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The Effect of CFO Characteristics on the Quality of Real Surplus: A Case Study of the Chinese Real Estate Industry

Nan Huang [a*] and Jia-hui He [a]

[a] *Xiamen University Tan Kah Kee College, China.*

Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

The article selects the data on the characteristics of finance chief executive officers of real estate listed companies from 2018 to 2022 as a research sample and explores the relationship between the heterogeneous characteristics of finance executives and concurrent positions and real surplus management from five perspectives: gender, age, tenure, educational background, salary and compensation of finance chief executive officers. The study shows that: in the real estate industry, gender, salary, and compensation of financial CEOs are not related to surplus management; age is significantly positively related to surplus management in the case of concurrent directorship and significantly negatively related in the case of non-concurrent directorship; tenure of financial CEOs is significantly negatively related to surplus management in the case of non-concurrent directorship; and educational background of financial CEOs is significantly positively related to surplus management in the case of non-concurrent directorship.

**Corresponding author: E-mail: 2822036082@qq.com;*

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Keywords: Finance chief executive officer characteristics; director concurrently; real surplus quality.

1. INTRODUCTION

In 2023, China's real estate industry stepped into a period of market weakness, the overall demand in the market is facing a lack of momentum momentum, and the real estate enterprise trading segment has also seen a sustained precipitous decline. The majority of investors hold a cautious attitude towards real estate investment, and real estate enterprises face difficulties in financing and weak demand. In this context, the quality of real estate corporate surplus management is importantly linked to the development decisions faced by real estate. Corporate surplus information is an important basis for investors to observe corporate surplus status. According to the theory of information inequality, due to the differences in information acquisition between corporate management and investors, enterprises manipulate profits within a reasonable range, thus adjusting the true surplus profit.

The real estate industry, as one of the major pillar industries of the national economy, is one of the important forces driving economic growth. Supply and demand in China's real estate market have been declining, and real estate enterprises are facing major transformation and upgrading.

Starting from the proposal of the top echelon theory, more and more scholars have begun to study the characteristics of the senior management team in the real estate industry. As an important component of the senior management team, corporate treasurers play an important role in corporate governance. And surplus management is a kind of behavior of profit management within the enterprise, which is the internal management personnel of the enterprise based on complying with accounting standards, through the manipulation of surplus information, to change the accrued profit surplus management. The chief financial officer as the leader of the financial management department, preparation of the financial statements direct control, the chief financial officer's executive characteristics of the quality of the financial statements to a certain extent have a direct impact on the quality of the financial statements, different characteristics of the chief financial officer of the quality of surplus management will have a different impact.

In the current domestic and international research on the analysis of the real estate industry's chief financial officer characteristics on the quality of real surplus management, the research on the heterogeneity of the senior management team is mainly focused on the team as a whole, and the team characteristics of the financial management personnel in the management team and the concurrent appointment of the relevant literature is relatively rare. Due to the unique economic status of the real estate industry, many stakeholders and the government are increasingly concerned about real estate enterprises, whether the heterogeneous characteristics and concurrent positions of financial executives in real estate enterprises will affect the real surplus quality of real estate enterprises has become a hot spot of concern.

This paper will analyze the impact of financial executives' characteristics and concurrent positions on the management of real surplus through descriptive statistical analysis and multiple linear regression analysis of the real surplus quality of real estate listed enterprises from 2018 to 2022, to prove whether the characteristics of the executives will affect the quality of the real surplus and lead to significant changes in the financial statements of enterprises and damage the reliability of the related parties. reliability and harm the interests of related parties.

2. LITERATURE REVIEW

(1) Review of real earnings management research literature

1. Definition and evaluation model of real earnings management

According to the literature reading research, the academic circle mainly uses the earnings management degree to measure earnings quality. The higher the earnings management degree of a company, the worse the earnings quality of an enterprise.

