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The effects of manager market competition and manager cash compensation on financial fraud among listed companies in China

In Partial Fulfillment of the Requirements

for the Bachelor of Science in Accounting

by

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1025954

May, 2020

The Effects of Manager Market Competition and Manager Cash Compensation on Financial Fraud among Listed Companies in China

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ABSTRACT: The purpose of this study is to examine whether the financial crises influence the effects of the market competition and manager cash compensation on the likelihood of listed firms' fraudulent financial reporting in China. I employ the logistic regression model to analyze a very large sample of 1088 Chinese listed firms from year 2008 through 2018. The main findings are as follows: first, the manager market competition is *negatively* associated with the probability of committing fraud. Second, the manager cash compensation is *negatively* related to the likelihood of financial fraud. These findings suggest that after several financial crises in China, (1) strong manager market competition can regulate Chinese top managers effectively; (2) higher cash compensation and a good reputation mechanism can provide a kind of stimulation for top managers in order to deter financial fraud.

Keywords: *Manager cash compensation; Market competition; Financial fraud*

Data Availability: *The data collected in the paper are available from the CSMAR database.*

I. INTRODUCTION

A recent research found that from 2001 to 2008, a quarter number of Chinese listed companies has been at least twice committed the financial fraud (Zhu and Wu 2009). This finding shows that it is very common for Chinese listed companies to conduct fraud, which will weaken the confidence of public investors and impede social economic development. The case analyzed in Albrecht's study (2015) shows that perpetrators always use power to ask others to commit fraud. In this way, the managers have more powers to recruit employees to do fraud. Shaw and Zhang (2008) pointed out the most companies' fraud was planned and implemented by top managers. Besides, Fleming et al. (2016) stated that managers are responsible for the quality of financial statement but also have more opportunity to fraud. On the one hand, the top managers directly charge the company's financial condition management and have the right to sign the confirmation of the financial statements, on the other hand, many listed companies have a large number of shareholders, which are very separated and less likely to involve in the company's events. Therefore, the managers are the actual controller of the company (Liu 2013). Therefore, it is not hard to say that the top managers are responsible for the company's financial statement fraud.

Moreover, Beasley (1996) stated that manager compensation, which is a kind of incentive mechanism, influences the manager's decision, besides, the increasing manager compensation can decrease the likelihood of managers' financial fraud. LaPorta et al. (2002) focused on external factors, he analyzed that the manager market competition is related to the reputation of managers; in a competitive manager market, a manager tends to behave well to build a good reputation, which decreases the likelihood of committing the fraud. Therefore, the manager compensation and manager market competition can influence the manager's decision making. But these are the cases in the U.S., a developed country. Unlike the U.S., China is a developing country with inefficient manager market. Therefore, I estimated that the findings would be different between these two countries (Yuan et al. 2008).

No prior study examines whether the changeable economic condition can influence the impacts of managerial compensation and market competition in the Chinese market from year 2008 to 2018. Besides, Davidson et al. (2015) pointed out that the environment has a heavy impact on financial frauds. Yuan and Deng (2008) found that from year 2002 to 2004, the managerial compensation is negatively associated to the probability of fraudulent reporting in China, and a competitive manager market can keep manager from corporate fraud. As such, this study is the continuous of Yuans and Deng's (2008) study and focuses on the impact of the top manager compensation and manager market competition on corporate fraud of listed companies in China from 2008 to 2018.

In recent years, the scandals about financial fraud of listed companies in China have been exposed frequently, such as the Lantian company's inventory fraud, the Leshi Internet corporation's accounts receivable falsification and so on. In 2008, the influence of subprime crisis was transformed to China, the Chinese government launched strong domestic demand to offset the economic impact of the shortfall, so this international crisis did not cause much damage on the Chinese economy. However, the Chinese economy's "sub-depression" in 2012 caused serious damage to the Chinese companies and influenced the companies' performance, influencing the likelihood of financial fraud (Liu 2013). Therefore, based on the changeable Chinese market situation, does this change influence the relationship with the company financial fraud? This is what I consider.

My major hypotheses are as follows: the number of listed companies is *negatively* associated with the likelihood of corporate wrongdoing; the CEO turnover rate is *negatively* associated with the probability of corporate fraud; the internal director increases the likelihood of financial fraud; CEO compensation is negatively associated with the likelihood of fraudulent financial reporting. I collect a large sample of 914 financial fraud firms that were disclosed on the China Securities Regulatory Commission (CSRC) action, and a matched sample of 174 firms that did not conduct fraud from year 2008 to 2018. I employ the logic regression model to analyze the relationship among them. My findings are accordant with my hypotheses.

