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Organization Capital and Corporate Financialization: Evidence From China

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ABSTRACT
This paper investigates the impact of organization capital on corporate financialization. Based on the data of Chinese A-share listed firms from 2014 to 2020, we find that organization capital is positively related to corporate financialization. After a series of robustness tests and endogeneity tests, the conclusion still holds. We further find that agency theory is the potential channel driving our findings. Precautionary savings theory, executive overconfidence theory and resource-based theory do not hold in our study. Furthermore, we find that the positive effect of organization capital on corporate financialization is stronger when firms are hit by severe external natural disasters shocks.
JEL Classification: E22, G30, G32

1 | Introduction

Corporate financialization, from a portfolio perspective, refers to the behavior of firms in allocating more resources to financial assets. The prevailing view is that the appropriate holding of financial assets by firms serves as a liquidity reserve and reduces the probability of firms falling into financial distress (Davis 2017). However, in a resource-limited context, the continued expansion of financial investment by firms will not only crowd out real investment and increase the vulnerability of the real economy (Orhangazi 2008; Tori and Onaran 2018), and will also increase the linkage between firms and the financial market, leading to excessive risk-taking and speculation, and ultimately to financial instability and crises (Zhang, Su, and Tong 2023). After the financial crisis in 2008, the phenomenon of corporate financialization has received widespread attention in the academic community, and scholars have begun to explore the causes of corporate financialization and put forward a number of governance proposals (Jiang, Shen, and Cai 2022). However, WIND data show that more and more listed

companies in China are buying various financial products, including stocks, bonds, and trust loans. By 2021, 1282 listed companies purchased financial products amounting to 1.33 trillion yuan, the trend of corporate financialization remains evident (Li and Shen 2023). Current arguments about the causes of corporate financialization include precautionary savings and speculative arbitrage (Liu and Lv 2023; Tang and Zhang 2019). Based on these perspectives, scholars have investigated the impact of external policy environment, financing environment and internal governance structure on corporate financialization (Cao and Li 2022; Li and Zhang 2023; Zhao and Su 2022). However, no study has yet explored whether organization capital affects corporate financialization.

Existing research typically defines organization capital as "the collection of corporate practices, processes, design, and culture that enables firms to consistently and efficiently combine human skills and physical capital into efficient production systems" (Hasan and Cheung 2018; Marwick, Hasan, and Luo 2020). Studies show that owners receive more than one-third of the

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returns from organization capital as they do from physical capital, net of new investment, and more than 40% of payments on all intangible assets in the U.S. National Income and Product Accounts (Atkeson and Kehoe 2005). Existing research further confirms that organization capital plays a positive role in improving business performance, fostering innovation, and driving firms towards growth and maturity (Francis et al. 2021; Hasan and Cheung 2018; Tronconi and Vittucci Marzetti 2011). However, there is an opposing view that the intangible nature of organization capital and the fact that it is partially attached to key talents make it difficult to use as collateral for bank loans, thus exacerbating corporate financing constraints (Falato et al. 2022). And there will also be serious agency problems arising from the misalignment of the interests of key talents and shareholders (Boubaker, Hasan, and Habib 2022). Overall, organization capital can play a role in firms' performance, difficulty in raising finance and level of governance, which will further influence firms' financial investment decisions, and thus we expect a link between organization capital and corporate financialization, which has not yet been answered by existing research.

In reality, Apple's corporate culture and its advanced product development system are typical of organization capital. At the same time, studies have pointed out that the company holds $121 billion, or 70% of its book assets, in financial assets, placing it among the largest hedge funds in the world (Duchin et al. 2017). Qingdao Haier has established a set of innovative training system based on talent demand and job characteristics, and developed a number of information systems including "10+N", "HOPE", "UHomeOS", etc., thus building the firm's organization capital. At the same time, Qingdao Haier's financial statement data show that in 2020, the firm's financial assets amounted to nearly 73 billion yuan, accounting for 35.3% of total assets, which is higher than the average value of all firms (28.7%).[1] Do firms with high organization capital also have high levels of corporate financialization? We try to answer this question.

We first analyze the possible impact of organization capital on the corporate financialization and propose two competing hypotheses based on resource-based theory and agency theory. Second, based on data of Chinese A-share listed firms from 2014 to 2020, we find that organization capital is positively related to corporate financialization, and the results are robust when replacing the coverage of financial assets, the way of measuring corporate financialization, and changing the model specification. For possible two-way causation problems, we re-estimated using a two-stage least squares approach, and the results remain robust after accounting for endogeneity problems. Subsequently, in our mechanism analysis, we find that the organization capital regression coefficients are significantly positive only within the high-agency problem group, but not within the low-agency problem group, thus confirming that agency theory is a potential channel to drive organization capital to positively influence the corporate financialization. Considering that the positive effect of organization capital on the corporate financialization may also be explained by the precautionary savings theory and the executive overconfidence theory, we tested and excluded these two theories. In addition, although the idea that organization capital negatively affects corporate financialization based on

resource-based theory is not supported by the results of the basic regressions, it has been suggested that the mere possession of valuable resources is a necessary but not sufficient condition for value creation, and that the value-creating function of organization capital is partly dependent on the firm's external environment (Sirmon, Hitt, and Ireland 2007). Thus, the resource-based theory may only hold true in the context of a particular firm's external environment. For this reason, we further divided the sample according to the firm's external environment, however, the grouping results still did not find evidence to support the resource-based theory.