This paper mainly uses Dechow (1998) and Sugata Roychowdhury (2006) models, which are widely used in current academic research, to measure the real earnings management level of enterprises:

$$TREMit=(-1)ACFOit+A\_PRODit+(-1)A\_DISEXPit \quad (1)$$

Where $TREMit$ is abnormal cash flow from operating activities, A_$PROD$it is abnormal production cost; A_DISEXP is the abnormal discretionary cost, which is estimated by models 2, 3, and 4.

$$\frac{\text{CFOi,t}}{\text{Ai,t}-1} = \alpha 0 + \alpha 1 \frac{\alpha 1}{\text{Ai,t}-1} + \alpha 2 \frac{\text{REVi,t}}{\text{Ai,t}-1} + \alpha 3 \frac{\Delta\text{REVi,t}}{\text{Ai,t}-1} + \varepsilon i,t \quad (2)$$

$$\frac{\text{PRODi , t}}{\text{Ai , t}-1} = \alpha 0 + \frac{\alpha 1}{Ai\ ,\ t-1} + \beta 1 \frac{REVi\ ,\ t}{Ai\ ,\ t-1} + \beta 2 \frac{\Delta REVi\ ,\ t}{Ai\ ,\ t-1} + \beta 3 \frac{\Delta REVi\ ,\ t-1}{Ai\ ,\ t-1} + \varepsilon i \quad (3)$$

$$\frac{DISEXPi\ ,\ t}{Ai\ ,\ t-1} = \alpha 0 + \frac{\alpha 1}{Ai\ ,\ t-1} + \beta 1 \frac{REVi\ ,\ t-1}{Ai\ ,\ t-1} + \varepsilon i,t \quad (4)$$

In the model, CFOi,t: the net operating cash flow of enterprise I in year t; PRODi,t: the production cost of the enterprise, equal to the sum of the operating cost and inventory changes of the enterprise in the current period; DISEXPi,t: the control expense of the enterprise, equal to the sum of the selling expense and administrative expense of the enterprise; REVi,t: business income of enterprise I in year t; △REVi,t: the change in business income of enterprise I in year t; △REVi,t-1: The shift in business income of enterprise I in the year t-1; Ai,t-1: Eliminate scale effects and use t-1 period ending total assets. The higher the value of this index (RealEarnin), the higher the degree of real earnings management, and the worse the company's earnings quality.

Zhang Xiangjian and Xu Jin (2006) pointed out that corporate earnings management motivation is mainly affected by contract motivation, capital market motivation, and political cost motivation. The research of Li Yanxi et al. (2007) shows that executive compensation has a positive correlation with earnings management, that is, the higher the compensation incentive, the more significant the earnings management behavior of the company. From the perspective of executive compensation motivation, scholar Wang Runting (2022) proposed that the heterogeneity of executive characteristics would hurt the executive pay gap and earnings management behavior.

(2)An overview of the relationship between the characteristics of chief financial officers and true surplus management

1. The impact of the gender of the financial chief executive officer on corporate surplus management

Currently, most scholars believe that female executives have a stronger awareness of risk aversion and are more cautious in making decisions compared to male executives. Barber and Powell [1] point out that women have a greater preference for risk aversion in financial decision-making, which leads to female directors in financial decision-making, more cautious, thus referring to the standard of corporate financial reporting. Scholar Hu Rui [2] used gender diversity of senior managers as an entry point to empirically prove that female directors show a positive correlation with the level of corporate surplus management, classified female directors into financial and non-financial backgrounds and proposed that female directors from financial backgrounds have a dampening effect on the level of real surplus management of the company.

Muhammad Safdar Sial (2022) pointed out that the study proved that female chief financial officers (CFOs) are more cautious about the manipulation of financial statement profits compared to men, and the larger the proportion of female executives, the higher the efficiency of corporate internal monitoring, which improves the suppression of surplus management.