This study contributes to the literature in several ways. Most importantly, this study is the first one to take environmental changes into consideration. After 2008 and 2013 financial crises, I found that the competitive manager market can behave managers well, which provides strong evidence in support of Yuan's (2008) study. Since my sample that includes 1088 listed firms is very large, my results should be representative of a large number of listed firms in China. Furthermore, as our empirical tests control for other internal factors such as company financial performance.

The reminder of my paper is organized as follows. In the next section, I briefly review the previous relevant literature and develop hypotheses. In section III, I describe methodology and sample. In section IV, I explain the empirical results of the main tests. In section V, I summarize and discuss the findings. And in the last section, I draw the conclusion.

II. LITERATURE REVIRE AND HYPOTHESIS DEVELOPMENT

Extant Literature

Because the corporate governance mechanisms are considered as a crucial factor of financial fraud by many scholars (Beasley 1996; Sharma 2004; Uzun et al. 2004; Robison and Santore 2006; Yuan et al. 2008; Hannink 2013), many previous studies investigated the importance of corporate governance mechanisms related to the corporate fraud. To be specific, they thought the size of the outside and inside director is significant related to corporate wrongdoing. By using the sample of fraud and no-fraud companies in the U.S., Beasley (1996) found that the number of outside directors in Board of Directors is negatively related to the financial fraud. He concluded that if the CEO is also the member of BOD, the likelihood of conducting fraud will increase. Uzun, Varma, and Szewczky (2004) found that the structure and the board composition of BOD are significantly associated with the likelihood of financial fraud. Besides, they also suggested that the portion of independent outside directors is negatively associated with company wrongdoing. In their study's discussion part, they highlighted the importance of the compensation committee for financial fraud, and the compensation committee represents a corporate's incentive mechanism, which is an indispensable part of a company. While Beasley (1996) and Uzun et al. (2004) study the cases in the United States, Arshad and Razali (2014) use a sample of fraud and no-fraud corporates in the Malaysia, concluding that the independent director is significantly negatively associated with the incidence of conducting fraud.

The Pre-2008 Financial Fraud in China

Since founding the stock market at the beginning of 1990s, the listed firm's fraud

happened frequently (Yuan et al. 2008). Beginning at the 21th century, more and more Chinese scholars contributed to find the relationship between corporate governance and financial fraud in China (e.g., Yuan et al. 2008; Yang and Heng 2012; Chen et al. 2006). Yuan and Deng (2008) found that the independent outside director can increase the likelihood of fraudulent financial reporting, this finding is different from the U.S. findings. It shows the different market system can lead a reverse relationship between corporate governance and corporate fraud. Chen et al. (2006) pointed out that increasing the proportion of the outside director can reduce the incident of fraudulent financial reporting by using a sample from 1999 to 2003 fraud firms. Yang and Heng (2012) also found that CEO is also the member of BOD can increase the likelihood of corporate fraud by using a large sample of fraud firms from year 1997 to 2007, which is more representative, and the result is consistent with the result studied by U.S. firms.

Changes in Chinese Market – 2008 & 2012 Financial Crises

The subprime mortgage crisis in 2008 and the international financial crisis in 2012 had a significant and far-reaching impact on the global economy (Sun 2014).

With the U.S. subprime crisis has spread quickly and had a bad influence on the global economic situation during year 2008 to 2009, China is inevitably affected seriously (Zheng and Tong 2010). In 2009, when the influence of subprime crisis was transformed to China, Chinese government launched strong domestic demand to offset the economic impact of the shortfall, so this international crisis did not cause much damage on the Chinese economy (Wise et al. 2015). However, Chinese economy's "sub-depression" in 2012 caused a serious damage on Chinese companies and influenced the companies' performance, influencing the likelihood of financial fraud (Liu 2013).

Despite serious financial crises stroke the Chinese economic society again and again, the Chinese market was still developing from year to year (Yang et al. 2012). They pointed out that the stimulus package designed by the Chinese government to keep the economy on course, as well as its results - both positive and negative aspects in the middle and long term. It represents an occasion for China to embark on a nation-wide effort to upgrade its economy in the key sectors. At the same time, attention needs to be paid to improving economic-legal institutional framework to support China's role as a major global player. Therefore, it is not hard to say that 2008 to 2018 had been disastrous years for China's market economy.

