Asian Journal of Economics, Business and Accounting

21(9): 77-86, 2021; Article no.AJEBA.70244
ISSN: 2456-639X

The Relationship between Corporate Governance Characteristics and Earnings Quality---Takes the IT Industry of China Listed Companies as a Sample

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJEBA/2021/v21i930424
Editor(s):
(1) Dr. María-Dolores Guillamón, University of Murcia, Spain.
(2) Dr. Chen Zhan-Ming, Renmin University of China, China.
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(3) Sabri Mekimah, Algeria.
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Complete Peer review History: https://www.sdiarticle4.com/review-history/70244

Original Research Article

Received 01 May 2021
Accepted 06 July 2021
Published 12 July 2021

ABSTRACT

Since the meeting of China Securities Regulatory Commission in 2020 once again emphasized the issue of earnings quality of corporate governance, this paper intends to study this issue from different perspectives. This study takes the IT industry of China's A-share listed companies from 2015 to 2019 as the sample, and makes an empirical analysis with the fuzzy set/ Qualitative Comparative Analysis (fs/QCA). The results show that the companies with large scale and good corporate governance concept, poor financial structure but with the assistance of external experts, high salary and high proportion of independent directors have relatively high earnings quality. According to the above research results. According to the findings, we put forward the following suggestions. For enterprises, good corporate governance concept and the concept of integrity are very important, but there must be efficient operation of the board of directors in order to play the role of corporate governance. Therefore, the size of the board of directors should not be too large, but it can be adjusted flexibly depends on whether the required professionals are enough. In addition, enterprises with poor financial structure should rely on the assistance of professional managers, rather than using earnings manipulation to obtain short-term benefits. For the regulators of listed companies, the procedures of independent directors' selection should be more strictly supervised, so as not to make the setting of independent directors become mere formality. For investors, we

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should always pay attention to the corporate governance, and announce the disclosure of real-time information about directors, supervisors and senior executives, to prevent losses caused by investment misjudgment.

Keywords: Earnings quality; Corporate governance; fs/QCA.

1. INTRODUCTION

At the mid-year meeting of China Securities Regulatory Commission in 2020, the "three year action plan for promoting the governance of listed companies" was put forward, which is the concrete embodiment and an important part of the "action plan for promoting the quality of listed companies". Among them, the earnings quality and audit quality of listed companies are the most concerned. Since the beginning of the 21st century, due to the global financial fraud scandal of listed companies, the earnings quality of financial statements disclosed by listed companies has been greatly questioned. In China, the financial statement fraud of listed companies is particularly serious. The internal causes of financial fraud of listed companies are mostly the results of fraud under the guidance of the top management of the company. The board of directors and senior managers play an important role in the operation and decision-making of the company. Therefore, this study will explore the relationship between corporate governance and earnings quality based on the characteristics of executives and board of directors.

According to the relevant literature in domestic and abroad, although there are many researches on corporate governance and earnings quality, the research methods are mostly ordinary least square (OLS) and quantile regression method. This kind of method can only get a group of solutions in each regression equation. However, the relationship between causes and results of social science phenomenon is very complex, and the combination of different factors may often lead to the same result. For enhancing the practical value of this paper, this study will use fuzzy set Qualitative Comparative Analysis (fs/QCA) method to explore the correlation between corporate governance characteristics and earnings quality, hoping that the empirical research of this paper can provide more practical reference value and diversified decision-making ideas for enterprises, regulators and investors.