Scholars XiaoJiao Li; Ei Thuzar Than [3] and others point out that women's participation in supervisory boards and executives has a facilitating effect on companies to conduct surplus management. It is proposed that this is due to the female CEO's gender characteristics of a high sense of moral restraint, risk aversion, and other personality decisions, which in turn reduces the female executives to improve the behavior of surplus management, and the surplus status of the response is more realistic.

Accordingly, the following hypotheses are proposed:

H1: Controlling for other factors being unchanged, the gender of the financial chief executive officer positively affects the impact of corporate surplus management.

2, the impact of the age of the financial chief executive officer on the real surplus management

Foreign research on executive characteristics began with the executive ladder theory proposed by scholars Hambrick and Mason (1984). They believe that there is a correlation between the demographic characteristics of executives and psychological characteristics and that the age, title, and tenure of demographic characteristics also affect the development of corporate strategy and the company's operating performance. Scholars Li Yinxiang, Shen Kangjie [4], and other scholars believe that when the industry is in a different life cycle and different industries, the executive team characteristics will have different impacts on company performance. Current research on executive homogeneity focuses on areas such as age and education, while research on executive heterogeneity pays more attention to factors such as executive tenure and education.

The older the average age of the corporate executive team, the stronger the awareness of risk avoidance and the smaller the motivation to implement surplus management behavior. Scholars Li Mei, Lin Liping [5] and other scholars pointed out that the younger the corporate executive team, the more adventurous, their decisions are influenced by business decisions, and the higher the implementation of surplus management behavior. Scholars Shan Mengmeng, Liu Tao [6], and others pointed out that age has a significant correlation between the risk appetite of executives and their biographies. The higher the average age of executives, the more conservative and rational the company's business decisions will be, and the weaker the corporate surplus management behavior.

Based on the above analysis, the age of executive team members is mainly chosen to study the relationship between executive team characteristics and surplus management.

H2: Controlling for other factors being unchanged, the age of the financial chief executive officer has a positive impact on corporate surplus management.

3: The effect of financial CEO tenure on corporate surplus management

Executive tenure length has an important impact on corporate management. When executives serve longer, they can better grasp the company's voice and decision-making power. At the same time, the compensation defense hypothesis theorizes that the shorter the tenure of a corporate executive, the easier it is to induce surplus management behaviors, to improve performance to obtain higher compensation.

Scholars An Yutuo and others [7] further explore the impact of executive characteristics on corporate surplus management from the difference of “vertical pair” characteristics, and empirical evidence shows that the greater the difference between executive education and tenure, the stronger the inhibitory effect on corporate surplus management behavior. At the same time, scholar He Qiaolu [8] pointed out that the tenure of corporate executives has a moderating effect on surplus management. The longer the tenure of executives, often paying more attention to the protection of personal reputation, the more concerned about the long-term development of the company at the same time behavioral decision-making is more conservative, and the implementation of surplus management behavior is less motivated.

H3: Controlling for other factors, the tenure of the chief financial officer hurts corporate surplus management.

4, the impact of the educational background of the chief financial officer on corporate surplus management

Scholars Liping Lin and Pace Yu [9] explore the impact of the academic experience of the executive team on the level of corporate surplus management through Logistic regression modeling, pointing out that the academic experience of the executives is closely related to the personal values, ethical level and so on, which in turn affects the real surplus management of the enterprise. At the same time, scholars Zhang Leying, Dong Yijie, Huang Li [10], and other scholars pointed out that the higher the academic background of the management, the more able to identify the hazards of corporate surplus management, pay more attention to the long-term development of the enterprise itself, and its dialectical thinking ability is stronger, and attach importance to the combination of personal interests and the interests of the company. Scholars Nan Xingheng, Tian Jing [11] and other scholars from the perspective of executive academic experience factors for research, prove that the academic experience of corporate executives affects the moral level of executives, has higher performance expectations and pressures, forcing executives to use surplus management tools to manipulate profits, and thus inhibit the real surplus management of the enterprise in which they work.

