INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

Vol 15, Issue 01, (2025) E-ISSN: 2222-6990

The Shareholder Effect: A Deep Dive into China's High-Tech Equity Cost Determinants

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To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v15-i1/24471 DOI:10.6007/IJARBSS/v15-i1/24471

Published Date: 24 January 2025

Abstract

This study explores the impact of significant investors' control and institutional shareholders' participation on the cost of equity in Chinese high-tech firms. Using panel data from 2012 to 2022, it analyzes the relationship between equity ownership and cost of equity, controlling for factors like firm size, financial leverage, and growth potential. Findings reveal that dominant shareholders' control positively correlates with equity prices, potentially due to self-serving behaviors that increase firm valuation and equity costs. In contrast, institutional investors' stakes inversely relate to equity costs, suggesting their oversight reduces valuations and costs, enhancing management. The study's limitation is the lack of differentiation among institutional investors, which could affect equity costs differently. Several strategic recommendations emerge for effective corporate governance and financial management. For policymakers, the study suggests the need for regulations that promote transparency and fairness in shareholder rights, as well as the establishment of frameworks that facilitate the active participation of institutional investors in corporate governance. By implementing these strategies, high-tech firms can not only manage their equity costs more effectively but also strengthen their financial health and competitiveness in the global market.

Keywords: Large Shareholder Control, Institutional Investors, Cost Of Equity, Chinese Listed Companies

Introduction

The cost of equity is a crucial element in business financing, influencing capital raising, resource raising, and dividend policies. In China, the role of institutional investors has been accentuated following the reforms by the China Securities Regulatory Commission's 2001 reforms. This study explores the impact of significant shareholder control and institutional investor equity stakes on the expense of equity in cutting-edge Chinese firms, focusing on

the period from 2012 to 2022. By bridging identified gaps in existing research, this study endeavors to enrich the understanding of corporate governance mechanisms in emerging economies. This affects how companies are valued and how capital markets operate. These elements are vital in determining investment strategies, capital raising, dividend policies, and the overall functioning of capital markets. Experts have intensely examined methods to compute the cost of capital cost and what affects it, especially in relation to organizational management and the dynamics between the people who manage the company and the people who own it.

In China, the findings reveal that equity incentives increase the influence of firm-specific information on stock prices, elicit positive reactions from institutional investors, and imply that besides mitigating agency problems, incentives can also enhance pricing efficiency, thereby providing empirical support for their positive effects (Long & Huang, 2020). They also enhance the transparency and accuracy of financial reporting by maintaining significant shares that enable oversight of management, thus amplifying the relevance of accounting information and providing investment insights in emerging markets (Diab et al., 2021). Furthermore, with their knowledge and substantial investments, institutional investors are anticipated to improve corporate ownership and governance structures, potentially decreasing shareholders' costs. Despite extensive studies on various governance aspects, such as board composition, executive compensation, and company transparency, the specific impact of institutional investors on the cost of capital is partially explored.

This research examines the relationship between institutional investors and the cost of equity in Chinese A-share companies from 2012 to 2022. Findings reveal a significant linkage: Stable institutional investors with a long-term commitment to ownership markedly effectively reduce the cost of equity (Gao et al., 2019). Analysis of firms with different levels of shareholder control indicates that institutional investors are instrumental in reducing costs in companies without dominant shareholders. However, in firms where shareholder control is concentrated, the beneficial impact of institutional investors is not as pronounced. The study underscores the need for further investigation into how shareholding concentration, the activity of institutional investors, and governance practices intersect in China's unique legal and cultural setting to better understand these dynamics' effects on corporate financing and management.

Literature Review

Large shareholder ownership ratio

Most importantly, in China's high-tech business, major investors exert substantial influence on corporate decisions through their equity holdings. Feng et al. (2020) find that firm size and ownership concentration positively impact profitability, while better governance leads to better performance. This provides insights for regulators and investors. Consequently, the level of shareholding proportion is directly linked to the impact of these major shareholders. Thus, investigating the equity proportions held by principal investors is vital for understanding the business administration framework of contemporary Chinese enterprises.

Research by Jalil & Rahman (2010) suggests that the presence of prominent investors can minimize opportunistic behaviors in oversight. Nevertheless, in the context of Chinese

sophisticated business, regulatory authorities must improve the efficiency of the domestic capital market and bolster investor protections, which are crucial for practical implications. Additionally, there is a pressing need for corporate governance policies to protect minority shareholders' interests. In addition, when executives possess substantial equity, it diminishes the moderating effect of social responsibility on financing constraints (Farooq & Noor, 2023).

From an academic viewpoint, an increase in the equity stake of significant shareholders in modern Chinese enterprises can heighten their involvement in management oversight (Wang, 2019), which in turn enhances corporate governance and reduces information risk. There exists a marked positive relationship between reduced information risk and enhanced company returns, underscoring that mitigating informational risks favorably influences financial outcomes (Abdollahi et al., 2021). Furthermore, they find that the lock-in effect of the largest shareholders is associated with better firm performance, suggesting that the active involvement of major shareholders can enhance firm outcomes.