2. LITERATURE REVIEW

The concept of corporate governance first appeared in the “Corporate Governance” issued by Tricker [1] It first stated the importance of corporate governance to modern enterprises in the book. In a narrow sense, corporate governance refers to a measure by which the owners (mainly shareholders) check and balance the operators. In order to prevent the operators from betraying and damaging the interests of the owners, it is hoped that the power and responsibility relationship between the owners and operators can be reasonably allocated, so as to maximize the interests of shareholders. In a broad sense, corporate governance is not only limited to shareholders' checks and balances on operators, but also involves stakeholders, including shareholders, employees, creditors and other groups or individuals who have interests with the company. The way of corporate governance is to coordinate the interests between stakeholders and the company through internal or external, formal or informal systems, or through mechanisms, in order to ensure the scientific and fair decision-making of the company; the ultimate goal is to maximize the interests of all stakeholders. Corporate governance structure usually refers to the supervision mechanism and internal control system established by the general meeting of shareholders, the board of supervisors, managers and the board of directors. Its purpose is to control and manage all the operation activities of the company, and gradually enhance the financial performance of the company. China is now mainly to build a system with Chinese characteristics, and then integrate with the international model to create a new model. Li and Li [2] suggest that China's corporate governance reform should be transformed from administrative governance to economic governance, the internal and external governance systems should be more perfect, and the reform and opening-up should be promoted. With the development of the internet and the era of green development, new governance concepts should be introduced.

The definition of earnings quality is the extent of real earnings can be reflected in financial statements. Dechow and schrand [3] argued that high-quality earnings need to be able to reflect the operating conditions, have a good forecast of the future operating conditions, and truly and objectively reflect the intrinsic value of the company. In the International Financial Reports Standards (IFRS) and American Generally Accepted Accounting Principles (GAAP), relevance and reliability are regarded as the most basic quality characteristics of accounting information. As the basic element of accounting statements, enterprise earnings can also meet these two characteristics. Dechow and Sloan [4]developed a modified Jones model based on the earnings quality model proposed by Jones [5]. The model shows as follow：

$$\frac{TA_{i,t}}{A_{i,t-1}} = \alpha_1 \frac{1}{A_{i,t-1}} + \alpha_2 \frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}} + \alpha_3 \frac{PPE_{i,t}}{A_{i,t-1}} + \varepsilon_{i,t}$$

$$\frac{NDA_{i,t}}{A_{i,t-1}} = \alpha_1 \frac{1}{A_{i,t-1}} + \alpha_2 \frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}} + \alpha_3 \frac{PPE_{i,t}}{A_{i,t-1}} + \varepsilon_{i,t}$$

$$DA_{i,t} = \frac{TA_{i,t}}{A_{i,t-1}} - \frac{NDA_{i,t}}{A_{i,t-1}}$$

Where TA is the total accrued profit and A is the total assets, ΔREV is the increment of sales revenue, ΔREC is the increment of accounts receivable, PPE is the total amount of fixed assets, and NDA is the non-manipulation accrual, ε is the residual, DA is the operational accruals.

After referring to the relevant literature on the relationship between corporate governance characteristics and earnings quality, it can be summarized as follows:

i. **Board size:** board size refers to the total number of directors in the board of directors, which is an important factor affecting the performance of the board of directors. The size of the board of directors mainly affects the supervision function of senior managers from two aspects, one is the overall professional ability of directors, and the other is the efficiency of communication and decision-making. The size of the board of directors has been controversial in the academic circles. One theoretical view is that the larger the board of directors, the worse the effect of exercising the supervision power. The view holds that large-scale board of directors can improve the difficulty and cost of communication and coordination among members, which is not conducive to the communication and cooperation between directors, resulting in low efficiency, is not conducive to the performance of the supervision power on the management, and is easy to worsen the quality of earnings. Another view is that large-scale board of directors will have more professionals, more comprehensive and extensive background, easier to grasp the changes in the external environment, provide various decision-making consultation, and enhance the effectiveness of the board of directors' supervision over the management and the company's operating efficiency. At the same time, the viewpoints out that small-scale board of directors is prone to the phenomenon of "lack of skills", it is difficult to provide sufficient professional services, and a few people may manipulate the board of directors. Considering the system and actual situation of our country, this paper believes that large-scale board of directors can more represent the demands of different stakeholders, play a certain role of checks and balances on the major shareholders, avoid the phenomenon of "one share dominating", better implement the supervision power, increase the difficulty of the management to control the company's earnings management, so as to improve the quality of earnings [6,7].

