

Research on the Effect of Executives with Legal Backgrounds on Corporate Frauds– Empirical Analysis Based on A-share Listed Companies

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Abstract: Hypothesizing based on upper echelon theory, principal-agent theory, corporate governance theory, and ownership theory, this paper focuses on 1320 A-share listed companies of going concern in Shenzhen and Shanghai stock markets for seven years from 2009 to 2016. It explores the effect of executives' legal backgrounds on corporate frauds and changes in relations between executives with legal backgrounds and corporate fraud under different natures of ownership, as well as analyzes the specific effect mechanism of executives with legal backgrounds. The results show: (1) Executives with a legal background are able to play a role in inhibiting frauds of listed companies, and the more executives with legal backgrounds, the fewer frauds of listed companies; (2) The companies' nature of ownership plays a moderating role in the effect of executives with legal backgrounds on frauds of listed companies. The inhibition effect of executives with legal backgrounds on corporate frauds is more obvious in state-owned enterprises; (3) The reason why companies for which executives with legal backgrounds work have fewer frauds is that the executives choose low-risk companies prior to the service, which is a function of signal transmission. The conclusions provide suggestions for listed companies in terms of optimizing talent structure, strengthening internal governance, and appointing executives for shareholders, as well as the basis for regulatory authorities to conduct key supervision.

Keywords: Executives with Legal Backgrounds; Corporate Frauds; Nature of Ownership

1. INTRODUCTION

The number of listed companies in China has continuously increased since the establishment of the securities market. Amid a more diversified environment of a market-oriented economy, however, some listed companies violate laws and regulations as they go after profits. In recent years, the frauds of listed companies have occurred regardless of repeated bans. As executives play a key role in corporate operation and decision-making, there may be agency problems within companies due to the separation of ownership and management. That is to say, owners cannot supervise managers at all times, and executives may seek personal gain in an illegal manner. The upper echelon theory points out, that “management’s personal characteristics influence corporate decision-making”. So, scholars start with background characteristics of the management and establish the new theoretical research system represented by the upper echelon theory (Hambrick and Mason 1984).

The existing literature studies the correlation between executives' political characteristics, gender, age, education, titles and other factors as well as corporate frauds. But few scholars start with legal backgrounds to explore influencing factors of corporate frauds. In fact, more and more listed companies engage executives with legal backgrounds. At present, scholars hold two opposite views of the roles played by such executives. “One proposes that executives with legal backgrounds play a role of supervision in enterprises and can more sensitively detect and control the legal risks of enterprises (Krishnan, Jayanthi, et al. 2011), while the other one would suggest that executives with legal backgrounds impose higher legal risks to enterprises as they may conspire with other executives for personal gain by taking advantages of their expertise.” (Preeti Choudhary, Schloetzer, Jason, Sturgess2012)

Starting with legal backgrounds, this paper provides a new perspective for the research on the effect of executives with legal backgrounds on corporate frauds. In addition, based on different operation environments between state-owned enterprises and non-state enterprises, a moderating variable, nature of ownership, is introduced to examine changes in the effect of executives with legal backgrounds on corporate frauds under different natures of ownership. Therefore, this paper further enriches the study of influencing factors of corporate frauds.

2. LITERATURE REVIEW

2.1. Concepts of Executives with Legal Backgrounds

Executives literally mean a person or persons in a high position that exercises executive function in business. Currently, there is no unified definition of executives in academic circles, and executives are defined according to the specific research content. Hambrick & Meason (1984) propose that executives include “all senior management”. Boeker (1997) believes that executives are CEO, general manager, deputy general manager, and senior manager reporting to them. Bantel & Javkson (1993) interprets executives as staff who can play an important role in major corporate strategic decision-making and bear the subsequent consequences of their execution.

Chi Guohua, Yang Jin, and Zou Wei (2014) refer executives in their paper to the chairman of the board, general manager, finance director, and chairman of the supervisory board. Wang Shihong (2016) adopts the definition related to executives in CSMAR, i.e. the management who are responsible for the daily operation and management of the enterprise, hold important positions, and master key information.

Based on the above views and the data availability in this paper, the executives herein are defined as the relevant team of senior managers of a company, including CEO, general manager, deputy general manager, secretary of the board of directors, finance director, and other staff.

As for the concepts of legal backgrounds, Hopkins & Maydew (2015) define executives with “lawyer”, “law” or other synonyms in their titles as legal executives. Xia Tongshui, Fan Ningning, and Li Yan (2016) define executives with legal backgrounds as the management with titles such as “lawyer”, “senior judge”, “legal expert”, and “corporate legal adviser” in the database. Quan Yi and Chen Donghua (2017) believe “executives who have worked in a law firm, engaged in legal research, and held posts in public security bureau, procuratorate, and court are executives with legal backgrounds, and although they are all engaged in law-related work, they have their own emphasis on judicial theory, practice, and resources.

To sum up, this paper defines executives with legal backgrounds as the management who has served as legal consultant, practicing lawyer, manager of an in-house legal department, or worker in public security bureau, procuratorate, and court, including a company’s president, general manager, vice president, deputy general manager, finance director, and secretary of the board of directors.

In regards to how to measure the background characteristics of executives, the dummy variable is the method most used by domestic and foreign scholars to measure the characteristics of legal backgrounds. The value standard is that if there is at least one executive with a legal background in an enterprise, the value of the variable is 1; otherwise, it is 0. This paper adopts a dummy variable method to measure executives with legal backgrounds.