At the same time, this could also lead to heightened supervisory costs as major investors are required to invest in more sources of firm oversight, particularly in a firm oversight and challenging market environment. In addition, a high concentration of ownership effectively curtails both accrual earnings management and transactions with related parties (Alhadab et al., 2020). Nonetheless, government ownership tends to negatively impact corporate performance in listed Saudi Arabian listed companies, indicating a negative correlation between government shareholding and company performance (Boshnak, 2023). This issue merits particular attention, given the quick advancement of Chinese state-of-the-art enterprises.

Empirical research studies in recent years have highlighted a complex relationship between the shareholding ratio of major investors and company performance in sophisticated Chinese ventures. Chen & Tang (2019) noted that across different countries, reformers and regulators must consider the influence of ownership structures on governance enhancements. While concentrated shareholder ownership aligns shareholder interests and company objectives, promoting better financial reporting, the excessively high shareholding proportion can distort source allocation and degrade company performance (Boubaker et al., 2019). This necessitates vigilance in modern Chinese ventures.

In summary, the equity stakes of significant investors in China's advanced industries are multidimensional, requiring a detailed examination of their impact on corporate governance and performance. Future research studies should pay more focus to the interaction between major shareholders' equity proportions and governance mechanisms, specifically versus the backdrop of China's rapid technological advancement. Moreover, China's unique legal setting and cultural context might affect the function of these equity stakes, warranting further research study for the comprehensive expedition.

The relationship between large shareholder ownership ratio and cost of equity

In China's advanced industries, which drive innovation, significant investment in research and market expansion is essential. This sensitivity to financial efficacy and costs means the equity stakes of significant investors are crucial, as they influence not only

governance but also the firm's developmental potential and market competition (Wan et al., 2021).

In some elements, political affiliations correlate positively with external financing, enhancing firm credibility and access to governmental support and indirectly boosting its external financing capabilities (Tawfik et al., 2022). However, excessively high shareholder ratios can lead to expropriation actions, particularly in China, where investor protections are relatively weak, adversely affecting minority shareholders and increasing perceived risks among external capitalists, thereby raising equity expenses.

In summary, the dynamic and multifaceted relationship between shareholder stakes and equity expenses in Chinese high-tech firms requires continuous research, considering different market environments and company qualities to accurately determine the impact of the shareholding ratio of major investors on equity expenses. Furthermore, policymakers and company monitoring should focus on enhancing business governance frameworks and balancing the supervisory role of major shareholders with expropriation risks to decrease equity expenses and enhance corporate value. In China's specific market atmosphere, additional support and incentives, such as tax benefits and R&D funding, are necessary to foster the sustainable development of high-tech businesses (Xiao, 2020). This search leads to the hypothesis that a positive correlation exists between significant investors is positively correlated with the price of equity, as follows:
H1: The higher the shareholding ratio of major shareholders, the higher the equity cost of the company will be.

Institutional Investors

In China's stock market, an emerging market characterized by insider trading, speculative practices, and prevalent information asymmetry issues, institutional investors play a critical role in diminishing these asymmetries in the Chinese stock market (Gao et al., 2018). Ilyas et al. (2023) discovered that the positive influence of Foreign Institutional Investors (FIIs) is particularly evident in common-law countries with robust governance systems and strong investor protection measures. This suggests that FIIs play a beneficial role in enhancing the efficiency of corporate resource deployment through effective monitoring. In addition, Institutional investors adeptly balance profit maximization with risk management, adjusting portfolios based on market conditions and company analysis. For optimal capital structure, companies must carefully navigate the leverage of institutional investments against the potential drawbacks of prolonged shareholding by these investors.

Over the past two decades, extensive studies have explored institutional investors in corporate governance, demonstrating their significant role in enhancing the company's operating performance as reflected in return on assets (ROA) and subsequently bolstering investors' confidence in the company (Veeravel et al., 2023). Ahmed et al. (2021) have identified a robust correlation between institutional ownership, earnings quality, and reducing the cost of equity capital, highlighting the potential for institutional oversight to secure more favorable financing conditions. This finding leads to our prediction that the shareholding ratio of institutional investors is negatively correlated with equity cost, as follows:

H2: The higher the shareholding ratio of institutional investors is, the lower the equity cost of the company will be.

The Relationship between Large Shareholder Ownership Ratio, Institutional Investors, and Cost of Equity

The shareholding ratio of major shareholders is pivotal in examining corporate governance and financial markets. Firstly, significant shareholders can curtail agency costs by overseeing management, thereby potentially reducing the company's equity costs (Jensen & Meckling, 1976). However, an excessively high ownership ratio might provoke expropriation of the interests of minority shareholders, augmenting the external risk perception of investors and, thus, elevating equity costs (Wang, 2019). Additionally, in emerging markets such as China, where legal frameworks and corporate governance structures are still developing, the impact of the major shareholder's shareholding ratio on equity costs may be notably intricate.