ii. **Proportion of independent directors:** independent directors, also known as external directors, usually do not hold other management positions in the company, and have no direct interest relationship with senior managers, so they are objective and impartial. Independent directors can improve the objectivity, independence and professionalism of the decision-making of the board of directors, effectively improve the operation efficiency, protect the interests of the company, and maintain independence in the decision-making, so as to make the behavior of the management consistent with the interests of the company and shareholders. It can be seen that independent directors are an important factor in the effective supervision of management behavior. The larger the proportion of independent directors, the stronger their independence, the more they can play the role of supervision and balance. The greater the supervision of management, the higher the cost of management earnings management, and to a certain extent ensure the quality of earnings information. Whether independent directors can effectively play their supervisory functions is related to their proportion in the board of directors. The proportion of independent directors is affected by the board of directors and the scale of independent directors, and also has a certain relationship with the scale of operation. When the number of independent directors is small, their opinions and opinions may be difficult to be accepted by other members of the board of directors. When the number of independent directors is large, they can communicate with other directors to a certain extent. The larger the proportion of independent directors is, the more opinions they can represent from more interested parties, provide more and more perfect suggestions, provide more different views, effectively supervise the board of directors, and make the company more inclined to provide comprehensive and effective information disclosure and improve earnings quality. [6,8] In addition, according to the research findings of Luo et al. [9] the retired independent directors in audit committee can significantly enhance the quality of earnings and play a positive role in corporate government. Especially, the retired independent directors with personal characteristics such as higher education, younger age as well as better reputation, are more helpful to improve earnings quality.

iii. **Number of directors, supervisors and senior executives holding concurrent posts per capita:** directors, supervisors and senior executives are related professionals employed by the company from outside, including investment, operation and management, financial and legal affairs, etc. Most of them are experts in their own industry and have a certain degree of influence and status in the industry. It means that they can effectively play the role of position of the company, and represents the affirmation of their relevant knowledge when they hold the position. At the same time, when directors, supervisors and senior executives also serves as a professional position of other companies, it shows that they have experience and knowledge of corporate governance and supervision. When directors, supervisors and senior executives have relevant experience, they will play a better supervisory role in the board of directors. Jiang et al. [10] found that “busy” independent directors reduce the possibility and frequency of violations. Moreover, the “busyness” of “busy” independent directors do show a significant positive correlation with their board meeting attended frequency and the negative correlation between “busy” independent directors and corporate violations is more obvious in the companies with young “busy” independent directors, in the companies of good fame and in the companies with relatively high salary incentives for all “busy” independent directors. Duan [11] suggest that busy directors may improve performance for companies of “low-cost supervision, high demand for advisory”. (4) The chairman and the general manager are the same person: Liu [12] found that when enterprises are under regulatory pressure, one of the main factors to reduce the possibility of earnings management is that the chairman concurrently serves as the general manager. In addition, Li et al. [13] show that if the chairman and the general manager are the same person, it will increase the positive correlation between earnings management and expense stickiness.

iv. **Salary level of directors, supervisors and senior executives:** Lin and Zhou [14] took a famous winery company in China in 2009 as a case study, by comparing with the changes of the company's operating performance, executive compensation and dividend policy, they found that during the period before and after the transformation of the executive compensation mechanism of the company, they found that under the inducement of the transformation of the compensation incentive system, the executive compensation mechanism of the company changed, It will lead to the motivation and behavior of earnings management. In addition, the research of Meng [15] shows that there is a positive relationship between earnings management and compensation management. Executives generally adjust corporate performance by manipulating surplus to reasonably expand the pay gap between employees and executives. Wang et al. [16] found that the higher the executives compensations, the lower the motivation for earnings management. Moreover, Alhebri et al. [17] argued that t the proportion of independent directors and the directors' compensation both interacted in family firms to enhance earnings quality, so they suggest that increasing the proportion of independent directors and paying higher compensation to directors are workable for family firms to improve their earnings quality.