H4: Controlling for other factors held constant, the educational background of the chief financial officer hurts corporate surplus management.

5, the impact of financial chief executive officer salary and compensation on corporate surplus management

Due to the heterogeneity of the educational background and occupational background of the company's executives, many scholars hold different attitudes towards the quality of the executives' management of corporate surplus. The research of foreign scholars on accrual surplus management has matured, and many scholars believe that there is a correlation between executive pay and corporate surplus management.

Foreign scholars such as Farouk Musa Adeiza [12], who studied the relationship between executive compensation and surplus management in Nigerian listed banks, found that CEO compensation has a significant positive effect on surplus management, while after moderation of executive shareholding; CEO compensation reduces the likelihood of surplus management by banks. Wang Runting [13] selected the data of Chinese A-share listed companies from 2010 to 2018 as empirical samples and started the research from the heterogeneous characteristics of executives to explore the association between the internal compensation gap of corporate executives and surplus management, and the results concluded that there is a negative relationship between the executive compensation gap and the real level of surplus management, and when the corporate executive compensation gap is larger, the quality of corporate surplus management is less real.

Currently, more scholars maintain different attitudes towards the internal pay gap on the quality of surplus management, which is mainly because the selected sample size is mainly concentrated in the listed main board and state-owned enterprises, etc., and there are fewer studies on the refinement to the real estate industry.

H5: Controlling for other factors unchanged, financial CEO salary and compensation negatively affects corporate surplus management.

3. RESEARCH DESIGN

(i) Research hypotheses

Based on the studies summarized in the literature review above, we propose the following hypotheses as shown in the relationship diagram:

(ii) Sample selection, data sources

Companies in the real estate industry of the SEC's 2012 edition (this is the latest version at present) industry classification are used as the research sample, and the sample period is 2018-2022. The real surplus management quality and financial CEO characteristics data of the sample firms are obtained from the Cathay Pacific database CSMAR (authoritative data organization).

(iii) Sample treatment

There are a total of 137 real estate companies in 2018-2022. To make the collected data usable, only the year-end data of the current year of the consolidated statement is selected and the data are screened and processed: (1) excluding ST; (2) excluding the samples with missing relevant data; and (3) extreme value processing. After the above screening, the final sample number of the research sample companies is 3576. The data processing software is Excel and Stata.

(D) Research design

1. Research design: in this paper, we used the least squares method as the main analytical method. Given that the overlapping roles of directors and chief financial officers (CFOs) may have an impact on independence, after referring to the relevant literature (Zhao Le, Wang Muzhi [14] Zhang Jie [15] we specifically grouped the factor of whether the CFO is also a director to be processed and analyzed.

2, Model design: this study is about the relationship between both the financial CEO characteristics of real estate companies and the quality of real surplus management, applying regression model to analyze, the established theoretical model is:

$$RealEarning=\beta0+\beta1\times Gen+\beta2\times Age+\beta3\times Edu+\beta4\times Payment+\beta5\times Duration+\beta6\times Scale+\beta7\times Debt+\beta8\times Soe+\beta9\times Big4+\varepsilon$$

Where: β is the regression coefficient and ε is the residual value.

4. EXPLANATION OF VARIABLES

This study involves explained variables, explanatory variables, control variables

(1) Explained variable: the quality of real surplus management (Real Earning): the Dechow (1998), Sugata Roychowdhury (2006) model, which is widely used in current academic research, is applied to measure the level of real surplus management of enterprises. The larger the value of this indicator (Real Earning), the higher the level of real surplus management is represented and the worse the quality of the company's surplus is [16].

(2) Explanatory Variables: Top executives play a crucial role in a company, they are directly involved in the day-to-day operation and management of the company and important decisions, and they are the core members of the company's decision-making layer. Given their central position in the company's operations, the impact of the background characteristics of the top management team on the quality of surplus cannot be ignored. The top echelon theory proposed by Hambrick et al. (1984) emphasizes that, when faced with complex and changing market environments, managers are not able to gain a comprehensive and in-depth understanding of all the information due to limitations in cognitive abilities and can only make selective observations based on limited information. The process of selective observation, including the selection, observation, interpretation, and processing of information, is largely influenced by top managers' attributes such as cognitive abilities and values [17].