Furthermore, institutional investors represent another pivotal market participant whose investment behaviors and strategies markedly influence the costs of equity. According to existing research, institutional investors typically possess enhanced professional capabilities and superior information acquisition skills, which facilitate more effective management oversight and curtail practices of earnings management behaviors, potentially leading to reduced equity costs (Saci & Jasimuddin, 2021). All in all, the investment strategies and holding periods of institutional investors also play a crucial role in corporate governance. For example, Gao et al. (2019) classified stable institutional investors with stable, long-term investment objectives as effectively lowering equity costs within high-tech firms in China.

In summary, the ownership proportions of major shareholders and the investment behavior of institutional investors collectively determine a firm's equity costs. On the one hand, major shareholders need an optimal ownership ratio to balance effective oversight and the potential risk of expropriation. On the other hand, the stability and investment duration of institutional investors significantly affect market volatility and governance dynamics (Waheed & Malik, 2019). Therefore, it is imperative for future research to delve deeper into how these investor categories affect equity costs through their ownership roles and governance involvement. At the same time, policymakers and corporate management should prioritize refining governance structures to foster a robust and stable investment environment, thereby minimizing equity costs and augmenting corporate value. These considerations lead us to hypothesize that Institutional investors' shareholding has a moderating effect.

H3: The shareholding ratio of institutional investors may moderate the interaction between the shareholding ownership ratios and equity cost.

Methodology

The investigation employs panel data from 2012 to 2022, sourced from the CSMAR database and company annual reports. The dependent variable, the cost of equity, is calculated using the CAPM model. The independent variables include the ownership percentages of major shareholders and institutional financiers, with control variables such as firm size, financial leverage, ROA, company age, and growth prospects. The analysis incorporates multiple regression methodologies and robustness assessments to

substantiate the findings. First, we establish a theoretical framework and formulate research hypotheses by reviewing the literature. Ultimately, our sample comprises sophisticated business detailed in China from 2012 to 2022, from which we gather required data from the CSMAR data source, annual corporate reports, and other financial disclosure files.

Furthermore, concerning variable definition, we designate equity cost as the dependent variable computed according to the CAPM model (Takouachet, 2020). The independent variables encompass the ownership percentages of major shareholders and the proportion of shares held by institutional investors while accounting for variables such as organizational size, financial leverage, growth, profitability, and market-to-book ratio. For empirical analysis, we formulate a multiple regression model and apply statistical techniques such as descriptive statistics, correlation analysis, and regression analysis.

Finally, we discuss the limitations of the study and suggest possible avenues for enhancing future research. Despite potential biases such as survivor bias and unobserved company-specific factors, this research aims to offer critical insights into the determinants of equity costs in Chinese high-tech companies. Through robust testing and additional verifications, our study seeks to provide valuable information and decision-making support for investors, corporate managers, and policymakers.

Cost of Equity

Equity financing demands a minimum risk-adjusted return that companies must generate to satisfy the needs of shareholders or financiers. Drawing on the work of Zouari-Hadiji & Chouaibi (2021) and various other scholarly contributions, we approximate the cost of resources using the Resources Asset Prices Version (CAPM). The equilibrium returns of a risky asset correlate with the covariance of the market portfolio return. The asset's return comprises the risk-free rate plus a threat premium that reflects systemic risk. The formula for the asset prices model is as follows:

$$Rs=Rf+\beta(Rm-Rf) \quad (1)$$

The Heterogeneity of Large Shareholder Control

First, the ownership stake of major shareholders serves as a vital indicator of their control within the corporation. While shareholders with minimal stakes might possess a degree of influence in company governance, they often struggle to impact significant strategic decisions. As the ownership stakes increase, the influence of these substantial progressively intensifies, enabling them to shape corporate policies and calculated directions through enhanced shareholdings. Nevertheless, excessively high ownership concentrations can lead to absolute control over the firm, potentially streamlining decision-making processes but also introducing risks as a result of the lack of oversight and balanced governance mechanisms (Lee, 2015).

Moreover, the presence of predominant control allows major shareholders to dictate vital corporate actions independently of other investors' opinions. This autonomy might result in major investors prioritizing personal gains over the interests of minor investors, hence creating potential conflicts of interest. However, research has shown that the presence of external blockholders can effectively mitigate earnings manipulation in publicly traded companies, reducing the likelihood of overvaluation during seasoned equity offerings (SEOs).

Therefore, investors are advised to favor corporations that incorporate external blockholders in their capital structure when participating in SEOs (Maatougui & Halioui, 2019).