Manager Market Competition and Financial Fraud

In competitive manager market, wages that the top manager earn are based on his or her past performance. Manager must work hard and convey his or her ability to labor market in order to build a good reputation so that he or she can earn higher wage in the future (Fama 1980). Therefore, market competition plays a crucial role on managerial behavior. Besides, if the top managers commit fraud, they will lose their reputation in the manager market and no company will employ them. Therefore, the more competitive the manager market is, the less likelihood the manager commit fraud. The measurement of manager market includes the amount of listed companies in certain province, the CEO turnover rate and the type of CEO.

When market competition is immature, managers can gain tremendous private benefits by conducting financial fraud (Chen et al. 2006). Generally, the greater number of

listed companies in certain economic environment, the more severe labor competition in that market, the more serious forces CEO confronted coming from the competitors. Thus, the researcher suggests that the top managers in provinces with more listed companies will be less likely to commit fraud but work hard for the sake of higher wages. Based on the above discussion, the researcher made the first hypothesis.
H1: The number of listed companies is negatively related to the likelihood of financial fraud.

The CEO's turnover rate can reflect the degree of competitiveness in the manager market (Rose et al. 2003). If the CEO in a company has bad performance, the Board of Directors will replace current one with a new one. However, if the market is immature, which means the number of qualified CEO in the manager market is limited, the company with incompetent CEO does not have the chance to replace with a new one. On the opposite, if there are a large number of professional managers in the market, the company with inefficient CEO can replace with a better one easily. This shows the importance of the market competition (Ross et al. 2003). To investigate the relationship between CEO turnover and the likelihood of corporate fraud. In 1996, Beasley found that the CEO turnover is negatively associated with the likelihood of conducting fraud. Therefore, based on above discussion, the researcher made the second hypothesis.
H2: The CEO turnover rate is negatively related to the incident of financial fraud.

The Board of Director (BOD) is something like a supervisory of top managers, so it holds a highly important position in the corporate governance system (Fama 1980). In China, listed firms have been required to include independent directors in the board, and the proportion of independent directors should reach at least one third by 2003 (Yang et al. 2012). Chen et al. (2006) investigated whether boardroom characteristics influence corporate fraudulent reporting in China and found that a higher fraction of outside directors reduces the possibility of financial fraud. Most of the previous researches show that the firm with dual CEO/BOD of the directorate status has more likely to report fraudulent financial statements. Besides, Schrand and Zechman (2012) also pointed out that the CEO overconfidence of the financial statement also leads to the wrongdoing. Therefore, based on above discussion, the researcher made the second hypothesis.
H3: If the CEO is also the member of BOD, the likelihood of financial fraud will increase.

Manager Cash Compensation and Financial Fraud

According to the efficiency-wage mechanism, paying a top manager a wage higher than the same level will increase the opportunity cost of committing fraud and force them to work hard for stockholders' interests (Yuan et al. 2008). When pecuniary compensation of top managers is rather low and the number of shares allocated to top managers is insignificant, given them higher cash compensation, they will cherish their positions and less likely engage in fraud (Zhang and Zeng 2004). Based on above discussion, the researcher made the fourth hypothesis.
H4: The incidence of fraudulent financial reporting is lower if the managerial compensation is higher.

Table 1 summarizes all the research hypotheses proposed in this study.

TABLE 1

Research Hypotheses Proposed in this Study

Hypotheses	Description
H1	The number of listed companies is negatively related to the likelihood of financial fraud.
H2	The CEO turnover rate is negatively related to the incident of financial fraud.
H3	If the CEO is also the member of BOD, the likelihood of financial fraud will increase.
H4	The incidence of fraudulent financial reporting is lower if the managerial compensation is higher.

III. RESEARCH METHODOLOGY

Data Source and Sample Selection

The researcher examines all published China Securities Regulatory Commission (CSRC) enforcement actions from 2008 to 2018, with four years from 2008 to 2011 for the after-2008 financial crisis period and seven years after 2012 financial crisis. My data have two types: (1) financial statement and corporate governance information, which obtained from the China Stock Market and Accounting Research Database (CSMAR); (2) the type of company capital stock, which I manually collected from CSRC website (http://csrc.gov.cn/).