In addition, most of the existing research on the economic consequences of organization capital has been limited to internal firms, with less attention paid to the impact of external natural disaster shocks on the economic consequences of organization capital. Since firms do not operate independently of their environments, considering the moderating role of external natural disaster shocks in the impact of organization capital on corporate financialization in additional analyses would not only help to improve our understanding of the economic consequences of organization capital, but also deepen the current research on the impact of natural disasters. In recent years, a series of natural disaster events, including hurricanes, extreme rainfall, and flooding, have caused a series of serious negative impacts on firms and have become environmental risk factors that cannot be ignored in the decision-making process (Aretz, Banerjee, and Pryshchepa 2019; Dessaint and Matray 2017; Rao et al. 2022). Natural disasters can cause direct damage to firm's production and infrastructure, and firms that do not actively manage disaster risk will also receive lower valuations in capital markets and increase the risk of bankruptcy (Feng et al. 2024; Li et al. 2024). On the contrary, firms that cope with the risk by reducing tax avoidance and establishing good relations with the government after a disaster can obtain more lenient environmental regulatory conditions (Xu and Ren 2024). Thus, the management of natural disaster risk is crucial for firms. Theoretically, high organization capital firms with a high proportion of intangible assets are relatively less exposed to direct damage from natural disasters, and thus natural disasters will likely not significantly alter firms' financial investment decisions. However, given that a portion of organization capital is embodied in key talents, managers' perceptions of risk may prompt them to adjust their allocation behavior on different risky assets (Dessaint and Matray 2017), which could have an impact on corporate financial investments. For this reason, we further explore the moderating effect of natural disasters at the end of the article, and show that natural disaster shocks reinforce the positive relationship between organization capital and corporate financialization.

This paper contributes to existing research in three main ways. First, the paper contributes to the literature exploring the drivers of corporate financialization. Existing studies have explored corporate financialization based on the precautionary savings motive and the speculative arbitrage motive in terms of the economic environment, economic policies and social norms at the macro level, and corporate equity structure, corporate business model and technology application at the micro level (Feng et al. 2022; Hu, Yu, and Wang 2023; Huang, Luo, and Peng 2021; Li and Zhang 2023; Xue et al. 2023; Zhang, Su, and Tong 2023). Starting with organization capital, we investigate the impact of

the construction of firms' strategic resources on corporate financialization, and show that firms with more organization capital tend to allocate more financial assets because they have more severe agency problems. Our study deepens the understanding of corporate financialization and adds new explanations of its drivers. Second, this paper contributes to the literature on the economic consequences of organization capital. Existing studies have explored the impact of organization capital on various aspects of firm performance, payment decisions and cash holdings (Hasan and Uddin 2022; Li, Qiu, and Shen 2018; Li and Wu 2021; Marwick, Hasan, and Luo 2020). However, the extent to which organization capital will influence firms' financial investment decisions is unclear. Our study enriches the literature on the economic consequences of organization capital from a corporate investment perspective, thereby deepening the understanding of organization capital. Third, this paper enriches the firm-level natural disaster impact literature. Most of the existing research discusses how natural disasters reduce firms' profits and value and how they lead to collateral depreciation and thus make it more difficult for firms to borrow money, in terms of severe damage to physical assets (Brown, Gustafson, and Ivanov 2021; Hsu et al. 2018; Rao et al. 2022). This paper shows that natural disasters can have a significant impact on investment decisions even for firms with mainly intangible assets, thus demonstrating the wide-ranging impact of natural disasters on firms.

The remainder of the paper is organized as follows. Section 2 presents the literature review and hypothesis development. Section 3 presents the research design. Section 4 presents the empirical results. Section 5 is the additional analysis. Section 6 is the conclusion.

2 | Literature Review and Hypothesis Development

2.1 | Literature Review

2.1.1 | Corporate Financialization

Corporate financialization refers to the process by which firms continue to withdraw resources from the real sector and invest them in the financial sector, often accompanied by a decline in capital accumulation (Davis 2017). This shift in corporate behavior leads to the problem of 'industrial hollowing out' and the accumulation of large financial risks within the real sector. Following the financial crisis in 2008, a wave of research on corporate financialization began to emerge. Existing research has generally concluded that the motives for corporate financialization mainly include precautionary savings and speculative arbitrage (Liu and Lv 2023; Zhao and Su 2022).

Under the precautionary savings motive, the corporate financialization is primarily aimed at alleviating external financing pressures and hedging against the risk of potential cash flow volatility. Traditionally, research on precautionary savings motives has been mostly related to cash holdings, but scholars have come to realize that in addition to cash, firms invest heavily in risky financial assets such as bonds, equities, and options and futures as liquidity reserves (Duchin et al. 2017). When external financing is more difficult or the risk of cash flow volatility

is higher, firms can alleviate the financing pressure and reduce the capital risk by liquidating financial assets or utilizing the proceeds of financial investments. In this view, scholars have found that digital transformation improves the ability of firms to raise external finance, thereby reducing the corporate financialization (Zhang, Su, and Tong 2023). The VAT reform has had a negative impact on the corporate financialization by reducing the need for liquidity to avoid business risks (Li and Shen 2023). China's low-carbon pilot policy has led to increased volatility of firms' earnings, which in turn has prompted firms to increase their financial investments (Liu and Lv 2023). Increased economic policy uncertainty raises the external environmental risks faced by firms, which likewise promotes corporate financialization (Zhao and Su 2022).