In summary, while the immediate control by major shareholders can enable swift adaptation to market changes and enhance decision-making efficiency, the potential negative ramifications cannot be overlooked. Long-term outright control may distort the corporate governance framework, enhance company costs, and suppress innovation and transparency, inevitably diminishing the firm's market value and competition. Therefore, to ensure the protection of all investors, especially minor shareholders, and to promote the sustainability of company governance and the firm's long-term growth, it is essential to construct and fortify company governance systems. These include systems like the independent director system and the investors' meeting structure, which curtail the misuse of outright control and augment oversight, as well as balance the habits of major shareholders. At the same time, regulatory agencies should bolster their oversight of business governance to make sure that the behavior of prominent investors is aligned with the overarching interests of the firm and all investors.

Control Variables

In examining the relationship between the shareholding proportions of major shareholders and equity costs, the analysis incorporates various control variables pertinent to the company's financial health, size, governance structure, and market perception. An outline and synthesis of these control variables:

Table 1
Variables and their Definition

Variables	Definition
CoE	Cost of capital, the dependent variable, estimated by the asset pricing model (CAPM)
TOP	The number of shares held by the largest shareholder is divided by the number of outstanding shares at the end of the year.
INST	The ratio of shares held by institutional capitalists to total shares.
TOP*INST	Interaction between Large Shareholder Ownership Ratio and institutional investor
SIZE	Measured by the natural logarithm of total assets
LEV	Total debt divided by total assets
ROA	The net profit rate of the company is equal to the net profit after tax divided by the total assets.
AGE	Firm Age (AGE) stands for the number of years given that the company's establishment.
INDEP	The Percentage of Independent Supervisors (INDEP) describes the percentage of independent supervisors on the firm's board.
GROWTH	Overall asset growth is divided by the initial overall property amount.

Growth Potential (GROWTH) is typically assessed through the growth rate of sales revenue or total assets, which depict the prospects for company expansion and market share growth. These metrics are instrumental in affecting investors' expectations regarding future

cash flows, which, in turn, impact the cost of equity. Return on Assets (ROA)serves as a measure of the company's asset profitability, calculated by the ratio of net profit to total assets. A higher ROA suggests efficient operations (Hong & Najmi, 2020), thereby diminishing the cost of equity. Leverage Ratio (LEV) is represented by the ratio of total liabilities to total assets and indicates the financial leverage and debt exposure of a company. Higher leverage may escalate the company's financial risk, potentially raising the cost of equity.

Company Dimension (SIZE) is determined by the natural logarithm of a company's total assets or operational revenues. Larger entities typically enjoy better market recognition and even more consistent performance, which reduces informational asymmetry and the price of equity. Conversely, small firms may face increased informational asymmetry and equity prices (Hong & Najmi, 2020). Firm Age (AGE) represents the duration since the company's facility. Established firms might have developed a more robust brand and reputation in the market, aiding in the reduction of investor uncertainty and risk assumption. The Percentage of Independent Directors (INDEP) indicates the share of independent directors on the business's board. The presence of independent directors is crucial in enhancing the quality of corporate governance and bolstering financier confidence, potentially lowering the cost of equity (Huang et al., 2021).

In light of the aforementioned control variables, researchers can much more accurately assess the partnership between the equity stakes held by major investors and the price of equity. As an example, enhanced developmental capabilities and asset returns might entice more capitalists, thereby reducing the cost of equity. Conversely, increased leverage and a lower percentage of independent supervisors could elevate financial and governance risks, thereby augmenting the cost of equity. In addition, the dimensions of a company's size and age, as proxies for stability and credibility, may also influence equity prices. Through meticulous control of these variables, scientists can better comprehend how the shareholding structure of major investors indirectly impacts equity costs by influencing corporate administration and financial stability. These findings are pivotal for investors who are evaluating investment dangers and for business executives who are formulating strategies and equity funding methods.

Model

In this model, it is denoted as the dependent variable, representing either the cost of equity or another value-related metric of the company. The subscript i identifies distinct observational units, such as individual companies, while t indicates the time dimension, encompassing years or quarters. The error term ε_{it} corresponds to the randomness associated with the i-th observational unit at time t, capturing the effects of factors influencing CoE_{it} that are not included in the model.

The constant term, b0, establishes the foundational level of CoE_{it} in the absence of any independent variables. Subsequently, coefficients b1 to b7 quantify the influences of institutional investor ownership (INST), independence (INDEP), firm size (SIZE), leverage (LEV), return on assets (ROA), firm age (AGE), and growth rate (GROWTH) on the dependent variable. Moreover, the model includes an interaction term—the product of TOP_{it} and $INST_{it}$—which examines the combined effect of the top management team and the proportion of institutional investor ownership that jointly affects CoE_{it}.

Finally, the summation in the equation further incorporates a summative adjustment for industry and annual fixed effects using corresponding dummy variables and year dummy variables, mitigating the potential distortions caused by static industry-specific effects and temporal trends on the dependent variable.