2.2. Corporate Frauds and their Influencing Factors

2.1.1. Relevant Concepts of Corporate Frauds

At present, there are following several views that scholars define frauds of listed companies. First, the acts of listed companies and their staff in violation of laws and regulations of China are frauds (Zhang Tingting, 2011). Second, companies that have been publicly warned or punished by a regulatory authority such as the China Securities Regulatory Commission (CSRC), Shenzhen Stock Exchange, Shanghai Stock Exchange, finance authorities, public security bureau, procuratorate, court, and other regulatory authorities due to violations of information disclosure, illegal operation, and crimes committed by the management are the object of study of frauds (Lu Yao, Zhu Yujie, Hu Xiaoyuan, 2012). Third, violations of laws and regulations, including national laws, regulations of the State

Council, rules of CSRC, rules of stock exchanges, rules of the Ministry of Finance and its departments and branches, rules of the People's Bank of China, etc., are described as frauds (Li Zheng, Tong Zhiyu, 2016).

Based on the above views and the data source of this paper, the corporate frauds are defined that acts of an enterprise in violation of laws and regulations, including laws officially promulgated by China; regulations and rules of the State Council; rules and regulations issued by CSRC, Shenzhen Stock Exchange, and Shanghai Stock Exchange; regulations of the Ministry of Finance; regulations jointly issued by the Ministry of Finance and China Banking and Insurance Regulatory Commission, State Administration of Work Safety, and State Taxation Administration, are corporate frauds. The measurement of corporate frauds adopts the same method as the one of executives' backgrounds. Most scholars use the dummy variable method to measure such indicator. That is to say, if there is at least one time of fraud by an enterprise, the value of the variable is 1; otherwise, it is 0 (Yang Hua, 2014; Quan Yi, Yao Zhenye, 2015; Lu Jun, 2015; Peng Mao, Li Jinjun, 2016; Ma Defang, Qiu Baoyin, 2016).

2.1.2. Influencing Factors of Corporate Frauds

In terms of governance structure, Cai Zhiyue and Wu Shinong (2007) find in a study on the relation between characteristics of a board of directors and frauds that the lower the proportion of independent directors, the more likely and severer the frauds occur. The dual role of the chairman of the board and the general manager also brings corporate frauds. As for executives incentives, Erickson et al. (2006) hold that there is no obvious correlation between executive equity incentives and corporate financial frauds. Wei Fang and Geng Xiulin (2018) consider the bigger the executive remuneration gap, the more corporate frauds with an unchanged average level of executives' remuneration.

With regard to the background characteristics of executives, Agrawal & Chadha (2005) think that engaging persons with finance backgrounds by a board of directors or board of auditors may reduce the probability of financial scandal. The higher the education level, the less the corporate frauds, and the service time and age are negatively correlated with corporate frauds (Gu Liang, Liu Zhenjie, 2013). The proportion of female executives among all executives is significantly negatively correlated with the times of fraud (Lu Jun, 2015). The legal background of executives is able to improve the quality of financial reports, while financial background does not have the same effect. Even the negative effect of financial background on financial report quality outweighs the positive effect imposed by legal background (Wang Yabing, 2014). As to legal background, the study of Lyu Rongjie, Hao Liting, and Wu Chao (2017) indicates that in listed companies independent directors with legal backgrounds are negatively correlated with times of crime due to disclosure violations, but positively correlated with the time span after which the frauds are found. It shows that independent directors with such backgrounds not only fail to fulfill their supervision function, but also take advantage of their expertise and work experience to cover up corporate frauds and crime. The study of Tang Jianxin and Cheng Xiaotong (2018) reveals that independent directors having legal knowledge are able to inhibit the interest infringement of large shareholders to medium and small investors, whose effect is more obvious during the low litigation risk.

In respect of the nature of ownership, Lei Guangyong and Liu Huilong (2006) find in empirical evidence that when the controlling shareholder of a listed company is state-owned, the manipulation of earnings management is less than that of non-state companies. Su Weidong (2005) believes that if the largest shareholder of a listed company is a state-owned administrative organization, it is more likely for business corruption to occur. However, some scholars hold different views that there is no significant relation between the proportion of shares held by the state and corruption of financial reports (Cai Ning, 2003), or a proportion of state-owned shares plays an inhibition role in executives' frauds (Zhou Haowen et al., 2006).

Corporate management incompetence is also a major reason for frauds. Huang Yanjun (2005) finds that the listed companies with a high proportion of borrowings during operation are more likely to obtain more profits via frauds. Furthermore, the larger the asset scale and the better the profitability, the lower the probability of corporate frauds of disclosure, probably because a large-scale company is more likely to attract the attention of regulators and the public. The pursuit of profit maximization is also a reason for corporate frauds (Shao Hui, Wang Hongxin, Li Zhigang, 2008).

In addition to the above internal reasons of enterprises, there are a lot of external factors affecting the proneness of corporate frauds. Zhang Yi (2005) finds the frauds of listed companies are significantly correlated with their localities. The acts of surrounding people or companies to some extent assimilate the operation and decision-making of such companies. Lyu Rongjie et al. (2017) find a high law index can inhibit the cover for corporate frauds of independent directors. Zhou Jun (2017) carries out an empirical analysis of multi-nation data specific to corporate frauds and reveals that the degree of nepotism in one country is positively correlated with corporate frauds. The transparency of government decision-making and efficiency of legal dispute settlement have a negative effect on corporate frauds. And good education quality also inhibits corporate frauds.