Under the speculative arbitrage motive, the declining returns on real investments and management opportunism due to agency problems are at the root of the corporate financialization. According to portfolio theory, when returns on real investments decline, firms will seek higher returns by investing more in the financial sector (Chen et al. 2023; Orhangazi 2008). Demir (2009) shows that the return gap between financial and fixed investment is an important driver of the corporate financialization in the countries of Argentina, Mexico and Turkey. Proponents of agency theory argue that agency problems lead to the emergence of short-sighted investment behavior by managers, which induces corporate financialization (Tang and Zhang 2019). Duchin et al. (2017) found that managers may derive private benefits from high-risk investments, and therefore firms with poor corporate governance will invest in more financial assets. Feng et al. (2022) found that business diversification may exacerbate agency problems, reduce investment efficiency, and increase operational risk, so managers have incentives to mask this negative information through financial investments. In contrast, executive equity incentives, non-controlling large shareholders, and multiple blockholders are effective in mitigating agency problems and reducing corporate financialization (Chen et al. 2023; Jiang, Shen, and Cai 2022; Li and Zhang 2023).

2.1.2 | Organization Capital

Organization capital has two key characteristics: (1) it is partly firm-specific, such as the corporate culture, the firm's unique business processes, employee recruitment and training, and employee incentive programs, and (2) it is partly attached to the key talents of the firm, embodied in key labor inputs such as managers, engineers, salespeople, researchers, etc., and can be mobilized between firms (Eisfeldt and Papanikolaou 2014; Francis et al. 2021). These characteristics of organization capital make its impact on firms both positive and negative.

Research on the negative impact of organization capital is largely based on an agency theory view. The fact that organization capital is partly embodied in key talent gives both shareholders and key talent a claim to the cash flows generated by organization capital, which creates a serious agency problem (Eisfeldt and Papanikolaou 2013). Leung et al. (2018) found that increased external options for key talent force firms to pay higher compensation for retaining key talent, which consequently reduces the share of cash flow available to shareholders and increases

shareholder risk. Mishra (2014) suggests that CEOs with strong general management skills as the core of organization capital will lead to serious agency problems, manifested in a preference for investing in riskier projects with better short-term performance. And to reduce agency problems between key talent and shareholders, firms with high organization capital tend to increase dividend payments or adopt tournament incentives to discipline managers (Boubaker, Hasan, and Habib 2022; Hasan and Uddin 2022).

Research on the positive impact of organization capital is largely based on the resource-based theory view. Organization capital is a body of knowledge about business practices, processes, design and culture that is firm-specific and difficult for competitors to imitate or substitute, so that firms can derive sustained competitive advantage from it and create higher product value relative to other firms (Hasan and Cheung 2018; Nadeem et al. 2021). Numerous studies confirm that organization capital as an important strategic resource has a range of positive impacts. For example, studies have shown that organization capital increases a firm's own output and has positive spillovers to the output of other firms (Li and Wu 2021), fosters firm innovation (Francis et al. 2021; Nadeem et al. 2021), improves productivity and consequently reduces performance incentives for executives (Gao, Leung, and Qiu 2021), creates better performance in mergers and acquisitions (Li, Qiu, and Shen 2018), helps firms to avoid taxes and leads to value enhancement (Hasan, Lobo, and Qiu 2021).

In summary, organization capital may bring positive economic benefits to firms or exacerbate their agency problems. Combined with research on corporate financialization, it is clear that improved economic benefits or exacerbated agency problems will affect the financial investment decisions of firms. We therefore expect organization capital to have an impact on the corporate financialization.

2.2 | Hypothesis Development

Based on agency theory, we argue that organization capital promotes the corporate financialization by exacerbating their agency problems. Managerial myopia driven by agency problems has been shown to be a major contributing factor to the corporate financialization (Tang and Zhang 2019). High organization capital firms tend to have serious agency problems because key talent can share the cash flows generated by organization capital with shareholders (Eisfeldt and Papanikolaou 2013). In order to maximize their own interests, key talents are more willing to invest in short-term projects with high rates of return for quick gains than longer capital investments, and the short-cycle and high-return nature of financial investments meets this investment demand (Mishra 2014). Moreover, key talent in firms with higher levels of organization capital has an incentive to over-invest in organization capital and other items to further improve their external options and thus require higher salaries (Hasan and Uddin 2022). They have an incentive to retain a large amount of liquidity within the firm in order to successfully carry out over-investment activities in their favor (Jensen 1986; Richardson 2006). Financial assets are both liquid and

yielding, not only revitalizing cash but also generating additional cash flow income, thus meeting the funding needs of key talent for expansion investments. In addition, key talent in organization capital will increase financial investment to cover up negative information, including agency problems (Feng et al. 2022). The existence of agency problems reduces the efficiency of internal capital allocation and worsens corporate performance. As the performance appraisal of key talent is mostly linked to the performance of the enterprise, in order to cover up the negative economic consequences caused by the agency problem, key talent have the incentive to use the high return of financial investment to disguise their performance. We therefore expect that firms with high organization capital also have higher levels of corporate financialization. Based on agency theory, we propose the following hypothesis:

H1a. : Organization capital is positively related to corporate financialization.