The fraud companies I collected fraud just in one year within that duration, which is more representative. Besides, I eliminated fraud firms as follow: 1) firms that have B-share (B-share is traded by foreigners, which is not within my consideration); 2) ten firms that the data cannot be collected completely. My final sample contains 914 companies experiencing fraud once during year 2008-2018 and 174 matched no-fraud firms during that period. Table 2 shows the year and stock exchange distributions of my final sample. Figure 1 shows the number of fraud companies changed from year to year, and this figure helps me to analyze the impacts of financial crises on corporate fraud.

Empirical Analyses

Multivariate Logistic Regression

As a grouping research, this paper regards NOLC, CEOC, and CEOT as proxy variable of manager market competition. As for studying the relationship between top manager compensation and financial fraud, I use TOP3 as an explanatory variable to test. The following logistic regression model is used to test the hypotheses:

$$\begin{aligned} FRAUD = {} & \beta_0 + \beta_1 b_1 NOLC + \beta_2 b_2 CEOC + \beta_3 b_3 CEOT \\ & + \beta_4 b_4 TOP3 + \beta_5 RCON + \beta_6 BODS + \beta_7 ROTS \\ & + \beta_8 LEVE + \beta_9 ROSA + \varepsilon \end{aligned}$$

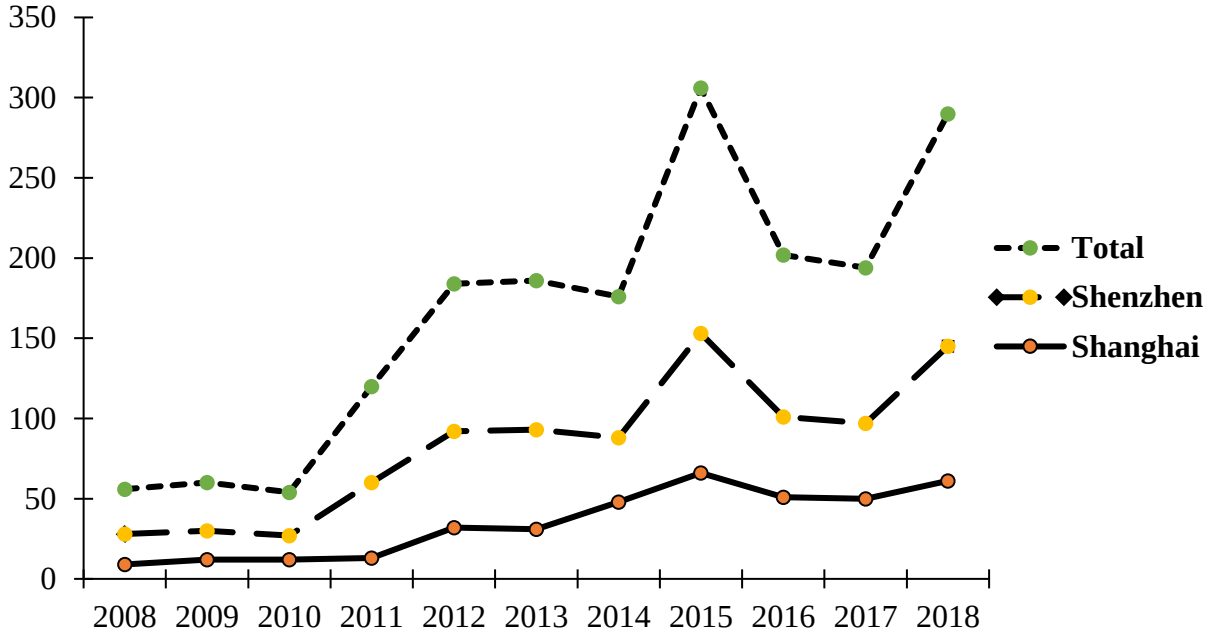
b_1=0,1

TABLE 2
The yearly and stock exchange distribution of fraud firms

Year	Shanghai	Shenzhen	Total
2008	9	19	28
2009	12	18	30
2010	12	15	27
2011	13	47	60
2012	32	60	92
2013	31	62	93
2014	48	40	88
2015	66	87	153
2016	51	50	101
2017	50	47	97
2018	61	84	145
Total	385	529	914

From all of the firm-year observations available in the Database of CSMAR during the 2008-2018 period, these firms are all committing fraud just in one year within that duration, I delete: (1) all firms that have B share; and (2) ten observations that the data cannot be collected completely.