1. The impact of Large Shareholder Ownership Ratio on the cost of equity

$$CoE_{it}=a_0+a_1TOP_{it}+a_2SIZE_{it}+a_3LEV_{it}+a_4ROA_{it}+a_5INDEP_{it}+\sum industry+\sum year+\varepsilon_{it} \quad (2)$$

2. The relationship between institutional investor ownership and the cost of equity

$$CoE_{it}=b_0+b_1INST_{it}+b_2INDEP_{it}+b_3SIZE_{it}+b_4LEV_{it}+b_5ROA_{it}+b_6AGE_{it}+b_7GROWTH_{it}+\sum industry+\sum year+\varepsilon_{it} \quad (3)$$

3. The moderating role of institutional investors

$$CoE_{it}=b_0+b_1INST_{it}+b_2INDEP_{it}+b_3TOP_{it}*INST_{it}+b_3SIZE_{it}+b_4LEV_{it}+b_5ROA_{it}+b_6AGE_{it}+b_7GROWTH_{it}+\sum industry+\sum year+\varepsilon_{it} \quad (4)$$

Empirical Analysis

Descriptive Statistics

Table 2

Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
COE	11023	0.0916092	0.0202472	0.0192378	0.1738912
INS	11023	0.4212397	0.2384742	0.004207	0.912759
TOPP	11023	0.3467084	0.1412234	0.001643	0.8999
SIZE	11023	22.14338	1.167006	19.40757	27.547
LEV	11023	0.4073859	0.1855271	0.0070799	1.056381
ROA	11023	0.0391732	0.0716348	-1.057019	0.5415242
AGE	11023	11.81003	5.2060002	2.0310001	22.38109
GROWTH	11023	0.1984926	0.6574853	-0.9290321	24.43527
INDEP	11023	0.3730453	0.0537383	0	0.75

The descriptive statistics, as shown in Table 2., indicate an average cost of equity (CoE) is 9.16%, highlighting a notably high return expectation among investors in high-tech listed companies. This figure likely mirrors the anticipated robust growth and inherent risks associated with these sectors in China, which include information technology, biomedicine, and new energy, all marked by rapid technological innovation and significant market changes. Thus, a higher return is warranted to offset the risks associated with market and technological risks.

Secondly, the average institutional investor holding ratio (INS) and the largest shareholder's holding ratio are 42.12% and 34.67%, respectively, underscoring the substantial institutional investors and major shareholders in Chinese high-tech listed companies. Such figures suggest institutional investors' strategic pursuit of long-term investment value and innovation potential. At the same time, the higher holding ratio of the largest shareholder may reflect the influence exerted by the founders or key management team, which is crucial in sectors reliant on specialized technical expertise and strategic decision-making.

The average age is 11.81, which represents the average number of years since their inception. The considerable standard deviation highlights a wide age range among these

companies, from newly founded firms to well-established entities. The average company size (SIZE) and financial leverage (LEV) suggest a variance in the scale and financial structures among the high-tech listed companies in the sample. This variance may reflect diverse developmental and unique industrial traits. The profitability (ROA) and company growth (GROWTH) display notable fluctuations, possibly due to the distinct market opportunities and challenges encountered by high-tech enterprises. Such companies might experience rapid growth in some years while encountering stagnation or declines in others.

Empirical Test

Utilizing unbalanced panel data, this research presents the regression coefficient table presented in Table 3, conducting a thorough empirical examination to probe into factors affecting the cost of equity (COE). This exploration yielded several significant conclusions. Firstly, the proportion of shares held by institutional investors correlates significantly and negatively with the cost of equity (-0.00678***), with a statistically significant P-value ($P < 0.01$). This finding suggests that the participation of institutional investors contributes to a decrease in the company's equity cost by 0.00678 percent for each unit increase in their shareholding. This effect likely arises from enhanced governance by institutional investors, which reduces agency costs and enhances company transparency and efficiency. Thus, Hypothesis 2 is verified.

Further analysis reveals a positive correlation between the equity shares held by the largest shareholder and the cost of equity (0.00408***), also statistically significant ($P < 0.01$). H1 is verified. This implies that an incremental unit increase in the holdings of the largest shareholders may elevate the cost of equity by 0.00408 percent, possibly due to actions by the largest shareholder that favor their interests at the expense of minority shareholders, thereby escalating the risks faced by minority shareholders.

Additionally, the interaction term between characteristics of top management team characteristics (TOP_{it}) and institutional investor holdings ($INST_{it}$) significantly reduces the cost of equity (-0.00791**), with statistical significance ($P < 0.05$). This indicates that any unit alteration in this interaction leads to a 0.00791 percent reduction in the cost of equity, indicating a synergistic effect between competent management and institutional investors that can effectively lower the equity cost.H3 is verified.