Based on resource-based theory, we argue that organization capital reduces the corporate financialization by increasing firms' cash flows, lowering financing constraints, and increasing returns on physical investments. Firstly, in terms of the precautionary savings motive for corporate financialization, firms facing higher financing constraints or cash flow uncertainty tend to increase their financial investments as a liquidity reserve in order to cope with the risk of a potential shortage of funds or a break in the financial chain (Duchin et al. 2017). Lim, Macias, and Moeller (2020) found that identifiable and valuable organization capital helps firms to generate cash flow, which facilitates access to debt financing support. Danielova et al. (2023) also found that a range of positive impacts such as improved performance generated by organization capital reduces the cost of bank loans. Organization capital can therefore reduce the corporate financialization by increasing firms' cash flows and reducing the cost of finance in a way that weakens firms' precautionary saving incentives. Secondly, from the perspective of speculative arbitrage motives for corporate financialization, when real investment returns perform poorly, firms will increase the allocation of financial assets in their portfolios for the purpose of maximizing returns (Demir 2009). Organization capital as a strategic resource helps firms to build unique competitive advantages, increase productivity and bring better performance to the firm (Hasan, Lobo, and Qiu 2021; Li and Wu 2021). Organization capital can therefore reduce the corporate financialization by improving the effectiveness of physical investment. Based on the resource-based theory, we propose the following hypothesis:

H1b. : Organization capital is negatively related to corporate financialization.

3 | Research Design

3.1 | Sample Selection

This paper selects all A-share listed firms in China from 2014 to 2020 as the research sample.[2] Data processing consists of the following aspects: (1) excluding firms in the financial and real estate industries; (2) excluding firms that have been ST and PT;

and (3) excluding firms with missing data. To reduce the influence of outliers, all continuous variables are winsorized at the 1% level on both sides. The data come from the CSMAR database and Wind financial database.

3.2 | Variable Measurement

3.2.1 | Dependent Variable: Corporate Financialization

We define corporate financialization as the expansion behavior of corporate financial investment activities. The "financial assets/total assets" index used in previous studies can only reflect the static level of corporate financial asset allocation, but cannot reflect the dynamic adjustment process of corporate financial investment (Demir 2009). Therefore, we use the change of the ratio of financial assets to total assets to measure corporate financialization, and the measurement method is "current financial assets/total assets - previous financial assets/total assets". Reference to previous studies (Zhang, Su, and Tong 2023; Zhao and Su 2022), the financial assets used in our study include the following subjects: monetary funds, marketable financial assets, available-for-sale financial assets, other debt investments, other equity investments, held-to-maturity investments, debt investments, bought-back financial assets, issuing loans and advances, derivative financial assets, long-term equity investments, and real estate investments.

3.2.2 | Independent Variable: Organization Capital

Based on existing studies (Cui, Dai, and Zhang 2021; Eisfeldt and Papanikolaou 2013), we use the perpetual inventory method to measure organization capital.

$$OC_{it} = (1 - \delta_0)OC_{it-1} + \frac{SA_{it}}{cpi_t} \quad (1)$$

OC_{it} denotes firm-specific organization capital at the end of year t. δ_0 denotes the depreciation rate of organization capital, following (Eisfeldt and Papanikolaou 2013), we choose δ_0 to be 15%. cpi_t is the consumer price index at the end of the year t. SA_{it} denotes the selling and administrative expenses at the end of the year t. We calculate the beginning year organization capital by deflating SA_1:

$$OC_0 = \frac{SA_1}{g + \delta_0} \quad (2)$$

OC_0 denotes the initial value of organization capital. g denotes the annual arithmetic average growth rate of SA at the company level. After calculating the initial value of organization capital, the annual firm-specific organization capital is obtained by recursion.

3.2.3 | Control Variables

Referring to existing studies (Jiang, Shen, and Cai 2022; Liu and Lv 2023; Zhang, Su, and Tong 2023), We choose the following control variables: Size is the natural logarithm of total firm assets plus one; ROA is the ratio of net profit to total assets; Age is the natural logarithm of the number of years the enterprise has been listed plus one; Lev is the ratio of total liabilities to total assets; Tobinq is the ratio of total market value to total assets; SOE is the nature of equity, if the firm is state-owned, the value is 1, otherwise the value is 0; Board is the size of the board of directors, measured as the natural logarithm of the number of board members plus one; Growth is the growth rate of operating revenue, measured as the ratio of the annual change in a firm's operating revenue to its previous year's operating revenue; Top is the percentage of shares held by the first largest shareholder; Dual is a dummy variable, if the CEO is also the chairman of the board, the value is 1, otherwise the value is 0. See Appendix for a list of variable definitions.