FIGURE 1
The Time-Series of the Amount of Fraud Firms in Two Stock Exchange Distributions



In this model, the FRAUD coded as 0 or 1 is dependent variable for representing fraud firms or no-fraud firms. NOLC, CEOC, CEOT, and TOP3 are the explanatory variables. To evaluate the degree of the manager market competition, I use NOLC to represent the amount of listed companies in certain province. I expected the more listed companies in the province, the severer manager market competition, and it will lead the less likelihood of conducting financial fraud. Let b_2, b_3, b_4 equal to 0 and b_1 equal to 1, then the coefficient β_1 should be negative.

CEOC coded as 0 or 1 represents CEO turnover, if a firm used to change CEO, it will be coded as 1, otherwise 0. Because higher CEO turnover rate indicates that BOD have opportunities to replace poor CEO with a better one, and the likelihood of financial fraud will decrease (Chen et al. 2006), let b_1, b_3, b_4 equal to 0 and b_2 equal to 1, then the coefficient β_2 of CEOC is expected to be negative.

CEOT coded as 0 or 1 represents whether the CEO is also the member of BOD. If the CEO is also the member of BOD, which means the director is internal, it will be coded as 1, otherwise 0. I expected the internal directors have more access to conducting fraud, which will increase the likelihood of financial fraud. Therefore, let b_1, b_2, b_4 equal to 0, and b_3 equal to 1, then the coefficient β_3 of CEOT is expected to be positive.

TOP3 represents the amounts of top3 managers' salaries, which can evaluate the relationship between the manager compensation and financial fraud. I expected if the managers have higher salary, their opportunity cost to conduct financial fraud is higher, which decreases the likelihood of corporate wrongdoing. Let b_1, b_2, b_3 equal to 0 and b_4 equal to 1, then the coefficient β_4 of TOP3 is expected to be negative.

The control variables include RCON (the type of companies capital stock), BODS (the total number of BOD members when the company established), ROTS (the proportion of shares held by individuals) , LEVE (total debit divided by total assets), and ROSA (main business sales divided by total assets).

In sum, β_0 is the fixed number, $\beta_{2\text{-}9}$ are coefficient numbers, $b_{1\text{-}4}$ are either 0 or 1 in order to decide whether put this variable in the model or not. ε means the expected error. The descriptive statistics for the independent and control variables are reported in Table 3.

IV. REGRESSION RESULTS

As the fraud companies were all conducted fraud only once in my final sample and a matched sample of no-fraud firms were also collected. The results of regression test are showed in Table 4.

As a result, NOLC has a negative sign (-0.0002) and highly statistically significant at $p<0.01$. This result is consistent with H1 and implies that the larger number of listed companies in certain province, the fiercer manager market competition, and the less likely that company will conduct financial fraud.

Consistent with H2, the coefficient of CEOC is negative (-0.1651) and statistically significant level is $p<0.01$. This result shows that a higher CEO turnover ratio can help to deter firm fraud indeed. These two results together show the importance of manager market competition, if there are more listed companies in province and more professional CEO available in the manager market, when managers in a company did something fraud, they will be replaced by better candidates easily, and thus their opportunity cost of reporting fraudulent financial statements becomes higher than those in the less competitive manager

TABLE 3
Descriptive Statistics for Variables

	Total Firms (n=1088)					Fraud Firms (n = 914)					No-fraud Firms (n = 174)				
Variable	Mean	Std. Dev.	Min.	Median	Max.	Mean	Std. Dev.	Min.	Median	Max.	Mean	Std. Dev.	Min.	Median	Max.
NOLC	284.47	537.52	9.00	202.00	3789.00	201.66	151.28	9.00	175.00	601.00	719.42	1211.65	31.00	306.00	3789.00
CEOC	0.65	0.48	0.00	1.00	1.00	0.59	0.49	0.00	1.00	1.00	0.97	0.18	0.00	1.00	1.00
CEOT	0.26	0.44	0.00	0.00	1.00	0.29	0.45	0.00	0.00	1.00	0.09	0.29	0.00	0.00	1.00
TOP3	231.09	261.31	18.42	156.83	3326.04	203.09	206.69	18.42	144.43	2505.73	378.21	421.51	22.95	238.68	3326.04
RCON	0.63	0.48	0.00	1.00	1.00	0.66	0.47	0.00	1.00	1.00	0.48	0.50	0.00	0.00	1.00
BODS	9.33	2.68	0.00	9.00	30.00	9.19	2.53	0.00	9.00	30.00	10.06	3.29	5.00	9.00	25.00
ROTS	37.33	35.88	0.00	39.61	100.00	33.95	37.67	0.00	166.78	100.00	55.06	14.97	10.45	55.85	89.40
LEVE	0.48	0.62	0.02	0.44	18.14	0.47	0.68	0.02	0.42	18.14	0.50	0.19	0.06	0.50	1.16
ROSA	0.28	0.33	0.00	0.18	3.18	0.30	0.35	0.00	0.20	3.18	0.15	0.12	0.00	0.12	0.73
NPRO	412	2470	-6070	6.84	50000	289	1590	-2560	63.18	37900	1060	4950	-6070	117.18	50000

