

Equity Structure and Performance in Chinese Financial Holding Companies

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Abstract Financial holding companies (FHCs) in China leverage equity control to enhance operational efficiency and synergies, yet excessive equity concentration often undermines these benefits. This study investigates the impact of equity structure — specifically concentration and balance — on the performance of 17 A-share listed Chinese FHCs from 2010 to 2022, using data from the CSMAR database. Empirical results reveal an inverted U-shaped relationship between equity concentration and performance, with moderate concentration optimizing decision-making efficiency, while excessive levels risk power abuse. Equity balance, however, negatively affects performance by fostering power struggles and delaying decisions. These findings underscore the need for a balanced equity structure in Chinese FHCs. Policy recommendations include listing parent companies to diversify equity, keeping subsidiaries unlisted with concentrated ownership for synergy, strengthening regulation, and encouraging small shareholder participation to enhance governance and stability.

Keywords financial holding companies (FHCs); equity concentration; company performance

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1 Introduction

In the 20th century, with the continuous development and innovation in the financial industry, as well as the improvement and maturation of markets and regulations, the global financial sector gradually transitioned from single-sector operations to diversified operations. In this process, the innovative organizational form of financial holding companies emerged. The concept of “financial holding company” was first introduced at the legal level in the United States in 1999 through the Financial Services Modernization Act, marking the formal operation of financial holding companies on the international stage. With continued development, financial holding companies have become the most important and mainstream organizational form in the financial industry, with most large financial institutions internationally evolving into financial holding companies. Since the beginning of the 21st century, with financial innovation, technological advancement, and diversification of customer demands for financial services, China has witnessed the emergence of numerous defacto financial holding companies. In terms of business scope, domestic financial holding companies not only include banking, trust, insurance, and securities, but also extend to areas such as funds, futures, and financial leasing. The business scope of five representative types of domestic financial holding companies is illustrated in Table 1 below.

Table 1 Business scope of representative financial holding companies

Name	Type	Bank	Trust	Insurance	Security	Fund	Futures	Lease
ICBC	Bank	ICBC		ICBC - AXA		ICBC Credit Suisse		ICBC Leasing
CITIC Group	Central enterprise	CITIC Bank	CITIC Trust	CITIC Prudential Life	CITIC Securities/China Securities	Prudential Fund/China Asset Management	CITIC Futures	CITIC Financial Leasing
Minmetals Capital	Central enterprise	Jinyang Bank	Minmetals International Trust		Minmetals Securities	Essence Fund	Minmetals Futures	China Foreign Trade Financial Leasing
Guosheng Financial Holdings	Local government				Guosheng Securities		Guosheng Futures	

As China’s financial holding companies have developed, domestic scholars have offered various definitions for them. For instance, Xia, et al. defines financial holding companies as those holding financial institutions as subsidiaries, while those with two or more financial institutions as subsidiaries are termed financial holding groups^[1]. Other scholars consider conglomerates engaged in two or more financial services and existing in the form of holding companies as financial holding companies^[2,3]. Meanwhile, Lian et al. define financial holding companies as financial groups holding licenses in two or more financial sectors and actually operating or controlling financial institutions within them^[4]. Wu discussed penetration regulation of FHCs from

a macroprudential perspective, relevant to governance and risk management^[5]. In line with the “Interim Measures for the Supervision and Management of Financial Holding Companies” issued in 2020, this paper regards financial holding companies as those holding or actually controlling two or more financial institutions of different types¹.

The equity structure significantly impacts the operation of financial holding companies. The equity structure of financial holding companies exhibits characteristics of both conglomerates and typical financial institutions. When equity is more concentrated and the first largest shareholder faces less constraint, decision-making and execution efficiency of the company increase. However, a dominant shareholder not only harms the interests of minority shareholders but also jeopardizes the financial security of the entire nation, as seen in cases like Tomorrow group and HNA group, where risks arose due to concentrated equity and ineffective corporate governance. Conversely, an overly dispersed equity structure may also impede decision-making and execution efficiency, potentially leading to insider control. Additionally, regarding the shareholding aspects of subsidiary companies, since financial holding companies typically possess diverse financial licenses, their equity structure may influence their operational strategies and resource allocation. With a reasonable equity structure, optimal resource allocation can be achieved, promoting synergy among subsidiary companies and enhancing the overall company value.