However, since the cognitive ability and values of top managers are internal personal characteristics that are difficult to measure directly and quantitatively, external characteristics of executives such as gender, age, education level, salary, and length of tenure are mostly used as proxy variables in academic research to reflect their cognitive ability and comprehensive literacy indirectly. Although these external characteristics are not directly equivalent to internal traits, they can be used as a reference basis for predicting and explaining executives' decision-making behavior to a certain extent [18].

This paper selects the five most representative indicators of executives' background characteristics, namely gender, age, education, compensation, and tenure, as explanatory variables, to explore how these characteristics affect a company's true surplus management behavior. Through an in-depth analysis of the relationship between these variables and true surplus management, this paper expects to provide useful references and insights for companies to optimize the structure of their executive teams and improve the quality of true surplus [19,20].

① Gender of the financial CEO (Gen): this common factor, the gender of the financial CEO of each company varies and is included in the explanatory variables.

② Finance CEO age (Age). In general, the older the financial chief executive officer is, the more experience he or she has and the more likely he or she is to have an impact on the management of the company. Hence, this paper includes this variable as an explanatory variable to examine the extent to which the age of the financial chief executive officer has an impact on the management of corporate surplus.

(iii) Educational background (Edu) of the chief financial officer. Generally speaking, there are differences in the way of thinking and knowledge reserve of financial CEOs with different educational backgrounds, thus directly or indirectly affecting surplus management, so this paper takes it as an explanatory variable.

(4) Payment: Generally speaking, the stronger the ability of the chief financial officer, the higher his/her salary and pay, and the greater the impact on the quality of corporate surplus management, so this paper takes it as an explanatory variable.

⑤ Duration of CFO's tenure. Usually, the longer the tenure of the chief financial officer, the deeper his understanding of the company and its personnel, the easier it is to have an impact on the company, so this variable needs to be taken into account when studying the impact of the characteristics of the chief financial officer on the quality of corporate surplus.

Table 1. Relevant variables and definitions

Symbol		Variable Definition
Explanatory variables	Real Earning	Real surplus management quality: measured by the Roychowdhury model
Explanatory Variables	Gen	Gen Gender of financial CEO = male and female taking values 0 and 1, respectively.
	Age	Age of financial CEO = (sample year - executive's birth year)/365
	Edu	Educational background of the chief financial officer = the education obtained by the current chief financial officer of the enterprise, secondary school and below, college, bachelor's degree, master's degree, doctoral degree, and others take the value of 1, 2, 3, 4, 5, 6, respectively.
	Payment	Financial CEO Salary and Compensation = Data must be downloaded from the publicly available data source, the Cathay Pacific database.
	Duration	Length of tenure of financial chief executive officer = (sample year - start date of tenure)/365
control variable	Scale	Scale Asset size = logarithm of firm's total assets at year-end
	Debt	Debt ratio = total liabilities/total assets
	Soe	So whether it is a state-owned enterprise = yes, no take the value of 1, 0, respectively
	Big4	Big4 Whether Big 4 audited = yes, no 1, 2 respectively

Note: The financial data used in the calculation of the variables are all consolidated data.

(3) Control variables

By studying the literature of previous scholars, it is known that in addition to the characteristics of the chief financial executive officer can affect corporate surplus management, some other variables can also affect surplus management, so this study chooses to include the size of the enterprise's assets (Scale), the debt ratio (Debt), whether it is a state-owned enterprise (Soe), whether it is a Big 4 audit (Big4), and whether the chief financial executive officer also serves as a director (Dual). The definitions and explanatory notes for each variable are shown in Table 1.