3.3 | Basic Regression Models

In order to test the relationship between organization capital and corporate financialization, we estimate model (3),

$$Fin_{it} = \alpha_0 + \alpha_1 OC_{it-1} + \alpha_2 \sum Controls_{it-1} + Industry + Year + \varepsilon_{it} \quad (3)$$

Fin_{it} denotes corporate financialization at the end of year t. OC_{it-1} denotes firm-specific organization capital at the end of year $t-1$. $Controls_{it-1}$ denotes a series of control variables at the end of year $t-1$, and ε_{it} denotes the error term. Both industry fixed effects and year fixed effects are added to the model to control for unobservable heterogeneity. All regression standard errors are clustered at the firm level.

4 | Empirical Results

4.1 | Descriptive Statistics and Correlation

Table 1 gives descriptive statistics of the main variables used in the study. The results show that the mean value of Fin is 0.004 during the sample period, which shows that the amount of change in the share of financial assets in total assets is 0.4% on average, indicating that the level of corporate financialization of Chinese A-share listed companies has been increasing. Moreover, the mean of Fin is higher (0.004) than the median (0.002), suggesting that the excessive level of financialization of a few firms is pulling up the mean of corporate financialization as a whole. The mean value of OC is 0.153, which shows that on average, organization capital accounts for 15.3% of the total assets, thus indicating the importance of organization capital for the firm. The 25% quantile and 75% quantile values of OC are 0.055 and 0.197, indicating that the level of organization capital of the majority of firms is around 5–20%, thus suggesting that organization capital investment is universal for firms. The statistical results of the control variables are basically consistent with previous studies. Specifically, the mean of Size is 22.253, the mean of ROA is 3.9%, the mean of Age is 2.137, the mean of Lev is 40.8%, the mean of Tobinq is 2.118, the mean of Board is 2.231, the mean of Growth is 16.1%, and the mean of Top is 0.341.

TABLE 1 | Descriptive statistics. This table shows the descriptive statistics of the main variables used in the study.

Variables	N	Mean	sd	Min	p25	P50	p75	Max
Fin	17,060	0.004	0.084	−0.241	−0.036	0.002	0.041	0.289
OC	17,060	0.153	0.148	0.006	0.055	0.108	0.197	0.804
Size	17,060	22.253	1.242	20.058	21.361	22.092	22.952	26.135
ROA	17,060	0.039	0.060	−0.261	0.016	0.038	0.068	0.194
Age	17,060	2.137	0.794	0.000	1.609	2.197	2.890	3.434
Lev	17,060	0.408	0.190	0.061	0.256	0.402	0.549	0.849
Tobinq	17,060	2.118	1.349	0.853	1.276	1.695	2.433	8.733
SOE	17,060	0.328	0.469	0	0	0	1	1
Board	17,060	2.231	0.179	0.000	2.079	2.303	2.303	2.944
Growth	17,060	0.161	0.387	−0.534	−0.023	0.097	0.251	2.414
Top	17,060	0.341	0.143	0.093	0.231	0.321	0.434	0.731
Dual	17,060	0.293	0.455	0	0	0	1	1

Table 2 reports the Pearson correlation coefficients between the main variables. The results show that the correlation coefficients between the variables are small, thus ruling out the possibility of multicollinearity. The correlation coefficient between corporate financialization and organization capital is 0.022 and significant, implying that organization capital may be positively correlated with corporate financialization.

4.2 | Basic Regression Results

Table 3 reports the results of the basic regressions testing the relationship between organization capital and corporate financialization, where columns (1) and (2) are the results of the OLS regressions, and columns (3) and (4) are the results of the regressions controlling for industry and year fixed effects. We find that the coefficients on organization capital are all significantly positive, supporting hypothesis H1a and suggesting that firms with higher organization capital also have higher levels of financialization. The coefficients on the control variables show that Age and Lev are positively associated with corporate financialization, indicating that the longer a firm has been listed and the higher its leverage, the more it prefers financial investment. In contrast, the Dual is negatively related to corporate financialization, indicating that when the CEO is also the chairman of the board of directors, the level of corporate financialization can be reduced.

4.3 | Robustness and Endogeneity

4.3.1 | Changing the Scope of Coverage of Financial Assets

Zhao and Su (2022) point out that long-term equity investment may be a strategic behavior serving the long-term development of the firm, which is different from general financial investment.

Referring to their approach, we exclude long-term equity investments to obtain a new measure of corporate financialization (Fin1) and regress the model. Columns (1) of Table 4 report the results of the basic regressions after replacing the category of financial assets, which show that the coefficients on organization capital remains significantly positive, thus proving the robustness of the previous regression results.

4.3.2 | Replacing the Measurement of Corporate Financialization

We first calculate the growth rate of firms' financial assets using logarithmic differencing as a new indicator of corporate financialization (Fin2). The measure is the natural logarithm of the size of financial assets in the current period minus the natural logarithm of the size of financial assets in the previous period. We then use the ratio of financial assets to total assets as a static indicator of corporate financialization (Fin3). Columns (2) and (3) of Table 4 report the regression results based on these two indicators. The results show that the effect of organization capital on corporate financialization remains significantly positive after replacing the measure of corporate financialization, again demonstrating the robustness of the basic regression.

