zero otherwise.

INNOINDEX represents the overall innovation index for China's provinces. Prior studies (e.g., Walker, 1887; Bertrand and Schoar, 2003) indicate that managers drive productivity difference across firms and explain an economically significant proportion of firm activities, such as R&D and M&A activity. Since the overall business innovation environment varies across provinces in China (Chen, 2015), we predict that firms located in provinces or region with higher innovation environment are more likely to engage capable managers to implement their innovative strategies. To measure the level of the business innovation environment of China's provinces and regions, Liu and Gao (2015) compiles substantive statistics and publishes them in a work entitled *Annual Report of Regional Innovation Capability of China*. We include the index (*INNOINDEX*) to capture the overall innovation environment. Following the same literature (e.g., Walker, 1887; Bertrand and Schoar, 2003), we predict that more diversified firms are more likely to engage capable managers because corporate complexity increases with the degree of corporate diversification. We include *DIVERS*, measured by the sales-based Herfindahl index, to capture the degree of a firm's diversification. In addition, we include in our model one measure of firm growth opportunities, *MB*, measured by ratio of market value to book value. We predict that growth firms are more likely to engage capable managers. Finally, we include a set of control variables in Model (3), including firm size, firm leverage and state-owned enterprise.

Next, we match, without replacement, each firm having more capable managers to a firm having less able managers with the closest predicted probability. Table 7, Panel A, presents the results that verify the covariate balance across the 1860 pairs generated using the nearest-neighbor matching technique. As indicated by several studies (e.g., Armstrong et al., 2010; Jayaraman and Milbourn, 2015), covariate balance is achieved if both the treatment and control groups are similar along their observable dimensions, except for their level of managerial ability. To assess covariate balance, we follow Armstrong et al. (2010) and test whether the mean value of each determinant differs across the treatment and control groups (Armstrong et al., 2010; Jayaraman and Milbourn, 2015). We observe that none of the differences in any of the dimensions approaches the cutoff of 0.1, suggesting that our subsamples of firms hiring more and less capable managers are generally similar. Overall, the propensity-score matching procedure does a satisfactory job of selecting control firms with similar economic determinants as treatment firms.

Panel B of Table 7 presents the results from our propensity score matching analysis. We observe that consistent with those in Table 4, the coefficients of *MAABILITY* in Models (1) and (2) are all negative and significant ($p < 0.01$), and the coefficient of *MAABILITY * POLITICAL* in Model (2) is positive and significant ($p < 0.05$). Overall, the primary results are broadly comparable to those in our main texts. Therefore, our results are not driven by the selection-bias of managers.

5.4.2. Political connections and endogeneity

Another question with our results in our main tests is the endogeneity of political connections. In this section, we also exploit the propensity-score matching model to examine whether our observed findings are driven by a self-selection bias of political connections choice. First, we perform the following probit model to estimate the propensity of companies to choose to have political connections with the government and its officials:

$$\text{Prob}(\text{POLITICAL} = 1) = F(\delta_0 + \delta_1 \text{SIZE} + \delta_2 \text{LEV} + \delta_3 \text{ROE} + \delta_4 \text{SOE} + \delta_5 \text{BEINDEX} + \varphi \cdot \text{INDUSTRY} + \phi \cdot \text{YEAR} + u), \quad (4)$$

where *BEINDEX* represents the overall business environment index for China's provinces (Wang et al., 2013).²⁵ One recent study (Zhang and Qi, 2014) indicates that the business operating environment varies across provinces in China, and that firms located in provinces or region with poorer operating environment are more likely to foster political relations with the government, compared to those with better environments. This argument is based on the notion that firms face greater uncertainty in regions with a poor business operating environment, such as lower level of governmental administrative management, weaker level of legal environment, lower level of intermediary organization (i.e. CPA and layers) services and higher level of social integrity. To reduce the operating uncertainty and thus transaction costs, firms have greater incentives to foster political relations with the government. To measure the level of the business operating environment of China's provinces and regions, Wang et al. (2013) compile substantive statistics and publish them in a work entitled *NERI Business Environment Index for China's Pro-*

²⁵ The composite index comprises seven main indicators of institutional arrangements: (1) governmental administrative management in the regional economy, (2) the local legal environment, (3) the number of intermediate institutions (such as law firms and CPA firms) and technology services, (4) the social environment, (5) financial services, (6) the human resource supply and (7) infrastructure. The first four indicators are related to political connections and serve as our focus. However, when we alternatively use the overall index, the empirical results are the same.