In existing research, equity concentration is an important indicator of equity structure. Kim, et al. argued that when the equity of a listed company was concentrated in the hands of a few large shareholders, then these large shareholders should have the incentive and power to effectively monitor the operations and management of the company^[6]. However, while the large shareholders enjoy the rewards of their monitoring, they also need to bear certain costs: First of all, the small shareholders may benefit from the monitoring by the large shareholders; second, the large shareholders forgo the benefits of a diversified portfolio. As a result, the large shareholders are likely to be found only in companies where the benefits of concentrated equity outweigh its costs.

As in other East Asian countries, the listed companies in China are characterized by a highly concentrated equity structure. Holderness believed that equity concentration varies both within and across countries, but there is little systematic evidence which can prove that either decentralized or concentrated equity has a value-enhancing effect in general^[7]. Demsetz and Lehn provided possible explanations for the different levels of equity concentration in different regions, and suggested that different levels of equity concentration were required to achieve maximal value of the company in different environments^[8]. After examining data on 1,142 Chinese companies over the period 1996–2003, Gul, et al. found that the equity concentration of the largest shareholder may be related to the government^[9]. They argued that most listed companies in transition economies like China were partially privatized, and as a result, the

¹The definition comes from the “Interim Measures for the Supervision and Administration of Financial Holding Companies” issued by the People’s Bank of China, https://www.gov.cn/zhengce/zhengceku/2020-09/13/content_5543147.htm.

company equity was highly concentrated in the hands of a single investor related to the central or local government or a state-owned enterprise (SOE), and that about 43% of the outstanding shares of the sample companies were held by the majority shareholder, 66% of which are related to the government.

As for the impact of equity concentration on the company, Porta, et al. found that the interests of majority shareholders may not always be aligned with those of minority shareholders, and that controlling shareholders may benefit privately from control by appropriating the wealth of minority shareholders^[10]. Pan and Peng argued that the nature of a holding group gave the parent company control over its subsidiaries, and although there was certain consistency between the holding group company and its subsidiaries in terms of interests and business, the two were in different positions in the formation and distribution of interests, and therefore had different interests to pursue, which inevitably generated a conflict of interest^[11]. Li and Zhang explored the internal risk contagion mechanism of financial holding groups and found that the equity structure and internal related party transactions were important factors affecting the internal risk management of the group, and the risk might be transmitted through equity relationships or related party transactions^[12]. Tripathy, et al. found a positive link between equity concentration, structure, and financial health in U.S. bank holding companies, supporting our findings on moderate concentration^[13]. For a financial holding group, there is a balance between the number of shareholding counterparties and the proportion of shareholding, and the trade-off between the two helps to reduce the risk for the group, which in turn reduces the internal risk contagion effect of the group and enables sound group operations. In addition, although the affiliated transactions can reduce the transaction uncertainty and reduce the transaction costs, when a crisis erupts in a group member, the related party transactions will increase the loss of the group member, thus expanding the risk as well as the scope of risk transmission. On the other hand, Grossman and Hart found that equity concentration promoted the alignment of interests between the controlling and minority shareholders^[14]. For example, Mitton reported that during the 1997–1998 continental financial crisis, the share prices of the companies with high equity concentration performed significantly better^[15]. Gomes argued that high concentration served as a credible commitment by controlling shareholders for not encroaching on the interests of the minority shareholders^[16]. This indicates that a concentrated equity may encourage the controlling shareholders to voluntarily disclose more and better company-specific information for the benefit of minority shareholders. This improved cost-benefit trade-off promotes better-informed transactions.

At present, the practice of financial holding groups in China is still in its infancy, the foundation is still unsound, and their equity concentration is generally high. The impact of equity concentration on the operation of financial holding groups is multifaceted. On the one hand, the equity concentration will promote the attention and supervision of large shareholders to the company, and reduce the agency cost between the owner and management of the company, so as to enhance the value of the company. On the other hand, the equity concentration will

reduce the liquidity of the company's share capital, and lead to the over-concentration of the company's control. As a result, the small and medium-sized shareholders may lose their voice in the company, increasing the agency problem between majority shareholders and minority shareholders, and thus reducing the value of the enterprise. Therefore, this paper puts forward pertinent suggestions for the development of financial holding companies in China by exploring the impact of equity concentration of financial holding companies on their operation.

The remainder of this paper is organized as follows. In Section 2, we make theoretical analysis and formulate research hypotheses. In Section 3, we test the hypotheses using the data of Chinese financial holding companies. In Section 4, we summarize the article and make corresponding policy recommendations.