5. RESULTS AND DISCUSSION

5.1 Descriptive Statistics Results and Analysis

In this paper, descriptive statistics of the main variables are presented, as can be seen in Table 2, the mean value of surplus management is 0.003, and since true surplus is calculated by subtracting abnormal cash flow from operating activities and abnormal discretionary expenses from abnormal production costs, this value is positive, indicating that the company's abnormal production costs are greater than its abnormal cash flow from operating activities and abnormal discretionary expenses. The mean value of gender of finance chief executive officers is 0.13, indicating a concentration of males and fewer females. The mean age of the chief financial executive officers is 53 years old, where the highest age is 70 years old and the lowest is 34 years old with a standard deviation of 6.9, indicating that the chief financial executives of real estate firms are either young and talented, or experienced and highly respected. The mean value of educational qualifications of financial chief executives is 2.64, indicating that the educational qualifications are college or above. The mean value of the chief financial executive officer is 6.02 years, with a large gap between companies, the longest tenure is 19.53 years, and the shortest is only 0.01 years. There is a large level of difference in the remuneration of the chief financial officer among various real estate enterprises.

5.2 Multiple Linear Regression Results and Analysis

1. Gender: The same non-significant relationship exists in the case where the chief financial officer is also a director and in the case where he is not. The quality of true surplus is affected by a variety of factors, including the market environment, corporate strategy, and the quality of internal controls. Gender, as a single factor, may not be sufficient to have a decisive impact on surplus quality in a complex business environment. Their professional competence, experience, ethical

values, and understanding and execution of corporate strategy have a more important impact on surplus quality.

2. Age: There is a significant positive correlation with age in the case where the chief financial officer is also a director and a significant negative correlation in the case where the chief financial officer is not also a director. The main reason may be: in the real estate industry, when the chief financial executive officer is also a director, with the growth of age, the risk tolerance may be reduced, and more inclined to avoid risk-taking and uncertainty to avoid the real surplus

Table 2. Results of descriptive statistics (N=3567)

Category of variable	Variable name	Mean value	Standard deviation	Minimum value	Maximum value
Explained variable	RealEarning	0.003	0.185	-0.420	0.767
Explanatory variable	Gen	0.128	0.334	0.000	1.000
	Age	53.239	6.904	34.000	70.000
	Edu	2.635	1.828	0.000	5.000
	Payment	1374694.000	1466323.000	0.000	8898900.000
	Duration	6.024	5.460	0.014	19.526
Control variables	Scale	24.072	1.639	19.584	28.017
	Debt	0.652	0.201	0.102	0.979
	Soe	0.506	0.500	0.000	1.000
	Big4	1.857	0.350	1.000	2.000

Note: For variable names refer to the variable definition notes in Table 1

Table 3. Analysis of regression results for financial chief executive officer who is also a director

Real Earning	Coef.	Std. Err.	t	P>t
Gen	0.014	0.015	0.910	0.365
Age	0.002	0.001	2.450	0.014**
Edu	-0.001	0.002	-0.550	0.581
Payment	0.000	0.000	1.600	0.110
Duration	0.000	0.001	0.440	0.658
Scale	0.007	0.005	1.590	0.112
Debt	0.087	0.031	2.800	0.005***
Soe	0.096	0.010	9.860	0.000***
Big4	0.034	0.016	2.090	0.036**

Note: For variable names, refer to the variable definition notes in Table 1
*Note: *** denotes p≤0.01, ** denotes 0.01 <p ≤0.05, * denotes 0.05 <p≤0.1*

Table 4. Analysis of regression results for financial chief executive officer who is not also a director

Real Earning	Coef.	Std. Err.	t	P>t
Gen	0.003	0.012	0.240	0.808
Age	-0.003	0.001	-3.610	0.000***
Edu	0.011	0.002	4.340	0.000***
Payment	0.000	0.000	1.260	0.207
Duration	-0.002	0.001	-1.930	0.054*
Scale	-0.001	0.004	-0.190	0.852
Debt	0.050	0.031	1.610	0.108
Soe	0.060	0.009	6.480	0.000***
Big4	-0.013	0.011	-1.180	0.237