Table 7

Managerial ability, political connections, and financial reporting fraud: using the propensity-score matching to deal with endogeneity associated with managerial ability.

	SIZE	LEV	MB	SOE	INNOINDEX	DIVERS
<i>Panel A^a: Descriptive statistics of 1860 pairs of firms with more and less capable managers</i>						
Firms with more capable managers	21.689	0.516	1.959	0.659	35.826	0.586
Firms with less capable managers	21.685	0.515	1.953	0.646	35.499	0.589
Diff.	−0.004	0.001	0.006	0.013	0.327	−0.003
p-value	0.907	0.842	0.670	0.409	0.392	0.689
Dependent variable: Financial reporting fraud	Full sample			Subsample with political connections		Subsample without political connections
	Model (1)		Model (2)		Model (3)	Model (4)
Variables	Coef.	(Z-stat.)	Coef.	(Z-stat.)	Coef.	(Z-stat.)
<i>Panel B: The impact of managerial ability and political connections on financial reporting fraud</i>						
MAABILITY	−0.869***	(−2.81)	−1.617***	(−3.78)	−0.183	(−0.42)
POLITICAL			0.021	(0.34)		
MAABILITY × POLITICAL			1.306**	(2.30)		
Controls ^b	Yes		Yes		Yes	Yes
n	3720		3720		1870	1850
Pseudo R ²	0.037		0.038		0.049	0.045

The z-statistics are based on robust standard errors clustered by firm (Petersen, 2009).

INNOINDEX is the innovation index of China's 31 provinces from the "Annual Report of Regional Innovation Capability of China" (hand-collected); DIVERS is the degree of diversification of a firm, measured by the sales-based Herfindahl index. All other variables are defined in Table 2 and all the continuous variables are winsorized at 1% and 99% to mitigate the effect of outliers.

^a For each firm having more capable managers, we choose a firm having less able managers with the closest propensity score as the control firm. Specifically, we use a one-to-one firm matching with a caliper of 0.1, and a common support range of [0.1, 0.9] (Caliendo and Kopeinig, 2008). This procedure yields 1860 pairs of matched firms.

^b For brevity, control variables are not reported.

* 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 8

Managerial ability, political connections, and financial reporting fraud: using the propensity-score matching to deal with endogeneity associated with political connections.

	SIZE	LEV	ROE	SOE	BEINDEX
<i>Panel A^a: Descriptive statistics of 1518 pairs of political connected and non-connected firms</i>					
Connected firms	21.610	0.506	0.050	0.677	3.062
Non-connected firms	21.640	0.503	0.060	0.678	3.065
Diff.	−0.030	0.003	−0.010	−0.001	−0.003
p-value	0.397	0.583	0.495	0.969	0.586
Dependent variable: Financial reporting fraud	Full sample			Subsample with political connections	
	Model (1)		Model (2)		Model (3)
Variables	Coef.	(Z-stat.)	Coef.	(Z-stat.)	Coef.
<i>Panel B: The impact of managerial ability and political connections on financial reporting fraud</i>					
MAABILITY	−0.932***	(−3.07)	−1.648***	(−3.82)	−0.398
POLITICAL			0.093	(1.37)	
MAABILITY × POLITICAL			1.195**	(2.10)	
Controls ^b	Yes		Yes		Yes
n	3036		3036		1518
Pseudo R ²	0.033		0.034		0.039

The z-statistics are based on robust standard errors clustered by firm (Petersen, 2009).

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

^a For each politically connected firm, we choose the non-connected firm with the closest propensity score as the control firm. Specifically, we use a one-to-one firm matching with a caliper of 0.1, and a common support range of [0.1, 0.9] (Caliendo and Kopeinig, 2008). This procedure yields 1518 pairs of political connected firms and control firms.