2 Theoretical Analysis of the Impact of Equity Structure of Financial Holding Companies on Their Operational Performance

Most of China's financial holding companies tend to have a high degree of equity concentration. Major shareholders hold significant decision-making power, and the interests of minority shareholders are not easily prioritized. Moreover, when power is concentrated in the hands of major shareholders, it can lead to erroneous decisions that affect the company's operational performance or trigger risks. In situations of highly dispersed equity, managers can exercise substantive control over the company, highlighting the phenomenon of insider control. This section primarily analyzes the impact of equity concentration on the enterprise value and financial risks of financial holding companies from three perspectives: excessive intervention by major shareholders, insider control theory, and equity balance.

1) Excessive intervention by major shareholders

Because shareholders cannot possess all knowledge, especially in the case of financial enterprises where their operations are relatively more complex than non-financial ones^[17–20], professional managers are needed to run the company. Thus, the principal-agent relationship arises to resolve conflicts between company shareholders and managers. The goals of principals and agents are sometimes not entirely aligned; principals seek to maximize shareholder interests while agents aim for higher rewards and benefits. The mismatch in goals leads to agency costs, also known as the principal-agent problem. To address the principal-agent problem, many financial holding companies have controlling shareholders, and the trend is towards a more concentrated equity structure. The involvement of controlling shareholders allows for deeper participation in corporate operations and reduces losses due to managerial dereliction. Moderate concentration of equity can incentivize major shareholders to participate in corporate governance and supervise management^[21]. However, when equity is excessively concentrated, major shareholders may “strip” the company through improper actions^[17], thereby encroaching on the rights of minority shareholders^[22], ultimately affecting enterprise value and creating risks.

In the composition of Chinese financial holding companies, state-owned enterprises have a relatively high proportion. According to the theory framework of government diversification

goals, it is reasonable to believe that the government, as the actual controller of financial holding companies, may use its power to manipulate corporate decisions, thereby adversely affecting corporate governance efficiency. In contrast to international financial holding companies, which typically have sound corporate governance structures and robust internal control systems, enabling them to operate more efficiently and stably, most of China's financial holding companies have not yet established strict internal management systems. This may lead to a degree of blindness and potential significant risks during their development. If companies lack sound internal management systems, they may make decisions without strong monitoring and management, increasing the risks they face and potentially making decisions detrimental to their long-term development. Therefore, as the actual controller of financial holding companies, the government should strive to strengthen the construction of the company's internal management system, enhance corporate governance efficiency, and ensure that the company maintains steady development in the face of various risks and challenges.

In China's financial holding companies, shareholders can nominate directors based on the proportion of their shareholding according to the Company Law and the company's articles of association. The nominees are generally their agents, so the members of the board of directors are mostly representatives of controlling shareholders or major shareholders, while the rights or quotas of minority shareholders who do not nominate directors are extremely limited. This situation often results in the decisions of the board of directors reflecting the opinions and interests of controlling shareholders or major shareholders, disregarding the interests of minority shareholders. Maintaining a certain degree of equity concentration is conducive to improving corporate governance efficiency. However, when major shareholders hold a proportion of shares beyond a certain limit, an excessively concentrated equity structure may lead to agency costs and situations where major shareholders infringe on the interests of minority shareholders. As equity concentration increases, the agency problem shifts from conflicts between shareholders and management to conflicts between major and minor shareholders. In terms of the equity structure of financial holding companies for their subsidiary financial companies, if the equity structure is too complex, agency problems may also arise. For example, the actual controller may obtain substantial control over subsidiary financial companies through cross-shareholdings with only a small investment, leading to a deviation between ultimate control and cash flow, providing the actual controller with the opportunity to sacrifice the interests of other shareholders for their own benefit. Furthermore, complex equity structures such as cross-shareholdings and other nested structures increase the degree of information asymmetry and reduce the transparency of the company, allowing the actual controller to disregard or harm the interests of minority shareholders more unrestrainedly.

2) Insider control

The previous analysis focused on the impact of equity concentration on the value and financial risks of enterprises in the presence of controlling shareholders. If equity is highly dispersed, financial holding companies may experience insider control. The control of internal personnel

in companies has a dual effect on corporate value and financial risks. On the one hand, the dispersion of equity prevents any shareholder from intervening in the operation of financial holding companies, ensuring the independence of financial holding companies. Moreover, because internal personnel have greater access to information compared to external parties and many of them are professional managers with advanced management capabilities, when they can control corporate operational decisions, capable internal personnel may positively influence enterprise value. On the other hand, since the management itself does not own company assets, their goals may differ from those of shareholders. Pursuing their own interests, their actions may contradict shareholder expectations, resulting in negative effects on the company. China's financial holding companies have not yet established an appropriate system of manager shareholding and stock options, making it difficult to directly link the behavior goals of executives with shareholder interests.