2.3. Nature of Ownership, Executives with Legal Backgrounds, and Corporate Frauds

2.3.1. Concepts of Nature of Ownership

In this paper, the nature of ownership refers that companies whose more than 50% of shares are invested or controlled by state-owned assets are state-owned, while non-state enterprises include other private enterprises, sino-foreign joint ventures, and wholly foreign-owned enterprises. The nature of ownership in this paper is defined as the category of the largest ultimate controlling shareholder of such listed company at the end of the sample selection year, and it adopts a dummy variable method to measure the nature of ownership.

2.3.2. Nature of Ownership and Corporate Frauds

From the perspective of the nature of ownership, some scholars study the occurrence of corporate frauds. In terms of earnings management, Lei Guangyong and Liu Huilong (2006) find in empirical evidence that when the controlling shareholder of a listed company is state-owned, the manipulation of earnings management is less than that of non-state companies. As to information quality and information disclosure, the study of Liang Jie et al. (2004) finds internal control systems and proportion of state-owned shares are correlated with accounting frauds. But ownership concentration and proportion of legal person share are highly negatively correlated with accounting frauds. Because the government imposes more strict control over state-owned enterprises and more focuses on the implementation of social responsibility in daily operation, the state-owned enterprises are obviously better than non-state enterprises in terms of social responsibility performance and information disclosure (Chen Litai, Liu Qian, 2011).

Zhao Can, Cao Wei, and Zhu Jinyu (2013) hold that because state-owned enterprises need to bear more policy-oriented and social responsibilities, their daily operation is more interfered by the government. There is also a study from other scholars revealing that the nature of ownership is not correlated with corporate frauds. In a fully competitive market, the category of actual controlling shareholder does not play a significant role in affecting corporate frauds and improving corporate governance (He Jie, Wang Guo, 2013).

It can be seen from the above contents that the category of nature of ownership can affect corporate operation conditions and policy environment, resulting in different information disclosure, earnings management, and statement frauds between state-owned enterprises and non-state enterprises. Therefore, this paper selects the nature of ownership as an indicator to study the moderating effect on the influence of executives with legal backgrounds on corporate frauds.

2.3.3. Executives with a Legal Background and Corporate Frauds

Since Hambrick and Mason (1984) put forward the upper echelon theory, more and more studies have revealed that the backgrounds of executives reflect their expertise, experience and other characteristics, as well as decide their decisions made in response to problems and risks in their daily operation.

Most studies on executives with legal backgrounds are targeted at the quality of financial information. For example, Linck & James (2009) draw a conclusion that if a company that engages an executive with a legal background misreports its accounting or financial information, the executive should take more responsibility for this. As a key to the voluntary governance mechanism, executives with legal backgrounds provide the management with suggestions about laws, regulations, litigation risks, and other issues, supervise acts of the management on shareholders' interests, and issue more accurate

information than that of other companies via its professional knowledge to improve the quality of information disclosure (Kwak et al., 2012). Moreover, Jagolinzer et al. (2011) find in their study that executives with legal backgrounds play a role in preventing insider trading. And Krishnan (2011) believes that the proportion of members with legal backgrounds in a board of auditors is positively correlated with the quality of financial reports. Litov et al. (2013) find in their study that the enterprises subject to more litigation and supervision and the companies owning significant intangible assets attach more importance to executives with legal backgrounds because they can effectively control their operation risks.

However, some scholars reach a different conclusion. Choudhary & Jason et al. (2012) hold that executives with legal backgrounds do not play a role of supervision. Relying on their extensive legal expertise and work experience, the executives better know how to cover up frauds from detection, and make more radical decisions on finance (Hopkins, Maydew, Venkatachalam, 2015).

There are varying results of studies on executives with legal backgrounds by scholars in China. Liu Wei (2013) concludes that executives with legal backgrounds are significantly negatively correlated with the degree of earnings management, that is to say, legal executives play a real role in supervision and governance. But, Lyu Rongjie, Hao Liting, and Wu Chao (2017) find independent directors with legal backgrounds are negatively correlated with the times of disclosed frauds of their companies, indicating that independent directors with legal backgrounds in fact play a role of covering up frauds of their companies. Wang Yabing (2014) comes to the conclusion that executives with legal backgrounds can improve the quality of financial reports of enterprises because they can, through their legal expertise, affect the decision-making of information disclosure, supervise the disclosure, and further reduce the probability of enterprises manipulating earnings.

3. HYPOTHESES

(1) Executives with legal experience and backgrounds and the frauds of listed companies

As suggested by domestic and foreign literature, the education, gender, age, political backgrounds of executives and other aspects play a positive or negative role in corporate frauds, meanwhile, independent directors with legal experience and backgrounds to some extent can control legal risks in companies' development (He Weifeng et al., 2017). Because they are concerned that the legal crisis undertaken by companies will be exposed by the mass media, which may bring irreparable damage to their career path, the executives with legal backgrounds must try their best to ensure that the information released by the companies is reliable and true (Krishnan, 2011; Jagolinzer, 2011). In this way, the transparency of companies' information disclosure is improved, and the information authenticity system of the company is optimized. In the process, executives with legal experience and backgrounds play the role of "supervisor" (De Mott, 2005; Duggin, 2006; Linck, 2009).