Variable Definitions:

NOLC = the number of listed companies in certain province

CEOC = 1 if CEO turnover, and 0 otherwise

CEOT = 1 is CEO is the member of BOD, and 0 otherwise

TOP3 = the total cash compensation of three top managers who compensation is highest (RMB ten thousand)

RCON = 1 if listed company is controlled by family enterprise, foreign capital, or employee, and 0 otherwise

BODS = the total number of BOD members

ROTS = the percentage of shares held by individuals (tradable shares)

LEVE = total debt to total assets

ROSA = the main business sales to total assets

NPRO = net profits of listed company (RMB in millions)

TABLE 4

The Results of Logistic Regression Analysis

Variables	Hypotheses	Predicted Sign	(1) Coefficient	t-value	P-value	(2) Coefficient	t-value	P-value	(3) Coefficient	t-value	P-value	(4) Coefficient	t-value	P-value
Constant			0.9765***	21.510	0.000	1.0342***	20.660	0.000	0.8929***	18.260	0.000	0.9559***	20.130	0.000
NOLC	H1	−	-0.0002***	-12.59	0.000									
CEOC	H2	−				-0.165***	-6.770	0.000						
CEOT	H3	+							0.0929***	3.730	0.000			
TOP3	H4	−										-0.000***	-7.150	0.000
RCON			0.0706***	3.240	0.001	0.0098	0.420	0.677	0.0461**	1.990	0.047	0.0511**	2.250	0.025
BODS			-0.0091**	-2.350	0.019	-0.0078*	-1.930	0.054	-0.0083**	-2.030	0.043	-0.0064	-1.570	0.117
ROTS			-0.002***	-5.510	0.000	-0.001***	-3.950	0.000	-0.001***	-4.970	0.000	-0.002***	-5.190	0.000
LEVE			0.0023	0.140	0.885	0.0101	0.600	0.548	0.0023	0.140	0.892	0.0072	0.420	0.671
ROSA			0.1189***	3.750	0.000	0.0987***	2.950	0.003	0.1241***	3.680	0.000	0.1411***	4.250	0.000
NPRO			-0.0000**	-2.250	0.025	-0.000***	-3.160	0.002	-0.000***	-3.080	0.002	-0.0000	-0.570	0.566
R-squared			0.2015			0.1216			0.0960			0.1257		
n			1088			1088			1088			1088		

*, **, *** Denote two-tailed statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

market. In order not to be fired by BOD, managers in the competitive manager market will perform well and not involve into financial fraud.

CEOT has a significantly ($p<0.01$) positive (0.0929) relationship with the incident of financial fraud. Consistent with H3, the result reflects that a firm with dual CEO/BOD director, which is internal director, is more likely to conduct financial fraud. This reflects the importance of independent non-executives.

The coefficient of TOP3 is -0.0003 and statistically significant at $p<0.01$. Consistent with H4, it shows that the higher manager compensation, the less likely managers commit fraud. The managerial compensation is related to the corporate incentive mechanism, the more efficient incentive mechanism can encourage managers perform better and decrease the likelihood of financial fraud.

Most of the control variables are significant, such as RCON, BODS, ROSA and NPRO, which means these measurements of corporate performance are important when considering the factors of financial fraud.

Variance Inflation Factor (VIF) Test

TABLE 5 shows the result of Variance Inflation Factor test. A variance inflation factor (VIF) is aimed to test the multicollinearity of the variables. If the VIF is close to 1, the ideal target, the dependent factor is not heavily impacted by its correlation with other factors. The VIF of my variables are all close to 1. That is, all of my independent variables and control variables are free from the multicollinearity.