4.3.3 | Changing Model Specifications

Since we use a dynamic indicator to portray the corporate financialization, in order to better capture the dynamic relationship between the variables, we try to empirically test it using a change model, regressing it again after equally differencing all the variables except the dummy variable. However, organization capital is a body of knowledge that includes corporate culture, business practices, processes and design, it is a stock concept. Only the stock of knowledge accumulated during the

TABLE 2 | Correlation analysis. This table presents the correlation matrix between the variables used in the main regression.

	Fin	OC	Size	ROA	Age	Lev	Tobinq	SOE	Board	Growth	Top	Dual
Fin	1											
OC	0.022***	1										
Size	0.005	−0.282***	1									
ROA	0.007	0.134***	−0.006	1								
Age	0.027***	−0.181***	0.459***	−0.170***	1							
Lev	0.013*	−0.188***	0.510***	−0.339***	0.297***	1						
Tobinq	−0.007	0.239***	−0.394***	0.194***	−0.089***	−0.306***	1					
SOE	0.013	−0.068***	0.385***	−0.077***	0.484***	0.261***	−0.145***	1				
Board	0.008	−0.030***	0.276***	0.027***	0.180***	0.130***	−0.125***	0.279***	1			
Growth	0.010	−0.093***	0.026***	0.222***	−0.096***	0.023***	0.037***	−0.095***	−0.020***	1		
Top	0.003	0.051***	0.180***	0.143***	−0.053***	0.041***	−0.059***	0.226***	0.025***	−0.017**	1	
Dual	−0.017**	0.060***	−0.201***	0.034***	−0.246***	−0.116***	0.083***	−0.298***	−0.190***	0.036***	−0.038***	1

***Indicates significance at the 1% level.
**Indicates significance at the 5% levels.
*Indicates significance at the 10% level.

TABLE 3 | Organization capital and corporate financialization. This table reports the results of the OLS and FE estimates of the relationship between organization capital and corporate financialization.

Dep.Var	(1)OLS Without control Fin	(2)OLS With control Fin	(3)FE Without control Fin	(4)FE With control Fin
OC	0.012***	0.017***	0.011**	0.016***
	(0.004)	(0.004)	(0.005)	(0.005)
Size		−0.001**		−0.001
		(0.001)		(0.001)
ROA		0.020		0.015
		(0.013)		(0.013)
Age		0.004***		0.004***
		(0.001)		(0.001)
Lev		0.007*		0.011***
		(0.004)		(0.004)
Tobinq		−0.001		0.001
		(0.001)		(0.001)
SOE		−0.001		−0.000
		(0.001)		(0.001)
Board		0.001		0.002
		(0.003)		(0.003)
Growth		0.003		0.003
		(0.002)		(0.002)
Top		0.003		0.001
		(0.004)		(0.004)
Dual		−0.002*		−0.002*
		(0.001)		(0.001)
Obs.	17,060	17,060	17,060	17,060
Ind FE	NO	NO	YES	YES
Year FE	NO	NO	YES	YES
Adj. R^2	0.000	0.002	0.021	0.023

Notes: Robust standard errors clustered at the firm level. Definitions of the variables are provided in the Appendix.
***Indicates significance at the 1% level.
**Indicates significance at the 5% levels.
*Indicates significance at the 10% level.

long-term development of an enterprise and the input of new knowledge and skills as a unified whole can constitute the organization capital of an enterprise. However, since we measure organization capital using the perpetual inventory method, the difference indicator only reflects the selling and administrative expenses incurred by the firm in the current period and does not include resources accumulated in the past, so the difference indicator loses the economic meaning of organization capital. Thus, we no longer take the difference for organization capital in the change model. Columns (1) and (2) of Table 5 report the

OLS and FE regression results after changing the model specification, respectively. The results show that the organization capital coefficient remains significantly positive and the basic regression results are robust.

4.3.4 | Endogenous Problems

Considering that firms with high levels of financialization are also likely to invest more in organization capital, to mitigate the endogeneity problem caused by reverse causation, we use

TABLE 4 | Robustness tests: Replacing indicators of corporate financialization. This table shows the sensitivity of the results using alternative measure of corporate financialization.

Dep.Var	(1) Fin1	(2) Fin2	(3) Fin3
OC	0.016***	0.087***	0.086***
	(0.005)	(0.025)	(0.016)
Size	−0.001**	−0.005	0.005**
	(0.001)	(0.003)	(0.003)
ROA	0.009	0.691***	0.263***
	(0.013)	(0.072)	(0.032)
Age	0.005***	−0.021***	0.025***
	(0.001)	(0.005)	(0.004)
Lev	0.015***	0.100***	−0.236***
	(0.004)	(0.023)	(0.016)
Tobinq	0.001*	0.031***	0.011***
	(0.001)	(0.003)	(0.002)
SOE	0.001	−0.001	0.011*
	(0.001)	(0.007)	(0.006)
Board	0.002	0.008	−0.015
	(0.003)	(0.017)	(0.012)
Growth	0.003	0.071***	−0.019***
	(0.002)	(0.011)	(0.003)
Top	0.003	0.027	0.035**
	(0.004)	(0.021)	(0.016)
Dual	−0.001	−0.007	0.004
	(0.001)	(0.007)	(0.004)
Obs.	17,060	17,060	17,060
Ind FE	YES	YES	YES
Year FE	YES	YES	YES
Adj. R^2	0.026	0.040	0.226

Notes: Robust standard errors clustered at the firm level. Definitions of the variables are provided in the Appendix.
***Indicates significance at the 1% level.
**Indicates significance at the 5% levels.
*Indicates significance at the 10% level.