Accordingly, this paper puts forward the following hypotheses: 1 Executives with legal backgrounds have an inhibiting effect on corporate frauds with other conditions being equal. The greater the number of executives with legal backgrounds, the fewer frauds the company has.

(2) Nature of ownership, executives with legal backgrounds, and corporate frauds

Most executives of state-owned shareholding enterprises are persons with a considerable level of political convenience (Shleifer et al., 1997). The political convenience allows them to bring loan and finance convenience (Charumilind et al., 2006; Mian et al., 2006;), tax breaks (Leuz et al, 2005; Faccio, 2006;), national financial aid (Yu Minggui, 2010), and other convenience conditions for companies. The principal-agency situation of state-owned shareholding companies is severer than that of non-state shareholding companies (Lin Yifu et al., 2004; Liao et al., 2009). So compared with non-state shareholding companies, the state-owned shareholding companies will account for a little more crimes due to the severer principal-agency situation. Accordingly, this paper puts forward hypothesis 2.

Hypothesis 2: Compared with non-state listed companies, the executives with legal backgrounds in the state-owned listed companies have a more significant inhibiting effect on corporate frauds with other conditions being equal.

(3) Hypothesis of the pathway of the effect of executives with legal background on the companies' frauds

In the circumstance of continuously increased market uncertainty and corporate operation risks, companies have required more and more high-end legal professionals. There are generally two opposite effect mechanisms in which executives with legal backgrounds control the times of corporate frauds:

1. Governance effect: Executives with legal backgrounds employ deterrent effect ahead so as to fundamentally prevent corporate frauds; 2. Signal transmission: Executives with legal backgrounds in fact do not really play the role of supervising whether the corporate operation is legal and compliant. Instead, they jump to companies with a lower legal risk level before their service, only achieving the effect of signal transmission.

Based on the above discussion, 3a and 3b are put forward:

Hypothesis 3a (governance effect): Executives with legal backgrounds reduce the probability of their current companies and play a real role in supervision.

Hypothesis 3b (signal transmission effect): Executives with legal backgrounds choose companies with low legal risks, only playing a role in signal transmission.

4. VARIABLE AND MODEL SETTING

4.1. Setting of Variables

4.1.1. Dependent Variables

Corporate fraud (Fraud): the dependent variable in this paper is corporate fraud. This paper describes corporate fraud in 2 dimensions: (1) the sum of the violations of relevant laws and regulations by the enterprise recorded in the current year; and (2) whether the enterprise is recorded in violation of laws and regulations in the current year. Corporate fraud 1 (Fraud): if the enterprise is punished for violating laws and regulations, the value of the variable is 1; otherwise, the value is 0; corporate fraud 2 (FraudTime): the number of times that the enterprise is punished for violating laws and regulations in the current year.

4.1.2. Independent Variables

Executives with legal background (Law) and number of executives with legal background (NumLaw): the explanatory variables in this paper are whether the company has executives with legal background and number of executives with legal background, i.e. (1) the sum of the number of executives with legal background in the current year; and (2) whether the enterprise has executives with legal background in the current year. The independent variables in this paper describe corporate fraud in 2 dimensions:

Executives with legal background (Law): a dummy variable. If the listed company has at least one executive with legal background, the value of the variable is 1; otherwise, it is 0.

Number of executives with legal background (NumLaw): number of executives with legal background in the company.

4.1.3. Moderating Variables

The moderating variables in this paper are divided into two parts. The first is the nature of the company's ownership, which is defined by whether the company is a state-owned holding company or by the category of the ultimate controlling shareholder of the largest shareholder. Private holding companies, foreign holding companies, collective holding companies or ESOP holding companies, etc. belong to non-state-owned holding companies. At the same time, this paper adds an interactive item between number of executives with legal background and nature of ownership. For the moderating variable nature of ownership (State) in this paper, if the enterprise is state-owned, the value of the variable is 1; otherwise it is 0. Meanwhile, an interaction item between nature of ownership and whether the company has executives with legal background (Law*State) and an interaction item between nature of ownership and number of executives with legal background (Numlaw*State) are set.

4.1.4. Control Variables

The following 7 control variables are set in this paper:

(1) Company size (Size)

This study controls the variable of the company's total asset size in the current year to observe the effect of the company size (which is logarithmized as $\ln\text{Size}$) on the hypotheses proposed above.

(2) Return on net assets (Roe)

Loss-generating enterprises, when faced with poor business performance, often choose to take risks due to the demand for funds, which makes them more likely to choose illegal means to gain profits and turn losses into profits. On this basis, this paper sets the state of operation as a control variable and the return on net assets (Roe) as the proxy variable to investigate the effect of the state of operation on the hypotheses in this paper.

(3) Equity concentration (Zindex)

In this paper, the shareholding percentage of the top 10 shareholders is taken as the proxy control variable of equity concentration (Zindex), to investigate the effect of the shareholding percentage on the hypotheses in this paper.

(4) Dual role (Dual)

“Dual role” refers to the General Manager serving as CEO at the same time. This paper sets the dummy variable Dual as the control variable to investigate the effect of duality in listed companies on the hypotheses in this paper.

(5) Proportion of female executives (Gender)

Compared with males, female managers are more careful and rational in company management, which has been verified by management and psychological studies. Therefore, corporate behavior will be affected by the gender ratio of the executives. This paper controls the proportion of female executives (Gender) as a variable to investigate the effect of Gender on the hypotheses in this paper.