Note: For variable names, refer to the variable definition notes in Table 1
*Note: *** denotes p≤0.01, ** denotes 0.01 <p ≤0.05, * denotes 0.05 <p≤0.1*

management behavior that may bring amplitude consequences; they may pay more attention to their long-term career development and maintain a good reputation, and are reluctant to carry out the real surplus management behaviors that may damage their reputation; So they keep the status quo as much as possible, reduce innovation and change, resulting in the lack of ability of enterprises to adapt to market changes; on the contrary, when the chief financial executive officer does not also serve as a director, their professionalism and independence may be better utilized to improve the quality of surpluses.

3. Educational qualifications: there is no significant relationship between educational qualifications when the financial CEO is also a director; while there is a significant positive relationship when the financial CEO is not also a director. When CFOs are also directors, their roles change to become strategic decision-makers and supervisors, and this change in roles may make their academic qualifications less useful in directly managing finances and ensuring the quality of surpluses. They focus more on overall corporate strategy and governance than on specific financial management skills; and the fact that the behavior of the CFO is monitored by the board of directors, which reduces the opportunities for surplus management, may make the direct effect of academic qualifications on surplus quality less significant. Whereas, in cases where the CFO does not also serve as a director, highly educated CFOs may face higher performance expectations and pressures, and they may be more inclined to use surplus management techniques to manipulate financial data; CFOs who do not also serve as a director may be more independent in their decision-making and less likely to be subjected to direct intervention by the board. This independence may make them more susceptible to the influence of their educational qualifications and This independence may make them more susceptible to the influence of their education and expertise, and they may be more confident and fail to consider the risk of decision-making, thus engaging in surplus management.

4. Remuneration: again, there is no significant relationship between a financial CEO who is also a director and one who is not. This is mainly because the quality of surplus is affected by a variety of complex factors, and although compensation as an incentive mechanism can affect the behavior and decision-making of executives, it is not necessarily directly reflected in the quality of surplus, but a combination of more factors, such as the company's long-term strategy, the board of directors' decision-making, and industry status. individual performance may be assessed with more focus on their professional competence in financial management, the quality of their decisions, and their collaboration with other departments. Therefore, even if the quality of surplus changes, there may not be a significant relationship between compensation and surplus quality due to the separation of individual performance and company performance.

5. Tenure: There is no significant relationship in the case of a chief financial officer who is also a director, while there is a significant negative relationship of 5% in the case of a chief financial officer who is not also a director, with the longer the tenure indicating the better the quality of corporate surplus. CFOs who are also directors may focus more on the long-term strategic development of the company than on the short-term surplus performance, so their tenure may be more related to the long-term goals and development plans of the company, and less related to the short-term fluctuations of surplus quality. In the absence of concurrent directorships, this may be because CFOs accumulate more experience, build more stable relationships and trust during their long tenure, and continue to improve the management of real corporate surplus to maintain their professional reputation.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

Taking the sample data of 137 real estate enterprises in China in 2018-2022 as the research object, this paper adopts the method of empirical analysis to study the relationship between the characteristics of the chief financial executive officer and the management of the quality of true surplus. Through model construction and empirical analysis, this paper draws the research conclusion that in China's real estate enterprises, there is no association between the gender of the chief financial executive officer and the quality of true surplus. There is a significant positive correlation between the age of the chief financial officer and the quality of the real surplus when the chief financial officer also serves as a director, the older the chief financial officer, the worse the quality of the corporate surplus; there is a significant negative correlation between the age of the chief financial officer and the quality of the real surplus when the chief financial officer does not serve as a director at the same time, and the older the chief financial officer is, the better the quality of the corporate surplus is. When the chief financial officer is also a director, there is no significant relationship between his education and the quality of real surplus; when he is not also a director, there is a significant positive correlation between his education and the quality of real surplus, and the higher his education is, the worse the quality of corporate surplus is. There is no association between the remuneration of the chief financial officer and the quality of true surplus. When the chief financial officer is also a director, there is no significant relationship between his term of office and the quality of real surplus; when he is not also a director, there is a negative correlation between his term of office and the quality of real surplus, and the longer his term of office is, the better the quality of corporate surplus is.