Based on the conclusion of the above literature, this study establishes a hypothesis as below：

The characteristics of corporate governance, such as the size of the board of directors, the proportion of independent directors, the salary level of directors and supervisors, whether the chairman and the general manager the same person, and the number of per capita part-time jobs of directors and supervisors the are related to the earnings quality of the company to a certain extent.

3. METHOD

Considering that the competition in the information technology industry is fierce, the life cycle of this industry is short, and the profit situation fluctuates greatly, so the possibility of earnings manipulation is relatively higher than other industries. Therefore, this study takes the information technology industry of China's A-share listed companies from 2015 to 2019. The data of listed companies selected in this paper mainly comes from both WIND and CSMAR databases. After downloading the data, the incomplete samples are deleted first, and then the outliers are removed. A total of 1943 samples are obtained. In the model design, the earnings management index is used as the dependent variable, and the corporate governance indicators are used as the independent variable. The fs/QCA is used to explore the impact of corporate governance characteristics on the earnings management. The model shows as follows:

~EM = f (BOARD, INDEP, CHGM, SALARY, PATI, SCALE, LIAB, BIG10)

3.1 Variable Description

Name	Definition	Explanation
Dependent variable：		
EM	Earnings management	The variable adopts the absolute value of the earnings management index as the alternative variable of earnings quality. The smaller the number is, the higher the earnings quality is. The calculation model of real earnings management index is based on the modified Jones model.
Independent variables：		
BOARD	Board size	Taking the number of board members as the proxy variable of board size.
INDEP	The percentage of independent directors in board committee.	The ratio of the number of independent directors to the number of the board of directors.
CHGM	Chairman and general manager are the same person	Dummy variable is used. If the chairman and general manager are not the same person, it is set as "1"; if they are the same person, it is set as "0".
SALARY	Salary of directors and supervisors	The total salary and welfare allowance of directors and supervisors divided by the total number of directors and supervisors.in order to reduce the absolute value of the data and not change the nature and correlation of the data, its natural logarithm is taken.
PATI	Number of per capita part-time jobs of directors and supervisors	The total number of directors and supervisors' positions in the sample company plus the number of positions outside the company divided by the total number of directors and supervisors.

Control variables：		
SCALE	Company scale	The total assets are taken as the alternative variable of company scale. Because the amount of consideration is too large compared with other variables, in order to reduce the absolute value of the data and not change the nature and correlation of the data, its natural logarithm is taken.
LIAB	The percentage of total liability on total assets	The ratio of liabilities to total assets.
BIG10	The CPA firm is the top ten (big10) in China	Using dummy variables, if the CPA firm of financial statements is the top ten, it is set as "1"; if not, it is set as "0".

Note：The larger the "EM", the higher the degree of earnings management. In addition "~" means "negative"

3.2 Research Method

In the field of social science research, the research object often involves multiple cases, and a single case cannot meet the needs of research. At the same time, as a complex social phenomenon, the causes of such events exist multiple concurrent combination of causal variables, and the quantitative statistical analysis method based on linear causality is difficult to provide effective analysis conclusions. Fuzzy set Qualitative Comparative Analysis (fs/QCA) has been widely used in the field of social struggle research because it can effectively and systematically analyze the relationship between a specific result and more than one group of multi factor combinations.

The fs/QCA [18,19] was strengthen on the base of QCA by Ragin [20]. In 2000, it demonstrates the use of fuzzy sets to address phenomena that vary by level or degree. Then, in 2008, it unravels causal complexity still further, elaborating the set-theoretic basis for linking variable-oriented and case-oriented thinking. The fs/QCA attempts to go beyond the traditional research methods, systematically investigate the causes of events and the interaction and possible relationship between the internal factors, and try to explain the key factors that contribute to the occurrence of events, the relationship between the factors and the complex combination of causes that stimulate the occurrence of events, so as to deepen the understanding of the complex causal relationship of events

4. RESULTS AND DISCUSSION

Table 1 is the descriptive statistics of all variables. It can be seen from the table that there is a big gap between the earnings management index, the size of the board of directors, the proportion of independent directors, the shareholding ratio of directors and supervisors, and the per capita salary of directors and supervisors. Most of them do not show normal distribution, indicating the operating conditions, profit status, development stage, etc. of a large number of sample companies. There are great differences in financial structure and other factors, so the research design of this paper adopts fuzzy qualitative comparative analysis method, which can increase the practical reference value of empirical results.