(6) Age of executives (Age)

Prendergast (2002) found that the peak of human intelligence, physical strength and reaction ability is around their 20-50. Young and middle-aged managers are in good physical condition, full of vitality and energy. However, due to lack of business experience, they tend to be overconfident in business decisions, and their investment decisions are prone to high risks. Elder managers tend to be more prudent and conservative in operations and decision making, and are unlikely to make high-risk decisions. This paper sets the age of executives as a control variable to investigate the effect of Age on the hypotheses in this paper.

(7) Time of being listed (Time)

Enterprises that have been listed for a long time often have a set of mature systems in terms of standardized management. In contrast, newly listed companies are more likely to have illegal behaviors due to their relatively short time of being listed and lack of experience in internal management. Therefore, this paper controls the variables of the company's time of being listed (Time) to observe the effect of the variable Time on the above hypotheses. Number of years of being listed is selected as the proxy variable to measure the company's time of being listed.

In order to better verify logic of the hypotheses, the following variables are designed, as shown in Table 4.1:

Table4.1. *Definitions of the variables*

Variable	Symbol	Definition
Dependent variable	Fraud	Whether the company appears in the CSMAR fraud handling database in the current year: 1 for “yes” and 0 for “no”
	FraudTime	Number of times the company appears in the CSMAR fraud handling database in the current year
Independent variable	Law	Whether the company has executives with legal background in the current year: 1 for “yes” and 0 for “no”
	NumLaw	Number of executives with legal background
Moderating variable	State	The value of the variable is 1 if the company is state-owned; otherwise, it is 0
	NumLaw*State	Interaction term between nature of ownership and number of executives with legal background
Control variable	Size	Company size, i.e. total assets of the company
	Roe	The company’s return on net assets
	Zindex	Shareholding percentage of top 10 shareholders
	Dual	Whether a member of the board of directors concurrently serves as General Manager: 1 for “yes” and 0 for “no”
	Gender	Proportion of female executives
	Age	Age of executives
	Time	The company’s time of being listed

4.2. Source of Data and Sample Selection

The time of sample selection in this paper is 2009-2016. CSMAR database is the data source of all variables in this paper, and the data obtained is preprocessed with STATA.14. The data of 1320 ongoing A-share companies listed in Shanghai Stock Exchange and Shenzhen Stock Exchange constitutes the sample data of this paper, and the data is screened as follows:

- (1) Companies with ST during the sampling period;
- (2) Companies in the financial industry;
- (3) Companies whose relevant data is seriously missing and have an effect on the results. 剋植

Finally, after filtering out the invalid data, the sample size of this paper is 10560, 1320 per year.

Table4.2. *Descriptive characteristics of the sample*

Year	FraudTime	Disclosure		Trading		Capital		Other	
	Observed value	Observed value	Percentage (%)	Observed value	Percentage (%)	Observed value	Percentage (%)	Observed value	Percentage (%)
2009	287	136	47.39%	60	20.91%	21	7.32%	70	24.39%
2010	480	232	48.33%	88	18.33%	32	6.67%	128	26.67%
2011	376	184	48.94%	96	25.53%	42	11.17%	54	14.36%
2012	488	262	53.69%	128	26.23%	22	4.51%	76	15.57%
2013	756	256	33.86%	244	32.28%	112	14.81%	144	19.05%
2014	682	296	43.40%	206	30.21%	70	10.26%	110	16.13%
2015	822	344	41.85%	302	36.74%	50	6.08%	126	15.33%
2016	938	446	47.55%	160	17.06%	92	9.81%	240	25.59%
Total	4829	2156	44.65%	1284	26.59%	441	9.13%	948	19.63%

The data shows that the total number of frauds of listed companies in the sampling period increased year by year. During the sampling period, the total number of frauds of listed companies in the sampling period reached 4829, that is, 3.66 frauds for each listed company on average. After subdividing the types of frauds of the sample companies during the period, we found that financial information frauds (Disclosure) accounted for the highest percentage (44.65%), followed by stock trading frauds (26.59%). Moreover, capital use frauds (Capital) were the least among the types of frauds of the sample listed companies (9.13%). Finally, other frauds (Other) accounted for 19.63% of the total number of frauds during the sampling period.

4.3. Setting of the Model

In this paper, the fixed effects regression model of panel data is used to test the hypotheses in this paper. The models used are as follows:

$$\text{Fraud} = \beta_0 + \beta_1 \text{Law} + \beta_2 \text{NumLaw} + \beta_3 \text{State} + \beta \sum \text{Control} + \varepsilon \quad (1)$$

$$\text{Fraudtime} = \beta_0 + \beta_1 \text{Law} + \beta_2 \text{NumLaw} + \beta_3 \text{State} + \beta \sum \text{Control} + \varepsilon \quad (2)$$

$$\text{Fraud} = \beta_0 + \beta_1 \text{Law} + \beta_2 \text{LawState} + \beta_3 \sum \text{Control} + \varepsilon \quad (3)$$

$$\text{Fraud} = \beta_0 + \beta_1 \text{Law} + \beta_2 \text{NumLawState} + \beta_3 \sum \text{Control} + \varepsilon \quad (4)$$

$$\Delta_{\text{Fraud}} = \beta_0 + \beta_1 \Delta_{\text{Law}} + \beta_2 \Delta_{\text{NumLaw}} + \beta_3 \sum \Delta_{\text{Control}} + \varepsilon \quad (5)$$

$$\Delta_{\text{Fraudtime}} = \beta_0 + \beta_1 \Delta_{\text{Law}} + \beta_2 \Delta_{\text{NumLaw}} + \beta_3 \sum \Delta_{\text{Control}} + \varepsilon \quad (6)$$