^b For brevity, control variables are not reported.

* 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.

vinces 2013 Report. All other variables are as previously defined. Next, we match, without replacement, each connected firm to a non-connected firm with the closest predicted probability.

Finally, we estimate Eqs. (1) and (2) using the samples we constructed in the first stage. Table 8, Panel A, shows that none of the differences in any of the dimensions approaches the cutoff of 0.1, indicating that the covariates are generally balanced across the connected firms and non-connected firms. Therefore, the matching procedure is successful.

Panel B of Table 8 presents the results from Eqs. (1) and (2) using the matched sample, and reveals that the main findings still hold. Overall, our results are broadly comparable to those in our main tests after controlling for self-selection bias of political connections through propensity-score matching research designs.

5.4.2.1. Frequency of financial reporting fraud. In our main tests, we construct an indicator variable (*FRAUD*) on whether the firm commits financial reporting fraud. In this section, we use the number of financial reporting fraud events, *FRAUD_NO*, as an alternative measure of fraud. We replace *FRAUD* with *FRAUD_NO* and re-estimate Eqs. (1) and (2). The untabulated results indicate that the results using alternative measures are broadly comparable to our main findings. Stated differently, managerial ability is associated with a lower frequency of financial reporting fraud events; this association is primarily driven by non-connected firms.

5.4.3. Other sensitivity analyses

In this subsection, we perform several other sensitivity analyses. First, our sample used in our main tests includes observations with Special Treatment (ST) status, which tend to have poor performance and thus are likely to commit financial reporting fraud. To provide further insights into whether our results are mainly driven by these ST observations, we exclude ST observations from our sample and re-conduct our regressions. Using this restricted sample, we find that the inferences are the same as those in our main tests (not reported).

Second, financial reporting fraud used in our main tests includes only the CSRC and stock exchanges enforcement actions for financial reporting misconducts. In other words, we delete the four other types of enforcement actions initiated by the CSRC and stock exchanges from our fraud analyses, including illegal share buybacks, the unauthorized change of fund usages, violations of fund provisions and embezzlement by a major shareholder. In this section, we include all types of enforcement actions in our analyses and construct one new measure of fraud, *ALLFRAUD*, equal to one if a firm is sanctioned by the CSRC or/and stock exchanges, regardless of financial reporting or not, and zero otherwise. We re-perform our tests for H1 and H2 by replacing *FRAUD* with *ALLFRAUD*. The untabulated results indicate that the inferences are broadly comparable to those in our main tests using the *FRAUD* measure. This suggests that our results are robust to alternative proxy for enforcement actions.

6. Conclusions

Despite China's weak legal and institutional environment, it has become the second largest economy in the world. The primary objective of this paper is to examine whether there are associations among managerial ability, political connections and financial reporting fraud in China.

Using a sample of listed firms in China during 2007–2012, we find that increased managerial ability results in less financial reporting fraud even in a relationship-based economy like China. Second, we find that the effect of managerial ability in reducing fraudulent financial reporting is stronger for non-connected firms than for connected firms.

Further analyses indicate that our findings are driven primarily by non-SOEs, as opposed to SOEs. We also find that firms with capable managers face less severe penalties if they are penalized by regulatory agencies, relative to those without capable managers; among non-state-owned firms, this association is weaker when firms are politically connected than when firms are not connected.

This paper is important for enhancing our understanding of the roles that managerial ability and political connections play in reducing fraudulent behavior in general and fraudulent financial reporting in particular. The evidence is that if an able manager does reduce the likelihood of financial reporting fraud, investors may have an incentive to invest in such firms. In addition, this paper may also have implications for the regulatory agencies. Specifically, if firms with more capable managers are, on average, less likely to commit financial reporting fraud, the regulatory agencies may want to put relatively more inspections and investigative focus on the financial statements of firms with less capable managers.

One major limitation of our paper is that our managerial ability variable is based on the paper by Demerjian et al. (2012, 2013). Although this proxy is used widely in accounting literature, we cannot completely rule out the possibility that this proxy reflects idiosyncratic abnormal performance. Therefore, we must interpret the results with caution.

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