Table 1. description statistics (n = 1943)

	Min.	**Max.**	**Ave.**	**Stv.**
EM	0.0024	0.8390	0.1518	0.1494
BOARD	5.0000	13.0000	8.1271	1.6214
INDEP	0.3333	0.6000	0.3848	0.0560
CHGM	0.0000	1.0000	0.6541	0.4758
SALARY	11.2503	14.3586	12.6484	0.5786
PATI	1.1538	7.8235	2.8280	1.3934
SCALE	10.7614	15.8352	12.8066	1.0672
LIAB	0.0521	0.7987	0.3654	0.1802
BIG10	0.0000	1.0000	0.5610	0.4964

Note: please refer to the variable description in 3. Method

Table 2. The calibration basis of variables (n = 1943)

	EM	BOARD	INDEP	CHGM	SALARY	PATI	SCALE	LIAB	BIG10
95%	0.46	11	0.5	1	13.70	5.77	14.79	0.69	1
50%	0.11	9	0.38	1	12.63	5.45	12.71	0.34	1
5%	0.01	5	0.33	0	11.77	1.31	11.19	0.10	0

There are three steps to implement the fs/QCA method. First, the original data of each variable must be converted into a fuzzy set between 0 and 1 according to its 95%, 50% and 5% calibration. Table 2 shows 95%, 50% and 5% of the original values of each variable.

Next, we need to analyze the necessary conditions. The purpose of this test is to test whether the consistency of a certain variable is too high. If the consistency is too high, it means that as long as there is such a variable in the model, the expected result must be achieved. In this way, the model will lose its meaning, because no matter what combination, only the specific variable with too high consistency really determines whether the expected result is achieved. It can be seen from table 3 that the consistency of each variable is less than 0.8, indicating that no one variable has necessary condition.

There are nine groups of empirical results in Table 4. Companies with the kind of characteristics of corporate governance generally have higher earnings quality, which can be summarized into the following three types:

Type A: the company is large in scale and has a good concept of corporate governance. The specific performance of this kind of company is that the proportion of independent directors is relatively high, the chairman and the general manager do not hold concurrent posts with each other, and a well-known certified accountant is employed to sign the financial statements, The larger the size of the board of directors is, the more professional advice they can get. With the help of correct business philosophy and professional managers, the disclosure of financial statements of such companies can also abide by the principle of good faith.

Type B: poor financial structure but with the assistance of external experts: the financial structure of such companies is poor, with the specific performance of high debt ratio. However, this kind of companies prefer to employ professional managers as directors and supervisors with high salaries, they tend to concentrate on the operation of the company (with a small number of concurrent posts), and with the assistance of external experts (independent directors), the operation of the company will gradually improve, This kind of company usually is formal, so the earnings quality of financial statements can reflect the actual earnings.

Type C: companies employ directors and supervisors with high salary, plus the assistance of external experts: such companies are willing to employ talents with high salary, including directors, supervisors, and a high proportion of external directors, and the employed directors and supervisors are able to concentrate on the company's business. Such companies have good governance philosophy, so they are reluctant to cheat investors by manipulating earnings.