Fraud -- Whether the company appears in the CSMAR fraud handling database in the current year: 1 for “yes” and 0 for “no”

Fraud Time -- Number of times the company appears in the CSMAR fraud handling database in the current year

Law -- Whether the company has executives with legal background in the current year: 1 for “yes” and 0 for “no”

Num Law -- Number of executives with legal background in the current year

State -- The value of the variable is 1 if the company is state-owned; otherwise, it is 0

Law*State -- Interaction term between nature of ownership and whether the company has executives with legal background

Numlaw*State -- Interaction term between nature of ownership and number of executives with legal background

Δ -- differential variable

Control -- control variable

Among them, models (1) and (2) test Hypothesis 1, that is, the inhibition of executives with legal background on corporate fraud; models (3) and (4) test Hypothesis 2, that is, the moderating effect of the company’s nature of ownership; and models (5) and (6) test Hypothesis 3, that is, the pathway of the inhibition of executives with legal background on corporate fraud.

Among them, in Hypothesis 2, the interaction term between the company’s nature of ownership and executives with legal background is set to test whether the company’s nature of ownership has a moderating effect. In equations (3) and (4), if the coefficient β_2 is not significant, there is no moderating effect, which indicates that whether the company is state-owned has no effect on the relationship between executives with legal background and the enterprise’s frauds; if the coefficient β_2 is significant, there is a moderating effect, indicating that executives with legal background in state-owned enterprises have a greater inhibiting effect on the enterprise’s frauds.

In Hypothesis 3, referring to the research of Krishnan et al. (2011), we conducted first-order differential treatment on models (1) and (2) to obtain the corresponding first-order differential models (5) and (6). In the 2 differential models, if the coefficient before the differential investigation of the independent variables is positive and significant, it indicates that the executives with legal background indeed play a positive governance role. If the coefficient before the differential investigation of the independent variables is negative and significant, it indicates that the executives with legal background actively choose low-risk companies, only playing a role of signal transmission.

5. CONCLUSIONS AND FINDINGS

5.1. Descriptive Statistical Analysis

Table 5.1. Descriptive statistics of the variables

Variable	Average	Standard deviation	Median	Minimum value	Maximum vale
Fraud	0.06	0.24	0	0	1
FraudTime	0.19	1.21	0	0	34
Law	0.11	0.32	0	0	1
NumLaw	0.12	0.35	0	0	4
Gender	0.15	0.16	0.14	0	1
Age	45.81	3.57	45.83	32.8	60.5
Time	8.28	0.5	8.18	6.1	9.21
Insize	12.28	1.17	12.15	8.83	18.6
Zindex	59.72	15.54	61.26	0	100.02
State	0.3	0.46	0	0	1
Roe	0.01	0.02	0.01	-0.4	0.37
Dual	0.3	0.46	0	0	1

The descriptive statistical analysis of the sample data in this paper is shown in Table 5.1. It can be seen that the maximum number of corporate frauds is 34, and the minimum number of frauds is 0. This indicates that some listed companies have poor compliance, and some listed companies have implemented the compliance requirements well. According to the descriptive analysis of the number of executives with legal background of the selected sample companies, the median is 0, and the average is only 0.12, indicating that not many executives of the sample companies have legal background. From the descriptive statistical analysis of the shareholding percentage of the top 10 shareholders of the sample companies, the maximum value and the minimum value differ greatly, and the value of the standard deviation is large, which indicates that the equity concentration of the sample companies in this paper vary greatly. In terms of the statistical description of the size of the sample companies, the total assets of the company are logarithmized, and the difference between the maximum value and the minimum value is large. The median and average return on net assets of the sample listed companies are 0.01 and 0.01, indicating that most of the sample companies are profitable. As we select the going concern operating from 2009 to 2016, there is a small difference in their time of being listed. In terms of the statistical analysis of the age of the executives of the sample companies, the difference between the mean and median is only 0.02, and the standard deviation is 3.57, indicating that the age of executives of the sample listed companies is basically between 40 and 50, which is also consistent with the reality.

5.2. Correlation Test and Analysis

Table 5.2. Correlation analysis with whether the company has frauds in the current year as the dependent variable

	Fraud	Law	NumLaw	State	Gender	Age	Time	Insize	Zindex	Roe	Dual
Fraud	1										
Law	0.0033	1									
NumLaw	0.0008	0.9615	1								
State	-0.0491	0.0709	0.0647	1							
Gender	0.0244	-0.0245	-0.0241	-0.1585	1						
Age	0.0091	0.0316	0.0329	0.2862	-0.1364	1					
Time	0.0077	0.0931	0.0874	0.3296	-0.1055	0.1627	1				
Insize	0.0059	0.1409	0.1449	0.3655	-0.1273	0.2752	0.3159	1			
Zindex	-0.0653	-0.015	-0.0188	-0.1474	0.018	-0.1147	-0.3028	-0.1041	1		
Roe	-0.0186	0.0104	0.0143	0.0147	-0.001	0.0314	0.0868	0.1687	0.0685	1	
Dual	0.0094	-0.0496	-0.0518	-0.2669	0.0828	-0.0427	-0.2542	-0.1847	0.0867	-0.019	1

Before conducting a regression analysis, we need to analyze the correlation between the variables, to prove that there is no autocorrelation between the variables. Table 5.2 above shows the correlation analysis with whether the company has frauds in the current year as the dependent variable. It can be seen that the maximum absolute value of the correlation coefficient between the dependent variable and the independent variable is 0.0033, while the maximum absolute value of the correlation coefficient between the dependent variable and the control variable is 0.0491. The greater the absolute value of the correlation coefficient, the closer the relationship between the sequences. The maximum absolute value of the correlation coefficient between the control variables is 0.3655, and the correlation coefficient values are all less than 0.4, indicating that there is no obvious autocorrelation in the sample data.