In analyzing firm size (SIZE), the research indicates that larger organizations typically incur lower equity costs (-0.00093***), a finding of high statistical significance ($P < 0.001$). This observation likely stems from the greater stability in cash flows and reduced risks associated with larger entities. Financial leverage (LEV) exhibits a positive association with the cost of equity (0.00279***), which is statistically meaningful ($P < 0.01$) and corroborates the notion that increased leverage increases amplify financial risk. Return on assets (ROA) exerts a substantial negative effect on the cost of equity (-0.01225***), with a very low P-value, indicating that enhanced profitability correlates with lower cost of equity. However, the influence of firm growth (GROWTH) and the cost of equity is negligible (-0.00031), as indicated by a higher P-value ($P > 0.1$), implying that a firm's growth may have a limited effect on the cost of equity. Meanwhile, firm age (AGE) shows a positive correlation with the cost of equity (0.00109**), which is statistically significant ($P < 0.05$), potentially due to issues such as market saturation and decline in innovation capabilities faced by mature companies.

The adjusted R-squared values of 0.4669 and 0.4670, respectively, illustrate that the model accounts for approximately 46.7% of the variation in the cost of equity.

In summary, this study has identified several critical determinants affecting the cost of equity and provided valuable insights for investors, management, and policymakers. These findings enhance existing literature and support informed decision-making by various stakeholders. The analysis of P-values allows for precise evaluations of the statistical significance of the relationships between variables, thereby bolstering the reliability of the research findings. Furthermore, by analyzing and examining the impact of each unit change in institutional investor holdings, major shareholders, and the interaction term TOP_{it}*$INST_{it}$ on the cost of equity, we gain a deeper understanding of the dynamics affecting a company's financial structure and governance.

Table 3
The Relationship between Large Shareholder Ownership Ratio, Institutional Investors, and Cost of Equity

	Before the Moderating Variable		After Adding the Moderating Variable	
Variables	Coef.	p>|t|	Coef.	p>|t|
INS	-0.00678***	0.00000	-0.00385**	0.01521
TOPP	0.00408***	0.00018	0.00779***	0.00021
Interact			-0.00791**	0.03857
SIZE	-0.00093***	0.00000	-0.00090***	0.00000
LEV	0.00279***	0.00273	0.00274***	0.00330
ROA	-0.01225***	0.00000	-0.01259***	0.00000
GROWTH	-0.00031	0.13612	-0.0003	0.15436
AGE	0.00109***	0.00025	0.00109***	0.00025
INDEP	-0.00172	0.49817	-0.00167	0.50891
Intercept	0.11009***	0.00000	0.10821***	0.00000
Adjusted R^2	0.4669		0.4670	
F	32.29***		29.19***	

Note: ***Significant at the 1% level, **significant at the 5% level, *significant at the 10% level.

Robustness Test

When examining the determinants of the cost of equity (Cost of Equity), robustness testing is an essential component for verifying the reliability of findings. This research aims to solidify the robustness of the existing design by integrating a series of brand-new control variables. In this process, we have thoroughly selected variables pertaining to the price of equity based on extensive literature and prior studies to ensure the comprehensiveness and depth of our analysis. Company dimension (SIZE), economic utilize (LEV), return on assets (ROA), development rate (DEVELOPMENT), and firm age (AGE) provide a robust statistical foundation and serve as fundamental controls. These variables are instrumental in evaluating the effect of large investor possession proportion and institutional investor participation holdings on the price of equity.

To augment the model's explanatory capacity and robustness, we have integrated Tobin's Q ratio as a proxy for the market evaluation of a company, revealing the market's expectations regarding a firm's growth prospects. The inclusion of Tobin's Q aims to offer a fresh lens through which to analyze the expense of equity, capturing the collective expectations of the market concerning future profitability. On top of that, a firm's financial stability, as a vital sign, has been incorporated into the design. Corporations experiencing losses typically come with greater financial dangers, potentially exerting a substantial influence on investor risk assessments and the determination of the expense of equity. The book-to-market proportion, one more essential control variable, mirrors investors' assumptions of the company's future success.

Regarding corporate governance structure, the role of executive compensation must not be overlooked. Executive compensation not only mirrors the managerial incentive framework but also correlates significantly with business monetary choices and risk-taking, influencing the cost of equity. This study introduces control variables such as Tobin's Q, monetary health and wellness, book-to-market proportion, and executive settlement to precisely gauge the security of the coefficients and relevance degrees of the main informative variables. The inclusion of these variables not only amplifies the model's sensitivity evaluation to different variable settings but also strengthens empirical outcomes. The results are received in Table 4. Despite similar findings in Tables 3, Theories 1,2, and 3 are reaffirmed.

Table 4
Robustness Test Results

	Before the Moderating Variable		After Adding the Moderating Variable	
Variables	Coef.	p>|t|	Coef.	p>|t|
INS	-0.00637***	0.0000	-0.00282*	0.08028
TOPP	0.00378***	0.00062	0.00826***	0.0001
interact			-0.00957**	0.01319
SIZE	-0.00078***	0.00019	-0.00075***	0.00036
LEV	0.00252***	0.00746	0.00245***	0.00925
ROA	-0.01725***	0.0000	-0.01757***	0.0000
GROWTH	-0.00032	0.14683	-0.0003	0.16889
AGE	0.00108***	0.00035	0.00108***	0.00034
INDEP	-0.00199	0.43502	-0.00193	0.44989
Loss	-0.00278***	0.00001	-0.00274***	0.00001
TobinQ	-0.00068***	0.0000	-0.00069***	0.0000
BM	-0.00315***	0.00382	-0.00319***	0.0034
lnSAL	-0.00065***	0.00704	-0.00065***	0.00685
Intercept	0.12066***	0.0000	0.11845***	0.0000
Adjusted R^2	0.4732		0.4735	
F	27.06		25.46	

Note: ***Significant at the 1% level, **significant at the 5% level, *significant at the 10% level.