TABLE 5

Variance Inflation Factor Statistic Test for Variables

Variables	VIF	1/VIF
NOLC	1.01	0.985884
CEOC	1.23	0.810521
CEOT	1.05	0.95227
TOP3	1.17	0.856104
RCON	1.19	0.839905
BODS	1.09	0.914698
ROTS	1.17	0.853993
LEVE	1.02	0.980615
ROSA	1.11	0.900345
NPRO	1.16	0.859911

V. DISCUSSION

Review of the Main Results

Motivated by the nationwide changeable economic situation in, but insufficient evidence of, whether the manager market competition and manager compensation are associated with the likelihood of fraudulent financial reporting, I investigate this issue within the context of China by

(1) counting the number of listed companies in certain province , (2) summarizing the CEO turnover rate, (3) evaluating the firms with dual CEO/BOD directors and (4) calculating top3 managerial salaries.

Based on a sample of 1088 firms from year 2008 to 2018, I document several findings. First, the larger number of listed companies in certain province, the less likelihood of financial fraud. Second, the higher CEO turnover can deter company from financial fraud. Third, the independent director can decrease the likelihood of fraudulent financial reporting. Fourth, the higher manager compensation can decrease the likelihood of corporate wrongdoing. Fortunately, these results accept my all hypotheses.

Explanation of the Main Results

Manager Market Competition

My first finding-increasing number of listed companies in certain province can decrease the corporate fraud-shows that the efficient manager market competition can help deter fraudulent acts because an area with more listed companies has relatively more fierce market competition compared to the area with fewer number of listed firms. Yuan et al. (2008) found the same result. They analyzed that the manager market competition is related to the manager reputation. If the market is more competitive, the manager reputation is more important because company wants to employ a manager with a high reputation instead of poor one. Therefore, in this situation, managers are motivated to perform better to build a good reputation, which helps decrease the likelihood of corporate financial fraud.

Second, I proved that the CEO turnover rate is negatively associated with the incidence of financial fraud. Rose et al. (2003) pointed that an indication of manager market competition is the replacement of incompetent manager. The competitive manager market can push a manager to operate a company based on the shareholders' interests, otherwise, they will be replaced with a new one. As a result, Beasley (1996) proved that the CEO tenure negatively related to the financial fraud, which shows CEO in fraud firms will be fired with higher possibility than CEO in no-fraud firms. Besides, Yang and Heng (2012) also found that the firms with shorter tenure are less likely to commit fraud.

Third, I proved that if the CEO is also the member of BOD, the likelihood of corporate financial fraud will increase. Many previous studies covered this factor (Yuan et al. 2008; Uzun et al. 2004; Chen et al. 2006; Arshad and Razali 2014; Yang et al. 2012; Chen et al. 2017). If the CEO is also the member of BOD, which means the dual CEO/BOD director is involved in day-to-day operation, it is believed that the internal director was subject to the pressure of corporate performance. Rosner (2003) also pointed out that the internal directors will have more motivation to commit fraud because they can conceal the fraudulent acts easily. Besides, the internal director has more opportunity to commit fraud. In line with the previous studies, Yang and Heng (2012) found that firms with a lower proportion of independent directors are more likely to report fraudulent statements. Besides, Arshad and Razali (2014) also pointed that the independent non-executive directors can decrease the incidence of financial fraud. The study shows that the board composition is an important element in a company and reflects the level of corporate governance mechanism (Chen et al. 2017). It is easy to conclude that firms should have a high proportion of independent non-executive directors so that they can make more independent decision, free from the pressure from internal organization and maximize the shareholders' interests.

Manager Cash Compensation

Fourth, as for the relationship between managerial compensation and corporate financial fraud. I proved that the higher compensation, the less likely conduct financial fraud. Actually, manager compensation is a type of manager incentive mechanism, higher compensation can encourage managers work hard and increases the private cost of committing fraud. Therefore, manager having high compensation is unwilling to commit fraud, in this way decrease the likelihood of fraudulent reporting (Yuan et al. 2008). Zhang and Zeng (2004) argued that managers cash compensation is negatively associated with financial fraud. And Yuan (2008) also proved that manager compensation is higher in no-fraud firms than that in fraud firms.