Table 3. Analysis of necessary conditions (n = 1943)

Var.	Consistency	Var.	Consistency
BOARD	0.54	~BOARD	0.77
INDEP	0.54	~INDEP	0.68
CHGM	0.68	~CHGM	0.40
SALARY	0.63	~SALARY	0.66
PATI	0.60	~PATI	0.67
SCALE	0.64	~SCALE	0.64
LIAB	0.62	~LIAB	0.64
BIG10	0.60	~BIG10	0.48

Note 1: variable description: please refer to table 1

Note 2:"" means "and", "~"means"negative"*

Table 4. empirical results of fuzzy qualitative comparative analysis (n = 1943)

	Solutions	Raw Coverage	Unique Coverage	Consistency
A-1	SCALE*INDEP*~BOARD	0.33	0.01	0.81
A-2	SCALE*~PATI*CHGM*~INDEP*BOARD	0.26	0.00	0.86
A-3	BIG10*~SALARY*INDEP*~BOARD	0.25	0.00	0.81
A-4	SALARY*CHGM*INDEP*~BOARD	0.25	0.00	0.82
B-1	LIAB*~SALARY*INDEP*~BOARD	0.27	0.00	0.83
B-2	LIAB*~PATI*INDEP*~BOARD	0.27	0.00	0.83
B-3	LIAB*SCALE*~PATI*SALARY*~INDEP	0.28	0.00	0.86
C-1	~LIAB*SALARY*INDEP*~BOARD	0.26	0.00	0.84
C-2	~PATI*SALARY*INDEP*~BOARD	0.27	0.00	0.83

Note 1: variable description: please refer to table 1
Note 2:"" means "and", "~" means "negative"*

4. CONCLUSION

4.1 Conclusion and Suggest

This paper selects A-share listed companies in Shanghai and Shenzhen Stock Exchange from 2015 to 2019 as samples, and makes an empirical analysis with fs/QCA method. The results show that the companies with large scale and good corporate governance concept, poor financial structure but with the assistance of external experts, high salary and high proportion of independent directors also have relatively high earnings quality. In the light of the empirical results of this study, we can deeply analyze the characteristics of corporate governance as follows：

- **The size of the board of directors and the proportion of independent directors:** The professional knowledge and experience of directors are the most important assets of enterprises. In the empirical results, group A enterprises with sound institutions or good governance concept (that is, they have the characteristics such as large scale, high remuneration of directors and supervisors, or certificated by "Big 10" CPA firms) show two situations: one is the proportion of independent directors is high, and large-scale board of directors is not needed. However, another situation is the board of directors with large scale does not need a high proportion of independent directors, which shows that the important thing is that the enterprise needs to have a good enough corporate governance concept. The members of the board of directors are professionals, and the number is not the key point.
- **The chairman and the general manager are the same person:** The responsibility of the general manager is to implement the business policies formulated by the board of directors. Based on the theory of internal control, if the executor and the examiner are the same person, their behavior will be uncontrollable, which will lead to control failure. Therefore, from the empirical results of group A, we can see that the chairman and the general manager will not be the same person for the enterprises with sound system and governance concept.
- **The number of part-time directors and supervisors:** If there are many part-time directors and supervisors, they will be distracted from full-time positions and cannot do their best. Enterprises hope to get experience that is more professional from senior management, which can be made up by employing suitable independent directors. Therefore, no one empirical result shows that the number of part-time directors and supervisors is conducive to earnings quality.
- **Per capita salary of directors, supervisors and senior executives:** If an enterprise wants to recruit professionals, the salary must not be calculated. From the group C solution of empirical results, it can be seen that enterprises with a high proportion of independent directors must attach great importance to the introduction of professionals, so the salary of directors, supervisors and senior executives is relatively high.

According to the above research results, this paper puts forward the following suggestions, hoping that the research results of this paper can provide reference value for enterprises, government regulators and investors in practice. First, for enterprises, directors, supervisors and senior executives are responsible for the company's business decision-making and direction. Good corporate governance concept and the concept of integrity are the primary principles. The operational efficiency of the board of directors is also very important. Therefore, the size of the board of directors should not be too large, but it can be adjusted flexibly depending on whether the required professionals are enough. In addition, enterprises with poor financial structure should rely on the assistance of professional managers to make the company lay a good foundation and gradually improve, instead of using earnings manipulation to obtain short-term benefits. For the supervision units of listed companies, since the independent directors play an important role in the company's business decision-making, the selection of independent companies of listed companies should be more strictly supervised, so as not to make the establishment of independent directors' mere formality. For investors, the financial report is an important reference for investors to invest. However, in order to avoid the company's earnings management speculation misleading investment judgment, investors should always pay attention to the company's governance situation, and announce the disclosure of real-time information about directors, supervisors and executives, to prevent losses caused by investment misjudgment.