Additionally, due to the low proportion of shares held by a large number of small and medium shareholders, their voice in listed financial holding companies is relatively weak. This may lead them to "free ride" to reduce their own monitoring costs. This situation further exacerbates the problem of adverse selection and opportunistic behavior by management, highlighting the issues in internal control. As equity gradually concentrates, the goals pursued by major shareholders become increasingly aligned with the operational objectives of the company, gradually leading to the so-called "interest synergy effect". Furthermore, according to Ref. [23], major shareholders strongly desire to supervise the operational decisions of the company, which helps reduce the tendency of excessive investment by the company's management. Therefore, as the proportion of shares held by major shareholders gradually increases, that is, the higher the degree of equity concentration, the stronger the desire of major shareholders to supervise the management team, and their management skills also improve accordingly, which helps to more effectively curb the opportunistic behavior of the company's management.

Based on the theories discussed and the analysis of the current status of the equity structure of financial holding companies in China, this study indicates that the concentration of equity in financial holding companies may have different effects on corporate decision-making. In cases where the equity is relatively concentrated, a few shareholders jointly hold the majority of the company's shares, resulting in a situation where the company is not controlled by a single shareholder, but rather characterized by a balance of power among shareholders. In the daily decision-making and management activities of the company, situations where the minority obeys the majority often arise, resulting in final decisions being made from the perspective of the long-term stable development of the enterprise. In contrast, when the equity is more dispersed, the likelihood of the majority shareholders infringing on the rights of minority shareholders significantly decreases, effectively restraining absolute control. However, when the distribution of equity becomes overly dispersed, shareholders may lack proactiveness in managing the company, leading to a passive state in critical decision-making processes, which is not conducive to enhancing corporate value. The relationship between the concentration of equity

and operating performance of the company exhibits a pattern of initial increase followed by decrease. Similar conclusions have been drawn in existing studies. For instance, Wang and Song found through their study of Chinese securities companies that there is a non-linear relationship between the degree of equity concentration and cost-effectiveness of companies, exhibiting an inverted “U” shape^[24]. Sun and Huang^[25], using Chinese listed companies as examples, discovered that maintaining a moderately concentrated equity structure is most advantageous for company value. Specifically, the equity held by the largest shareholder demonstrates an inverted “U” relationship with corporate value. Qian and Liu^[26], analyzing from the perspective of governance theory regarding monitoring and balancing, argue that when the proportion of shares held by major shareholders is excessively high, internal governance lacks supervision and balancing, which affects corporate value. Conversely, excessive dispersion of equity cannot effectively balance management. Therefore, effective balancing of major shareholders and management can best enhance corporate value when the equity structure is moderately concentrated. Therefore, based on the above analysis, this study proposes the following hypotheses.

Hypothesis 1 There is a non-linear “U” shaped relationship between the concentration of equity in financial holding companies and enterprise value.

3) Equity balance

The mutual supervision and balance among multiple major shareholders in an enterprise are referred to as equity balance. This role weakens the encroachment behavior of major shareholders on the company, protecting the interests of small and medium shareholders^[27,28]. However, the balance of equity structure may have a dual impact on the value and financial risks of enterprises. In terms of positive impacts, equity balance helps in risk supervision and constraint, as different stakeholders can monitor management decisions by exercising shareholder rights, thereby reducing operational risks. At the same time, the diversified decision-making perspectives brought about by equity balance help companies comprehensively assess risks and formulate corresponding risk management strategies, enhancing the company’s ability to identify and respond to risks. Additionally, a balanced equity structure helps build a sound governance structure; by diversifying shareholders, internal monitoring mechanisms within the company can be strengthened, reducing improper behavior within the company and promoting its long-term stable development. For example, Sun and Huang found that higher equity balance significantly promoted the increase in company value using Chinese listed companies as samples^[25]. Indeed, some scholars using Chinese data have also found the promoting effect of equity balance on company value^[29,30].

However, in terms of negative impacts, a balanced equity structure may lead to a decrease in decision-making efficiency due to the need for more coordination and consensus, making the company slow and inflexible in responding to market changes and formulating strategic directions. Additionally, the lack of dominant shareholders may exacerbate information asymmetry problems, as management may be unwilling to share critical information with all shareholders, leading to valuation biases by investors and affecting corporate value. Due to conflicts of in-

terest among different stakeholders, decision-making efficiency may decrease, decisions may be difficult to reach a consensus, thereby affecting the company's operational efficiency, and even the power struggles between the top shareholders may increase the company's financial risks. For example, Zhu and Wang found through case studies that equity balance was not necessarily a more efficient governance structure^[31]. Other studies have found that excessive equity balance can have a negative impact on company value^[32,33].