Table5.3. Correlation analysis with the number of the company’s frauds in the current year as the dependent variable

	FraudTime	Law	NumLaw	State	Gender	Age	Time	Insize	Zindex	Roe	Dual
FraudTime	1										
Law	-0.0018	1									
NumLaw	-0.0031	0.9615	1								
State	-0.0263	0.0709	0.0647	1							
Gender	0.013	-0.0245	-0.0241	-0.1585	1						
Age	0.0079	0.0316	0.0329	0.2862	-0.1364	1					
Time	0.0143	0.0931	0.0874	0.3296	-0.1055	0.1627	1				
Insize	-0.0019	0.1409	0.1449	0.3655	-0.1273	0.2752	0.4159	1			
Zindex	-0.0454	-0.015	-0.0188	-0.1474	0.018	-0.1147	-0.3028	-0.1041	1		
Roe	-0.0134	0.0104	0.0143	0.0147	-0.001	0.0314	0.0868	0.1687	0.0685	1	
Dual	-0.0013	-0.0496	-0.0518	-0.2669	0.0828	-0.0427	-0.2542	-0.1847	0.0867	-0.019	1

The above table shows the correlation analysis with the number of the company’s frauds in the current year as the dependent variable. It can be seen that the maximum absolute value of the correlation coefficient between the dependent variable and the independent variable is 0.0031, the maximum absolute value of the correlation coefficient between the dependent variable and the control variable is 0.0454, and the maximum absolute value of the correlation coefficient between the control variables is 0.3655. The larger the absolute value of the correlation coefficient, the closer the relationship between the sequences. The absolute values of the correlation coefficients are all less than 0.4, indicating that there is no obvious autocorrelation in the sample data. ®

5.3. Test of the Inhibition of Executives with Legal Background on the Companies’ Frauds

The test results of Hypothesis 1 are reported in Table 5.2. The fixed effects model is used for relevant tests in this paper. In model (1), the correlation between whether the company has executives with legal background (Law) and corporate fraud (Fraud) has a level of significant of 1%, which indicates that whether the company has executives with legal background is significantly related to whether the listed company has frauds. The number of executives with legal background (NumLaw) of the company is negatively related to the corporate fraud (Fraud), with a level of significance of 1%. This shows that the company’s executives with legal background indeed play a role in controlling the listed company’s frauds. In model (2), there is no significant correlation between whether the company has executives with legal background (Law) and the number of corporate frauds (NumFraud), which indicates that whether the company has executives with legal background is not directly related to the number of frauds of listed companies. The number of executives with legal background (NumLaw) of the company is negatively correlated with the number of corporate frauds (NumFraud), with a level of significance of 5%. This indicates that the number of executives with legal background does play a role in controlling the frauds of listed companies. The more the number of executives with legal background, the less the number of frauds of the listed companies. The results of the model regression verify Hypothesis 1

Table5.4. Relationship between executives with legal background and corporate fraud

	Model (1)	Model (2)
	Fraud as explanatory variable	NumFraud as explanatory variable
Law	0.0323125*** (2.68)	0.0752979 (1.17)
NumLaw	-0.0281053***	-0.076227**

	(-2.97)	(-2.22)
Gender	0.0325754**	0.0848805
	(2.53)	(1.34)
Age	0.0013445***	0.0049816***
	(2.82)	(3.12)
Time	0.0059682	0.0504628
	(1.24)	(1.53)
Insize	0.0042414*	0.0014992
	(1.9)	(0.13)
Zindex	-0.0010467***	-0.0032069***
	(-6.79)	(-5.99)
State	-0.0409398***	-0.1250874***
	(-8.56)	(-5.71)
Roe	-0.1796705	-0.6078845
	(-1.51)	(-0.99)
Dual	0.0003271	-0.0148471
	(0.2)	(-0.53)
_cons	-0.0436469	-0.2414093
	(-1.04)	(-1.28)

Note: *, **, and *** indicate level of significance of 10%, 5% and 1% respectively. The same in the table below.

The regression results of the control variables show that the proportion of female executives in the company is positively correlated with the company's frauds, with a level of significance of 5%, which is somewhat inconsistent with our previous assumptions. It shows that women in listed companies do not play a role of gender heterogeneity, and female executives have weak control over risks compared with male executives. The age of executives is significantly positively correlated with the company's frauds, with a level of significance of 1%. This may be because although elder executives have rich experience, such experience often means certain fixed thinking and overconfidence, resulting in more frauds. The enterprise size is significantly positively correlated with the corporate fraud, with a level of significance of 10%, probably because the enterprise size reflects the size of income that can be obtained by corporate fraud to a certain extent. The high income positively stimulates the enterprise to take risks, which may eventually results in corporate fraud. The concentration of corporate equity is significantly negatively correlated with corporate fraud, with a level of significance of 1%, which indicates that the higher the shareholding percentage of the top 10 shareholders of the company, the greater the sense of ownership of the major shareholders, and the more active supervisory role they will play, resulting in less corporate frauds.