TABLE 5 | Robustness tests: Changing the model specification. This table shows the sensitivity of the results using a change model, where column (1) shows OLS regression results and column (2) shows FE regression results.

VARIABLES	(1) Fin	(2) Fin
OC	0.007*	0.024***
	(0.004)	(0.005)
ΔSize	0.026***	0.032***
	(0.006)	(0.006)
ΔROA	−0.012	−0.018
	(0.017)	(0.017)
ΔAge	−0.003	−0.010
	(0.007)	(0.007)
ΔLev	−0.162***	−0.167***
	(0.015)	(0.015)
ΔTobinq	0.004***	0.002*
	(0.001)	(0.001)
SOE	−0.001	0.000
	(0.001)	(0.001)
ΔBoard	0.000	−0.000
	(0.009)	(0.009)
ΔGrowth	−0.012***	−0.012***
	(0.002)	(0.002)
ΔTop	−0.012	−0.010
	(0.029)	(0.029)
Dual	0.000	−0.001
	(0.001)	(0.001)
Obs.	13,649	13,649
Ind FE	NO	YES
Year FE	NO	YES
Adj. R^2	0.024	0.042

Notes: Robust standard errors clustered at the firm level. Definitions of the variables are provided in the Appendix.
***Indicates significance at the 1% level.
**Indicates significance at the 5% levels.
*Indicates significance at the 10% level.

two-stage least squares (2SLS) approach. Referring to existing studies (Cui, Dai, and Zhang 2021; Francis et al. 2021; Hasan and Uddin 2022), we use industry growth uncertainty as an instrumental variable for organization capital. To obtain the instrumental variable, we first estimated firm-level standard deviations of quarterly asset growth rates over the previous eight quarters, and then we take the industry median of those firm-level standard deviations (Ind_Gru). Carlin, Chowdhry, and Garmaise (2012) show that firms in fast-changing industries

face a higher risk of technological obsolescence and therefore invest less in organization capital. Thus industry-level growth shock is typically negatively correlated with organization capital. In order to mitigate the industry-specific financialization noise, we further exclude the effect of industry financialization from the industry growth uncertainty variable. Specifically, we use the amount of change in the industry-specific summed financial assets to total assets ratio as a measure of industry financialization (Ind_Fin), then we run the following regression,

$$Ind\_Gru_{j,t} = \alpha + Ind\_Fin_{j,t} + Ind\_\varepsilon_{j,t} \qquad (4)$$

$Ind\_\varepsilon_{j,t}$ captures industry-level growth shocks that are not explained by industry financialization, and we use it as an instrumental variable for organization capital.

Table 6 reports the results of the two-stage least squares regression, with the first stage regression results showing that industry growth uncertainty is significantly negatively related to organization capital, in line with our expectations. The second stage regression results show that predicted organization capital obtained is significantly and positively correlated with corporate financialization. The results of non-identifiable test show Kleibergen-Paap rk LM statistic is 26.420 and p-value is 0.000, thus rejecting the original hypothesis that the instrumental variable is not correlated with organization capital. The weak instrumental variable test show F-statistic is 25.998, which is greater than 10, indicating there is no weak instrumental variable problem. Overall, the 2SLS results suggest that the positive relationship between organization capital and corporate financialization is not driven by endogeneity issues.

4.4 | Mechanism Analysis: Agency Theory Tests

Our theoretical analysis points out that firms with high organization capital experience serious agency problems (Eisfeldt and Papanikolaou 2013). Key talent tends to increase short-sighted investment behavior in order to maximize private benefits, thereby raising the level of corporate financialization. If this channel holds, then we expect the positive effect of organization capital on corporate financialization to hold significantly in firms with high agency problems. In contrast, in firms with low agency problems, where key talent is relatively aligned with shareholders' objectives and their incentives to use financial investments for personal gain are weak, an increase in organization capital does not promote corporate financialization.

Referring to previous studies, we select investor protection index (IPI) and free cash flow (FCF) as proxies for agency problems (Jensen 1986; Zhang, Wang, and Jiang 2017). First, it is found that investor protection limits managers' behavior of storing bad news and concealing fraud, and reduces the information asymmetry between shareholders and managers, and thus firms with high investor protection indexes have fewer agency problems (Zhang, Wang, and Jiang 2017). Second, it is found that when internal funds exceeded investment opportunities, managers were driven by opportunism to use these funds for self-interested behaviors such as over-investment (Jensen 1986), and thus the agency problem is more severe in high free cash flow firms. We classify firms into high and low agency problem groups based on the industry median.

Table 7 shows that the positive effect of organization capital on corporate financialization only holds significantly within the low investor protection group and the high free cash flow group. This suggests that an increase in organization capital promotes

TABLE 6 | Instrumental variable estimation results. This table shows the results of a two-stage least squares regression. We use industry-level growth uncertainty (Ind_ε) as the instrument.