Conclusion

Theoretically, the study advances our knowledge of the intricate interplay between shareholder behavior, corporate governance, and innovation dynamics within the high-tech sector. By emphasizing the significance of long-term value creation through innovation, the research challenges traditional finance theories that primarily focus on shareholder wealth maximization through short-term financial metrics such as dividend payments and capital gains. This balance between short-term profitability and long-term strategic investments in R&D and market expansion is crucial for high-tech firms operating in rapidly evolving and highly competitive environments.

Furthermore, the study sheds light on the role of corporate governance structures in managing risks associated with high-tech equity investments. The findings indicate that while dominant shareholders can positively contribute to governance by providing oversight and strategic direction, excessive control can lead to agency problems and increased equity costs. Conversely, institutional investors, leveraging their professional capabilities and information advantages, can mitigate these risks and reduce equity costs through effective monitoring and engagement. This research contributes to the corporate governance literature by demonstrating the differential impacts of various shareholder types on firm performance and the cost of equity.

In terms of background, the study contextualizes China's high-tech sector within the broader framework of emerging market finance. China's high-tech industry has been a pivotal driver of the country's economic growth, supported by government policies, venture capital, and a thriving entrepreneurial ecosystem. However, the unique challenges and opportunities faced by firms in this sector, such as the necessity for continuous innovation, the importance of intellectual property protection, and the government's role in technology development, have often been overlooked in general finance literature. This study addresses this gap by providing a detailed analysis of the regulatory environment, capital market dynamics, and investor behavior specific to China's high-tech sector.

Moreover, the existing body of knowledge on equity cost determinants has largely been based on studies conducted in developed markets. While these studies have offered valuable insights into general finance and investment principles, they may not fully capture the nuances and specificities of emerging markets like China. By focusing on China's high-tech sector, this study significantly enhances our understanding of equity costs in diverse market contexts, revealing how factors such as shareholder behavior, corporate governance, market dynamics, and information asymmetry interact to shape equity costs in this unique sector. This finding underscores the importance of context-specific research in finance, which takes into account the unique characteristics of different markets and sectors.

The findings of this study have crucial implications for policymakers, investors, and corporate managers. For policymakers, the research emphasizes the need for regulatory frameworks that promote transparency, fairness, and the active participation of institutional investors in corporate governance. Policies aimed at protecting minority shareholders and encouraging long-term investment can help reduce equity costs and enhance the financial health of high-tech firms. For investors, the study provides insights into the risks and rewards associated with investing in China's high-tech sector, highlighting the importance of considering a firm's

ownership structure and governance quality when making investment decisions. For corporate managers, the study offers guidance on balancing short-term profitability with long-term innovation and engaging with different types of shareholders to minimize equity costs and maximize shareholder value.

While this study has made significant contributions to the field, it acknowledges its limitations and suggests avenues for future research. Future studies could expand the analysis to other emerging markets to explore similar relationships in different industry settings. Additionally, a more detailed examination of the heterogeneity among institutional investors and their specific roles in corporate governance could provide further insights into the mechanisms through which they influence equity costs. Furthermore, considering the dynamic nature of the high-tech sector, longitudinal studies tracking the evolution of equity costs over time in response to changes in shareholder structure, corporate governance, and market conditions could be particularly valuable.

In summary, this academic paper not only deepens our understanding of the determinants of equity costs in China's high-tech sector but also emphasizes the importance of considering the unique characteristics of emerging markets in financial research and practice. The findings and recommendations presented in this study are expected to guide policymakers, investors, and corporate managers in making more informed decisions and contribute to the sustainable development of the capital market in China and beyond.

References

Maatougui, A. J., & Halioui, K. (2019). The effect of outside blockholders on earnings management around seasoned equity offerings in French listed companies on the SBF120. Journal of Financial Reporting and Accounting, 17 (3), 449-467. https://doi.org/10.1108/jfra-02-2018-0012.

Diab, A., Abdelazim, S. I., & Metwally, A. B. M. (2021). The impact of institutional ownership on the value relevance of accounting information: evidence from Egypt. Journal of Financial Reporting and Accounting, 21 (3), 509-525. https://doi.org/10.1108/jfra-05-2021-0130.

Jalil, A. A., & Rahman, A. (2010). Institutional investors and earnings management: Malaysian evidence. Journal of Financial Reporting and Accounting, 8 (2), 110-127. https://doi.org/10.1108/19852511011088370.