Based on the above analysis, this paper proposes the following opposing research hypotheses.

Hypothesis 2a Equity balance in financial holding companies will increase company value.

Hypothesis 2b Equity balance in financial holding companies will decrease company value.

3 Empirical Analysis

3.1 Research sample and Variables

1) Research sample

This study classifies financial holding companies based on shareholder characteristics into five categories: bank-controlled, centrally owned enterprises (COEs), local government-controlled, board/management-controlled, and privately controlled financial holding companies. Considering the features and data availability for each category, the following selections were made:

Bank-controlled: The five major state-owned commercial banks (Industrial and Commercial Bank of China, Agricultural Bank of China, China Construction Bank, Bank of China, and Bank of Communications) were chosen as typical representatives.

Centrally owned enterprises four listed companies controlled by the Ministry of Finance and the State-owned Assets Supervision and Administration Commission (SASAC) were selected as representatives, including Minmetals Capital, CNPC Capital, AVIC Capital, and COFCO Capital.

Local government-controlled: Four listed local financial holding platforms were selected as representatives: Yuexiu Capital (Guangdong), Zhejiang Orient (Zhejiang), Guosheng Financial (Jiangxi), and Xinyu Financial (Anhui).

Board/management-controlled: Four recently listed local commercial banks with no actual controllers (Bank of Beijing, Bank of Shanghai, Bank of Hangzhou, and Bank of Qingdao) were chosen as representatives.

In total, 17 A-share listed companies were included in the sample. Privately controlled financial holding companies were not included in the sample selection because many of them have faced various degrees of risk exposure and are no longer operating normally. The study period spans from 2010 to 2022, with data sourced from the CSMAR database.

2) Variable selection

Dependent variable: In measuring the performance of financial holding companies, most existing studies use Economic Value Added (EVA) and Tobin's Q. However, EVA is essentially accounting profit and retains all its inherent flaws, such as susceptibility to manipulation, inability to overcome scale differences, and a focus on short-term profits. Tobin's Q is also a crucial

parameter for assessing performance^[34], defined as the ratio of a company's market value to its replacement cost of assets, where the replacement cost is represented by the company's book value^[35]. The market value of a company is the sum of the value of its circulating shares non-circulating shares and debt. Shareholders tend to focus more on performance measured by Tobin's Q, so this study adopts Tobin's Q as the proxy variable for measuring company value.

Independent variables: The study uses the equity proportion of the controlling shareholder (Controlshare) as the measure of equity concentration and the ratio of the second-largest shareholder's equity to the largest shareholder's equity (Shareb) as the measure of equity balance. The equity proportion of the controlling shareholder refers to the company equity held by the actual controller through concerted actions, multiple-tiered holdings, and cross-holdings. It is calculated by multiplying the equity percentages at each level of the equity chain between the actual controller and the company, or by summing the products of equity percentages along each equity chain.

Control variables: The control variables selected include the age of the enterprise (age), the price/earnings to growth ratio (PEG), revenue growth rate (inc_gro), whether the enterprise is state-owned (SOE), whether the CEO and chairman positions are held by the same person (Mega), and return on assets (ROA). Table 2 below provides a detailed overview of each variable, including its definition and symbol.

Table 2 Variable definitions

Category	Variable	Symbol	Definition
Dependent	Company performance	TobinQ	Ratio of market value to replacement cost of assets
Independent	Equity concentration	Controlshare	Proportion of equity held by the controlling shareholder
	Equity concentration (squared)	Controlshare ²	Squared term of equity concentration to test non-linear effects
	Equity balance	Shareb	Ratio of second-largest shareholder's equity to largest shareholder's equity
Control	Firm age	age	Age of the enterprise since establishment
	Price/Earnings to growth	PEG	Ratio of price-to-earnings to earnings growth rate
	Revenue growth rate	inc_gro	Annual growth rate of operating revenue
	State-owned enterprise	SOE	Indicator of state ownership
	CEO-chairman duality	Mega	Indicator of whether CEO and chairman roles are held by the same person
	Return on assets	ROAa	Profitability relative to total assets

3.2 Model Specification

To empirically test the hypotheses regarding the impact of equity structure on the performance of financial holding companies (FHCs), we specify the following regression models using a panel fixed-effects approach, controlling for time fixed effects due to the similarity among individual FHCs. All models use Tobin's Q (TobinQ) as the dependent variable to measure company performance.