The regression results of the moderating variable show that the nature of ownership (State) is significantly negatively correlated with corporate fraud (Fraud) and the number of the frauds (FraudTime), with a level of significance of 1%. This indicates that the nature of the company's ownership (State) has an effect on the company's frauds; specifically, state-owned enterprises are less prone to frauds than non-state-owned enterprises. Next, we conducted a detailed test of the moderating effect of the nature of the company's ownership.

5.4. Test of the Moderating Effect of the Nature of the Company's Ownership

Table 5.5. Test of the moderating effect of the nature of the company's ownership

	Model (3)	Model (4)
	Fraud as explanatory variable	NumFraud as explanatory variable
Law	0.044871***	.1013371*
	(-4.55)	(1.85)
NumLaw	-0.027609***	-.0723447**
	(-2.86)	(-2.21)
LawState	-0.0336362*	-.0801934
	(-1.79)	(-1.12)
Gender	0.037614***	.1047483
	(-2.82)	(1.63)

Age	0.0004599	.0024225
	(-0.9)	(1.32)
Time	-0.008666*	.0031944
	(-1.75)	(0.10)
Insize	0.0031411	-.0034551
	(-1.31)	(-0.30)
Zindex	-0.0011161***	-.0034364***
	(-6.77)	(-6.10)
Roe	-0.1451982	-.4906102
	(-1.19)	(-0.79)
Dual	0.0051593***	.0000108
	(-2.87)	(0.00)
_cons	0.1374538**	.2891707
	(-2.33)	(1.50)

From Table 5.5 we can find that the interaction term between the nature of the company’s ownership and the company’s frauds (LawState) is significantly negatively correlated with the corporate fraud (Fraud) with a level of significance of 10%. The estimated coefficient indicates that compared with the executives with legal background in non-state-owned enterprises, the executives with legal background in state-owned enterprises have a greater inhibition on the corporate fraud. This verifies Hypothesis 2 in this paper, that is, the nature of corporate ownership has a moderating effect.

In addition, there is no significant correlation between the interaction term between the nature of the company’s ownership and corporate fraud (LawState) and the number of frauds of the company (FraudTime), which indicates that executives with legal background have no direct relationship with the specific number of frauds of the company whether in state-owned enterprises or non-state-owned enterprises.

5.5. Test of the Pathway of the Effect of Executives with Legal Background on the Corporate Fraud

Referring to the research of Krishnan et al. (2011), we conducted first-order differential treatment on models (1) and (2) to obtain the corresponding first-order differential models (5) and (6). In the 2 differential models, if the coefficient before the differential investigation of the independent variables is positive and significant, it indicates that the executives with legal background indeed play a positive governance role. If the coefficient before the differential investigation of the independent variables is negative and significant, it indicates that the executives with legal background actively choose low-risk companies, only playing a role of signal transmission. The results of the first-order differential regression are shown in Table 5.6. The coefficients of independent variable of the differential investigation in the differential models (5) and (6) are not significant, which indicates that the executives with legal background actively choose low-risk companies and only play the role of signal transmission.

Table 5.6. First-order differential model of relationship between executives with legal background and corporate fraud

	Model (5)	Model (6)
	Delta_Fraud as explanatory variable	Delta_NumFraud as explanatory variable
Delta_law	0.0455336	0.2625995
	(1.31)	(1.33)
Delta_numlaw	-0.0395643	-0.2158032
	(-1.29)	(-1.18)
Control variable	Control	Control
Number of obs	9239	9239

6. CONCLUSIONS AND POLICY SUGGESTIONS

This paper studies the effect of executives with legal background on listed companies’ frauds through theoretical review and empirical analysis. The nature of ownership is introduced as a variable to study whether there are differences in the effects of executives with legal background on corporate fraud between state-owned and non-state-owned enterprises. The study reveals that: (1) Executives with

legal background can inhibit the listed companies' frauds, and the more the number of executives with legal background, the less the number of frauds of the listed companies; (2) The nature of the company's ownership has a moderating effect on the frauds of listed companies. Compared with the executives with legal background in non-state-owned enterprises, those in state-owned enterprises have a greater inhibiting effect on corporate fraud. (3) To a certain extent, the lower number of corporate frauds is due to the fact that executives with legal background tend to choose low-risk companies before taking office, playing a role of signal transmission. The conclusions of this paper have implications for companies in helping them protect shareholders' interests. (1) Companies should be more careful in selecting executives to increase the proportion of executives with legal background and give play to their advantages in the supervision and management of the companies. They should establish a fair competition system to provide a fair development platform for female executives, and should strengthen the construction of corporate culture to decrease the turnover of senior directors with rich experience, strong supervision ability and long service. (2) Companies should strengthen the supervision of the general meeting of shareholders and the employees of the company on the management, so as to ensure the availability and timeliness of the information of listed companies, expand the channels for reporting frauds, and supervise the frauds of listed companies and executives. (3) The CSRC and other regulators need to strengthen external supervision and refine relevant laws. For companies with serious frauds, it is necessary to increase the punishment, including even mandatory de-listing. Violation of the criminal law should never be tolerated, and typical cases should be handled to serve as a warning to other companies likely to take chance.

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