4.2 The New Lines of Future Research and Research Limitation

In recent decades, there are many researches on the characteristics of corporate governance. However, each country has different culture background, even in the same country; there are different operation conditions exist in many enterprises. Limited by the research method, we can only study specific variables and specific result. We hope that future scholars who are interested in this field can have a deeper discussion on this topic, including the richness of variable items and the heterogeneity of various variables.

DISCLAIMER

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Tricker B. Corporate Governance. Oxford University Press; 1984
2. Li WA, Li YZ. The logic and trend of corporate governance reform in China. Board of directors. 2020;(Z1):31-35.
3. Dechow PM, Schrand CM. Earnings quality. The Research Foundation of CFA Institute Press; 2004.
4. Dechow PM, Sloan RG, Sweeney AP. Causes and consequences of manipulation：An analysis of firms subject to enforcement actions by SEC. Contemporary Accounting Research. 1996;13-1-36.
5. Jones J. Earnings management during import relief investigators. Journal of Accounting Research, 1991;29:193-228.
6. Li YJ, Zhu HQ. Board control and earnings quality: An Empirical Analysis of China's securities market. Mathematics in Practice and Theory. 2010;40 (21):12-25.
7. Yang JW, Bu HB, Liu C. Board Governance and Earnings Quality : Empirical Evidence in Post Non – tradable Share Reform Era. Journal of Capital University of Economics and Business. 2011;13(1):73-81.
8. Li YX, Dong WC, Ji K. An empirical study on board characteristics and earnings quality of Listed Companies in China. Modern Management Science. 2010;12:12-15.
9. Luo Y, Lu Z, Wu L. Do Retired Independent Directors Play a Role? The Effect of Retired Independent Directors in Audit Committee on Earnings Quality. Accounting and Economics Research. 2020;34(1):3-20.
10. Jiang XF, Zhang DL, Li H. “Busy” Independent Directors and Corporate Violations. Accounting Research. 2020;9:85-104.
11. Duan HY. Research on the Consequence of Busy Directors on Firms' Performance—

Based on Dual Perspectives of Supervision and Advisory. Soft Science. 2016;30(1):61-65.
12. Liu X. Regulation Pressure, Characteristics of Board and Choice of Earnings Management. Communication of Finance and Accounting. 2015;15:49-54.
13. Li ZG, Dai W, Xu Salaryk, Zhang SG. Earnings management, corporate governance and Cost Stickiness. Finance and Accounting Monthly. 2017;9:16-21.
14. Lin B, Zhou QY. Earnings management behavior of state-owned listed companies under the transformation of salary mechanism—Taking Wuliangye Co., Ltd. as an example. Journal of Chongqing University of Science and Technology (Social Sciences Edition). 2011;21:76-78.
15. Meng L. Internal pay gap and earnings management. Chinese & Foreign Entrepreneurs. 2019; 30:45.
16. Wang F, Yang S, Liu N. Corporate Environmental Information Disclosure Level, Executive Characteristics and Real Earnings Management. Journal of Statistics and Information. 2020;35(5):93-103.
17. Alhebri AA, Al-Duais SD, Almasawa AM. The influence of independence and compensation of the directors on family firms and real earnings management. Financial Economics. 2021;9(1).
18. Ragin CC. Fuzzy-Set Social Science. University of Chicago Press Economics Books;2000.
19. Ragin CC. Redesigning Social Inquiry: Fuzzy Sets and Beyond. University of Chicago Press;2008.
20. Ragin CC. The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies. University of California Press;1987.

Peer-review history:
The peer review history for this paper can be accessed here:
https://www.sdiarticle4.com/review-history/70244