Model for equity concentration (Hypothesis 1): To examine the non-linear, inverted U shaped relationship between equity concentration and performance, we estimate:

$$\text{TobinQ}_{it} = \beta_0 + \beta_1 \text{Controlshare}_{it} + \beta_2 \text{Controlshare}_{it}^2 + \sum \gamma_k \text{Controls}_{kit} + \delta_t + \varepsilon_{it},$$

where TobinQ_{it} is the performance of FHC i at time t ; Controlshare_{it} is the equity proportion of the controlling shareholder, capturing concentration; $\text{Controlshare}_{it}^2$ is its squared term to test the non-linear effect; Controls_{kit} includes control variables (age, PEG, inc_gro, SOE, Mega, ROAa); δ_t represents time fixed effects; and ε_{it} is the error term. A positive β_1 and negative β_2 would support Hypothesis 1, indicating that performance increases with concentration up to a turning point, then declines.

Model for equity balance (Hypotheses 2a/2b): To assess the effect of equity balance on performance, we estimate:

$$\text{TobinQ}_{it} = \beta_0 + \beta_1 \text{Shareb}_{it} + \sum \gamma_k \text{Controls}_{kit} + \delta_t + \varepsilon_{it},$$

where Shareb_{it} is the ratio of the second-largest shareholder's equity to the largest shareholder's equity, measuring balance; other terms are as defined above. A positive β_1 would support Hypothesis 2a (equity balance increases performance), while a negative β_1 would support Hypothesis 2b (equity balance decreases performance). These specifications align with the variable definitions in Section 3.1 and are tested using the CSMAR dataset of 17 A-share listed FHCs from 2010 to 2019.

3.3 Regression Results

The regression results of the impact of equity concentration on performance in financial holding companies are presented in Table 3. Based on the Hausman test results, the chosen regression model for this chapter is the panel fixed-effects model. Due to the significant similarity among individual financial holding companies, this chapter only controls for time fixed effects. In Model (1), only the equity proportion of the controlling shareholder is regressed against performance, with non-significant results. In Model (2), both the equity proportion of the controlling shareholder and its square term (Controlshare^2) are included in the model to explore the nonlinear effect of equity concentration on performance. From the results of Model (2), it is observed that the coefficient of the linear term is significantly positive, while the coefficient of the quadratic term is significantly negative, with a significance level of 10%. This indicates that equity concentration in financial holding companies indeed has a non-linear "inverted U-shaped"

Table 3 Regression results of controlling shareholder equity percentage on performance

	(1) TobinQ	(2) TobinQ	(3) TobinQ
Controlshare	-0.0025 (-0.29)	0.0372* (1.68)	0.0546** (2.36)
Controlshare ²		-0.0004* (-1.93)	-0.0006** (-2.54)
age			-0.2610 (-0.58)
PEG			-0.0107* (-1.75)
inc_gro			-0.0044* (-1.87)
SOE			-0.2440 (-1.08)
Mega			-0.4600*** (-3.14)
ROAa			-2.1020 (-1.17)
_cons	1.891*** (4.81)	1.112** (1.99)	5.192 (0.71)
N	141	141	140
Adj. R^2	0.179	0.198	0.262

Note: The values in parentheses represent t-statistics, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

effect on performance, thus verifying Hypothesis 1. According to the parameters estimated in Model (2), the marginal effect of equity concentration on performance turns from positive to negative after the equity proportion of the controlling shareholder exceeds 86.92%. The results of Model (3) demonstrate that even after controlling for variables entering the model, the coefficient of the linear term remains significantly positive, and the coefficient of the quadratic term remains significantly negative, with a significance level of 5%. Therefore, the conclusion of Hypothesis 1 remains robust.

The inverted U-shaped relationship between equity concentration and performance offers critical insights into the optimal governance structure for Chinese FHCs. The turning point at 86.92% (derived from Model 2 coefficients: $0.0372/(2 \times 0.0004)$) indicates that performance peaks when the controlling shareholder's equity approaches this threshold, reflecting a balance between efficient decision-making and the risk of power abuse. For instance, in our sample, firms like ICBC and CITIC Group, with concentrated state ownership, likely benefit from streamlined decisions up to this point, aligning with their extensive operations across banking, securities, and insurance (Table 1). Beyond 86.92%, however, excessive concentration — as seen in cases like Tomorrow Group cited in Section 1 — may trigger inefficiencies or risks, such as tunneling by

dominant shareholders, which erode minority shareholder value and national financial stability. This turning point, robustly confirmed in Model 3 ($p < 0.05$), suggests that Chinese FHCs should target moderate concentration levels (e.g., 50%~85%) to maximize performance while mitigating governance risks, a normative guideline particularly relevant given the prevalence of state-owned enterprises (SOEs) in our sample (43% of shares held by majority shareholders, Gul, et al.^[9]).