Saci, F. (2021). Does the research done by the institutional investors affect the cost of equity capital? Finance Research Letters, 41 (0), 101834-101834. https://doi.org/10.1016/j.frl.2020.101834.

Gao, H., Shen, Z., Li, Y., Mao, X., & Shi, Y. (2019). Institutional Investors, Real Earnings Management and Cost of Equity: Evidence from Listed High-tech Firms in China. Emerging Markets Finance and Trade, 56, 3490 - 3506. https://doi.org/10.1080/1540496X.2019.1650348.

Gao, Y., Wang, Y., Wang, C., & Liu, C. (2018). Internet attention and information asymmetry: Evidence from Qihoo 360 search data on the Chinese stock market. Physica A: Statistical Mechanics and its Applications. https://doi.org/10.1016/J.PHYSA.2018.07.016.

Gormsen, N. (2020). Expected Stock Returns and Firms' Perceived Cost of Capital. Capital Markets: Asset Pricing & Valuation journal. https://doi.org/10.2139/ssrn.3712699.

Boshnak, A. (2023). Ownership structure and firm performance: evidence from Saudi Arabia. Journal of Financial Reporting and Accounting, 25 (4), 106-127. https://doi.org/10.1108/jfra-11-2022-0422.

Hong, S., & Najmi, H. (2020). The Relationships between Supply Chain Capability and Shareholder Value Using Financial Performance Indicators. Sustainability. https://doi.org/10.20944/preprints202003.0074.v1.

Huang, H., Wang, C., Xie, H., & Zhou, J. (2021). Independent Director Attention and the Cost of Equity Capital. Financial Accounting journal. https://doi.org/10.1111/JBFA.12522.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. Journal of Financial Economics, 3(4), 305-360.https://doi.org/10.1016/0304-405x(76)90026-x.

Lee, S. (2015). Ownership Structure and Capital Structure Decision. Mathematical Models and Methods in Applied Sciences, 9, 264. https://doi.org/10.5539/MAS.V9N4P264.

Alhadab, M., Israa, A. (2020). Mansour. Related party transactions and earnings management in Jordan: the role of ownership structure. Journal of Financial Reporting and Accounting.18 (3):505-531. doi:10.1108/jfra-01-2019-0014.

Farooq, M., & Noor, A. (2023). The impact of corporate social responsibility on financial constraints: the role of insider and institutional ownership. Journal of Financial Reporting and Accounting, 41 (9), 29-41. https://doi.org/10.1108/jfra-10-2022-0368.

Arthur, N., Chen, H., & Tang, Q. (2019). Corporate ownership concentration and financial reporting quality. Journal of Financial Reporting and Accounting, 17 (1), 104-132. https://doi.org/10.1108/jfra-07-2017-0051

Zouari-Hadiji, R., & Chouaibi, Y. (2021). Corporate ethical behavior and the cost of equity capital: evidence from the world's most ethical companies. Journal of Financial Reporting and Accounting, 19 (5), 939-964. https://doi.org/10.1108/jfra-08-2020-0223.

Takouachet, R. (2020). Capital asset pricing model. Finance and Business Economies Review. https://doi.org/10.58205/fber.v4i1.645.

Waheed, A., & Malik, Q. (2019). The Impact of Institutional Investment Horizon on Corporate Governance and Firm Performance. JISR management and social sciences & economics. https://doi.org/10.31384/jisrmsse/2019.17.2.14.

Wan, H., Peng, Q., & Zhong, X. (2021). Too much of a good thing? The nonlinear influence of noncontrolling large shareholders on corporate innovation. European Journal of Innovation Management. https://doi.org/10.1108/ejim-06-2021-0283.

Wang, Y. (2019). Regression Analysis of Executive Shareholding and Corporate Earnings Management. 2019 International Conference on Economic Management and Model Engineering (ICEMME), 415-420. https://doi.org/10.1109/ICEMME49371.2019.00090.

Xiaona, L. (2020). Regression Model Analysis of Tax Preferential Policies for Promoting High-tech Enterprises. 2020 Management Science Informatization and Economic Innovation Development Conference (MSIEID), 231-234. https://doi.org/10.1109/MSIEID52046.2020.00048.

Feng, Y., Hassan, A., & Elamer, A. (2020). Corporate governance, ownership structure and capital structure: evidence from Chinese real estate listed companies. International Journal of Accounting and Information Management, 28 (4), 759-783. https://doi.org/10.1108/ijaim-04-2020-0042.

Long, Y., & Huang, X. (2020). Do equity incentives for the managements have impact on stock-pricing efficiency? Evidence from China. International Journal of Accounting and

Information Management, 28 (4), 703-715. https://doi.org/10.1108/ijaim-03-2020-0031.

Wang, Y. (2019). The Evolutionary Analysis on the Expropriation of Large Shareholders on Minority Shareholders. Lecture notes in electrical engineering, 33 (6), 1298-1305. https://doi.org/10.1007/978-981-13-3648-5169.