Under China's current market environment and the existence of institutional design flaws, top managers can utilize these loopholes for surplus manipulation. For a variety of motives, managers may exert influence on the extent of corporate surplus management through their decisions. In particular, true surplus management, a more insidious means of surplus manipulation, should cause us to be more vigilant. Given this, firms need to have high-quality top management teams who should possess solid ethics and efficient management capabilities to reduce the possibility of surplus manipulation and thus enhance the quality of the firm's surplus.

6.2 RECOMMENDATIONS

Based on the characteristics of real estate and combining the results from the empirical analysis of this paper, the following recommendations will be made starting from its characteristics:

1, enhance the professional quality of the chief financial officer: gender in the real estate industry in the selection of a chief financial officer, has no impact, but the enterprise should provide regular and systematic professional training for the chief financial officer, in-depth understanding of the characteristics of the real estate industry, to grasp the policy trends and market trends, pay attention to the chief financial officer's professional ethics and integrity awareness, to encourage the chief financial officer to participate in the industry's professional exchanges and academic seminars, to encourage the chief financial officer to participate in professional exchanges and academic seminars. Encourage the chief financial officer to participate in professional exchanges and academic seminars within the industry, encourage the chief financial officer to continue to learn and self-improve, to continuously improve the quality of the chief financial officer to provide solid support for the healthy development of the enterprise.

2. Optimize the age composition of the chief financial officer: when young chief financial officers are also directors, their vitality, innovative thinking, and rapid acceptance of new concepts and technologies will help the modernization of the enterprise's financial management and market adaptation. The older non-director financial chief executive officer, its rich experience and stable character, can provide stable financial management for the enterprise, to ensure the sound operation of corporate finance. Therefore, when selecting financial talents, enterprises should pay attention to balance: part-time chief financial officers can favor young people with the potential to inject new vitality and innovative thinking; non-part-time chief financial officers should pay attention to experienced and stable candidates.

3, comprehensive consideration of the quality of executive education: in the case of the chief financial executive officer concurrently as a director of the education does not have a significant relationship, but when the chief financial executive officer does not concurrently as a director of the situation, the level of education will have a positive impact on the real estate enterprise real surplus management, the quality of the enterprise's surplus will be reduced. Therefore, real estate enterprises should consider the education level and professionalism of executives when hiring executives, management should improve the internal governance of the company, strengthen incentives, and appropriately depress the level of education of executives, to strengthen the surplus management behavior of enterprises.

4, real estate companies should establish a scientific and perfect executive compensation system, and optimize the level of internal governance: to cope with the current real estate industry transformation and upgrading and the need for market restructuring, real estate companies should attach great importance to the quality of internal control and cost management, and the development of a fair incentive mechanism for compensation, and to promote healthy competition among executives. At the same time, the company's long-term strategy and executive compensation are closely linked to strengthening the sense of responsibility of executives, focusing on the long-term development of the company.

5, sound tenure scheduling mechanism: real estate companies in the growth period, to develop a reasonable executive tenure mechanism, absorb quality talent, strengthen the company's reform and development, and improve the core competitiveness of enterprises. At the same time, to meet the market changes, real estate companies should pay more attention to the diversity of the composition of the executive team, the appropriate extension of the term of financial executives, the introduction of different age groups of the talent team, but also to strengthen the stability of the team within the team, to avoid too short a term of office of executives to lead to frequent mobilization of the management of the enterprise within the management of the company between the impact of the company's business management development.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during writing or editing of manuscripts.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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