The regression results of the balance of equity (Shareb) in financial holding companies on performance are presented in Table 4. Model (4) illustrates the baseline regression results of the equity balance and performance, while Model (5) presents the regression results after controlling for variables. Model (4) demonstrates a significant negative correlation between the equity balance in financial holding companies (Shareb) and performance, indicating that a balanced equity structure suppresses the enhancement of performance, thus validating Hypothesis 2a. In Model (5), after including control variables, this negative correlation persists, further confirming the impact of equity structure on performance, with a significance level of 1%. This may reflect that a balanced equity structure leads to decision-making delays, power dispersion, and insufficient incentive mechanisms. Financial holding companies typically engage in various financial services, such as banking, insurance, and securities. Decision-making in these sectors

Table 4 Regression results of equity balance on performance

	(4) TobinQ	(5) TobinQ
Shareb	-2.168*** (-5.14)	-1.878*** (-4.20)
Age		-0.341 (-0.80)
PEG		-0.00819 (-1.41)
Inc_gro		-0.00208 (-0.90)
SOE		-0.232 (-1.10)
Mega		-0.234* (-1.71)
ROAa		-2.778* (-1.75)
_cons	2.746*** (12.44)	8.425 (1.23)
N	141	140
Adj. R^2	0.333	0.334

Note: The values in parentheses represent t-statistics, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

often requires rapid responses to market changes and regulatory requirements. However, mutual constraints among major shareholders may complicate the decision-making process, especially in significant decisions involving multiple departments and subsidiaries. If major shareholders have divergent strategic or investment directions, the decision-making process may be delayed. Such inefficiency is particularly disadvantageous in the fiercely competitive financial market, potentially leading to missed market opportunities, decreased competitiveness, and ultimately affecting overall performance. Moreover, mutual constraints among major shareholders may exacerbate conflicts between internal management layers and different business units, leading to greater resistance and interference for management in executing company policies. This internal friction can reduce management efficiency, increase operating costs, and ultimately impact the overall performance of the company.

The significant negative effect of equity balance (Shareb) on performance (-2.168 in Model (4), -1.878 in Model (5), $p < 0.01$) provides nuanced insights into the governance challenges faced by Chinese FHCs. Unlike findings in broader listed company studies (e.g., Sun and Huang^[25]), where balance enhances value, our results suggest that in FHCs, a higher Shareb ratio — indicating parity between the largest and second-largest shareholders — exacerbates decision-making inefficiencies. The negative coefficient implies that a 1-unit increase in Shareb reduces Tobin's Q by approximately 1.878 units (Model (5)), potentially due to power struggles delaying strategic decisions, as seen in the multi-subsidiary structures of our sample firms. This finding normatively suggests that Chinese FHCs should avoid overly balanced equity structures, favoring a moderately dominant shareholder to ensure agility, especially in SOE-dominated contexts where government influence already complicates governance.

3.4 Robustness Test

To examine the robustness of the above results, this study substitutes the core explanatory variables in Models (1)–(5). Specifically, the indicator representing equity concentration is replaced with the equity proportion of the largest shareholder (share1) and the square of the equity proportion of the largest shareholder (share1²), while the indicator representing equity balance is replaced with the ratio of the sum of the equity proportions of the second to fifth largest shareholders to the equity proportion of the largest shareholder (Shareb5). The regression results are presented in Table 5.

From the results of Models (7) and (8), it is evident that the regression coefficient of the linear term of the equity proportion of the largest shareholder is significantly positive, while the regression coefficient of the quadratic term is significantly negative, with a significance level of 1%. This indicates a non-linear “inverted U-shaped” effect of equity concentration on performance, thus maintaining the robustness of Hypothesis 1. Furthermore, from the results of Models (9) and (10), it can be observed that the regression coefficient of the equity balance indicator remains significantly negative, thus confirming the robustness of Hypothesis 2a. In addition, to mitigate potential endogeneity issues, we lagged all explanatory variables, and the results remained robust.