Limitations

Because the records of listed companies from 2008 to 2018 have thousands of observations and the data provided in database are incomplete, I eliminated the companies with incomplete information. Although my sample was very large, the result was less accurate compared with that drew by using the whole population. As for the type of company's capital stock, I did not find it in my database, so I searched it one by one on the government website.

Besides, because of the deficiency of provided information, I collected 914 fraud firms and 174 no-fraud firms, and then compared fraud firms with no-fraud firms. The imbalance number of fraud firms and no-fraud firms may lead to the inaccurate results.

Because the results before financial crises and after financial crises are very similar, so I did not analyze the influence of financial crises deeply. Maybe in further study, I hope researchers can analyze the environmental influence year by year to find if there is any difference between before-crisis and after-crisis.

Reliability and Validity

Reliability of Research

The data I collected are from CSMAR database and government websites, which are official and free of bias. Besides, I did the statistic and logistic regression tests and had the same findings as those of previous researches.

Validity of Research

Internal validity is established when my research demonstrates a causal relationship among variables. In my correlation test, I defined the fraud as my independent variable and NOLC, CEOC, CEOT and TOP3 as my dependent variables. And then I examined the relationship among these variables. By analyzing the factors related to the likelihood of corporate fraud based on previous studies, I proved that my dependent variable and independent variables have true causal relationships.

My large sample of 1088 firms, which include both fraud firms and no-fraud firms, covers most of the Chinese provinces. Besides, the fraud firm I chose committed fraud in only one certain year, which is representative to see the things happened in that year. As Table 2 shows above, the fraud firms covered in each year within my study years. Therefore, the data I collected is more representative and the results can be generalized to all population. Besides, I did the VIF test, as Table 5 shows above, all of my independent variables and control variables are free from multicollinearity.

Theoretical Contribution

Financial frauds at prominent companies have triggered a sweeping examination of corporate governance and financial fraud. Many studies empirically test the relationship between corporate governance mechanisms, such as BOD composition, ownership structure, independent auditors, and the probability of financial fraud. The effect of market competition on companies' serious accounting problems is an unnoticed field that deserves more research because of these reasons. First, manager market competition of developed countries is more complete than that of developing countries, thus, the studies in developed countries could neglect the influence of it (Yuan et al., 2008). But China is a developing country, the economy is unstable, and the market is very immature. Therefore, we cannot ignore the effect of market competition. In the Yuan's paper, the effects of manager compensation and market competition on financial fraud in public companies: an empirical study in China, they studied the fraud companies from 2002 to 2004 in order to investigate the relationship between the manager market competition and corporate financial fraud.

However, after 2004, there still were many frauds being disclosed, causing serious damage to the social economy and bringing the large losses to investors. As for the social environment, the 2008 and 2012 financial crises crashed the Chinese market over and over again, making economy more unstable. Therefore, it is better to investigate how the market environment influences the likelihood of financial fraud. Until now, there is no empirical evidence about the effectiveness of manager market competition and manager compensation on avoiding companies' serious accounting problems after being damaged by economic depression.

VI. CONCLUSION

The purpose of my research is to investigate the impacts of the manager market competition and manager compensation on financial fraud from 2008 to 2018 in listed companies in China. I used a large sample of 1088 firms and employed logistic regression analysis to find the relationship among them. I found manager market competition has negative relationship with the incident of financial fraud, and the efficient manager incentive mechanism can deter fraudulent reporting. To compare the cases before with after 2008 financial crisis, I got the same results.

Because the manager market competition is hard to measure, and many researchers thought it is not a major aspect of financial fraud, there are a few researchers covered this area. Besides, twice financial crises after 2008 lead many companies' loss even bankruptcy, the external environmental factors also can influence the fraud. Therefore, this study was aimed to find whether there is any change in the relationship between managers' factors and financial fraud.

The provided information was incomplete, so I used the sample data instead of all population. Although my findings were consistent with most of the previous studies, the results were not too accurate if I want to analyze the level of the relationship in detail.

Because there were some limitations in my study, I highly recommend doing further research. For the sample selection, the further research can use more firms during more years in order to make sure the sample is more representative. Besides, the firms I selected were all in mainland China, the range can be expended to Hong Kong, Macao and Taiwan in order to see if there is any difference among these regions. As for the influence of financial crises, further research is needed to do the same regression analysis year by year in order to find if there is any different relationship among these years.

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