Table 5 Robustness test results

	(6)	(7)	(8)	(9)	(10)
	TobinQ	TobinQ	TobinQ	TobinQ	TobinQ
share1	0.00164 (0.16)	0.0801*** (2.73)	0.0899*** (2.88)		
share1 ²		-0.000833*** (-2.84)	-0.000879*** (-2.90)		
Shareb5				-0.908*** (-5.60)	-0.910*** (-5.27)
age			-0.228 (-0.51)		-0.258 (-0.63)
PEG			-0.00957 (-1.57)		-0.00905 (-1.62)
inc_gro			-0.00400* (-1.71)		-0.00194 (-0.88)
SOE			-0.109 (-0.46)		-0.0137 (-0.06)
Mega			-0.426*** (-3.02)		-0.270** (-2.08)
ROAa			-2.139 (-1.24)		-3.526** (-2.29)
_cons	1.713*** (3.85)	0.102 (0.14)	3.682 (0.51)	2.526*** (14.42)	6.839 (1.04)
N	141	141	140	141	140
Adj.R ²	0.178	0.226	0.276	0.356	0.384

Note: The values in parentheses represent t-statistics, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

4 Research Conclusion and Discussion

The findings of this study reveal an inverted U-shaped relationship between equity concentration and the operational decision efficiency of financial holding companies. Moderate equity concentration can enhance operational decision efficiency, but excessive concentration may lead to the abuse of power. This indicates the necessity to find a balance point in the design of equity structure, considering both shareholder concentration and diversification, to achieve effective operational decision-making and risk control. The results of this study further emphasize the importance of shareholder balance for financial holding companies. Unlike most previous studies, this study found a significant negative effect of power balance among major shareholders on company performance for financial holding companies. A balanced equity structure among major shareholders can prevent the abuse of power and the depletion of company resources, thereby enhancing supervisory effectiveness. However, due to the unique characteristics of the financial industry, rapid responses to market changes and risk management are crucial. Power

struggles among the top shareholders may hinder the company's ability to make quick decisions in response to market changes, leading to wasted investment opportunities and resources, thereby impairing company performance. Therefore, this study suggests that a moderately concentrated major shareholder combined with a group of smaller shareholders with evenly distributed equity proportions is more suitable for the equity structure of financial companies.

Combining theoretical analysis and empirical evidence, the following suggestions are put forward for the operation and management of financial holding companies:

Firstly, Chinese financial holding companies need to find a balance point in the design of their parent company's equity structure, taking into account both equity concentration and diversification, to achieve effective management. They can position financial holding companies as listed platforms, introducing external investors to expand their capital base. Diversifying the equity structure can strengthen the constraints of the capital market, thereby improving corporate governance. Subsidiary financial companies should preferably remain unlisted, with concentrated equity or full control, to achieve more efficient subsidiary governance. This approach avoids the influence of external shareholders of subsidiaries on the overall strategic implementation of financial holding companies and maximizes synergies. If both parent and subsidiary companies are listed, although the equity structure is more dispersed and the capital market's constraining ability is stronger, the synergy at the operational level and unified risk management may face challenges. Therefore, it is recommended that financial holding companies be listed at the parent company level, while subsidiary financial companies remain unlisted whenever possible, with highly concentrated equity. This facilitates the better execution of the financial holding company's synergistic strategy and harnesses synergy among subsidiary companies to enhance overall corporate value.

Secondly, strengthen relevant regulation and governance mechanisms. The regulatory bodies should strengthen the regulation of financial holding companies to ensure the rationality and fairness of their equity structure. At the same time, efforts should be made to promote the establishment of a sound internal governance mechanism, strengthen the role of independent directors, enhance the transparency and effectiveness of corporate governance, and prevent the shareholders from abusing their power and hollowing out the corporate resources. Yang, et al. advocate differentiated governance policies for various financial institutions, aligning with our call for tailored equity structures^[36].

Thirdly, encourage the participation of small and medium-sized shareholders. The government and regulatory bodies can introduce appropriate policies to encourage the small and medium-sized shareholders to actively participate in the decision-making and supervision of financial holding companies, so as to strengthen the protection of their shareholders' rights and interests. By providing more information disclosure and voting rights, the small and medium-sized shareholders can play a better supervisory role, which can help reduce the abuse of shareholder power.

In summary, the equity concentration and shareholder structure of financial holding companies have a significant impact on the efficiency of their business decision-making. The government, regulatory bodies and the companies should make joint efforts to establish sound systems and mechanisms to promote diversification of the equity structure, strengthen regulation and governance, encourage the participation of small and medium-sized shareholders, and enhance education and training in corporate governance, so as to improve the business operational decision-making efficiency of financial holding companies and to promote the stability and sustainable development of the financial system. These measures will help to realize the long-term sustainable development of financial holding companies and provide the investors and shareholders with more stable and reliable returns.

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