Dep.Var	(1) First OC	(2) Second Fin
Ind_ε	−0.398***	
	(0.078)	
OC		0.234**
		(0.098)
Size	−0.020***	0.004*
	(0.002)	(0.002)
ROA	0.264***	−0.042
	(0.028)	(0.030)
Age	−0.018***	0.008***
	(0.003)	(0.002)
Lev	0.004	0.011**
	(0.011)	(0.005)
Tobinq	0.009***	−0.001
	(0.002)	(0.001)
SOE	0.015***	−0.004
	(0.005)	(0.002)
Board	0.020***	−0.003
	(0.011)	(0.004)
Growth	−0.052***	0.014***
	(0.003)	(0.006)
Top	0.057***	−0.012
	(0.015)	(0.008)
Dual	0.005**	−0.003**
	(0.004)	(0.002)
Obs.	17,052	17,052
Ind FE	YES	YES
Year FE	YES	YES
Adj. R2	0.335	
Underidentification test		
(Kleibergen-Paap rk LM statistic)	26.420	
p_value	0.000	
Weak identification test		
F-stat	25.998	

Notes: Robust standard errors clustered at the firm level. Definitions of the variables are provided in the Appendix.
***Indicates significance at the 1% level.
**Indicates significance at the 5% levels.
*Indicates significance at the 10% level.

TABLE 7 | Agency theory tests. This table reports possible explanations for the positive correlation between organization capital and corporate financialization based on agency theory. Columns (1) and (2) show the interpreted results based on investor protection index. Columns (3) and (4) show the interpreted results based on free cash flow.

Dep.Var	(1) IPI > Median Fin	(2) IPI < Median Fin	(1) FCF > Median Fin	(2) FCF < Median Fin
OC	0.009	0.025***	0.019**	0.010
	(0.007)	(0.009)	(0.008)	(0.008)
Size	−0.001	−0.000	−0.000	−0.001
	(0.001)	(0.001)	(0.001)	(0.001)
ROA	0.048**	0.003	0.069***	−0.019
	(0.021)	(0.019)	(0.024)	(0.016)
Age	0.007***	0.003*	0.003*	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)
Lev	0.022***	0.009	0.020***	0.005
	(0.007)	(0.006)	(0.006)	(0.006)
Tobinq	0.001	0.001	0.002	−0.000
	(0.001)	(0.001)	(0.001)	(0.001)
SOE	−0.001	−0.000	−0.001	0.001
	(0.002)	(0.002)	(0.002)	(0.002)
Board	0.003	0.000	−0.001	0.003
	(0.004)	(0.005)	(0.005)	(0.005)
Growth	0.005	0.001	0.006*	0.002
	(0.003)	(0.002)	(0.003)	(0.002)
Top	0.002	−0.000	−0.005	0.004
	(0.006)	(0.007)	(0.006)	(0.007)
Dual	−0.002	−0.003	−0.003	−0.002
	(0.002)	(0.002)	(0.002)	(0.002)
Obs.	8527	8524	8535	8524
Ind FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adj. R^2	0.022	0.030	0.023	0.025

Notes: Robust standard errors clustered at the firm level. Definitions of the variables are provided in the Appendix.
***Indicates significance at the 1% level.
**Indicates significance at the 5% levels.
*Indicates significance at the 10% level.

corporate financialization only when firms face more severe agency problems. In contrast, there is no longer a significant correlation between organization capital and corporate financialization among firms with high investor protection and low free cash flow. Agency theory is thus shown to be a potential mechanism driving organization capital to positively influence corporate financialization.

4.5 | Ruling out Alternative Explanations

4.5.1 | Precautionary Savings Theory Tests

The positive effect of organization capital on the corporate financialization may be explained by the precautionary savings theory. Organization capital, as an intangible asset,

cannot be easily verified or liquidated and is rarely accepted as collateral for debt financing, thus making it more difficult for firms to finance themselves (Falato et al. 2022). Moreover, key talent in organization capital can be mobile across firms, leading to a higher risk of trade secret leakage and increased uncertainty about future earnings and cash flows (Boguth, Newton, and Simutin 2022; He 2018; Marwick, Hasan, and Luo 2020). In addition, most strategic resources, including organization capital, lose their value-creating capacity over time and due to the way they are used (Karadag and Poppo 2023). Firms need to invest in organization capital over the long term through acquisition, accumulation and in-house development to maintain their resource advantage (Sirmon, Hitt, and Ireland 2007), and this cannot be done without financial support. Accordingly, we hypothesize that an increase in organization capital worsens firms' funding situation and increases their liquidity needs, which in turn prompts firms to increase their financial investment for precautionary savings motives.

If this channel holds, then we expect the positive effect of organization capital on corporate financialization to hold significantly in such firms with higher precautionary saving motive that have higher financing constraints or higher cash flow risk, but not in such firms with a lower precautionary saving motive that have lower financing constraints or lower cash flow risk. This is because firms with higher financing constraints and higher cash flow risks often face severe funding shortfalls and have difficulty in obtaining financial support from external markets, so when organization capital worsens a firm's financial position, the incentive to save preventively through financial investment increases, leading to higher levels of corporate financialization. For firms with lower financing constraints and better cash flow positions, they are usually relatively well-funded and can easily obtain financial support from external markets, and thus can cope well with the financial problems caused by organization capital, and firms have lower incentives to engage in precautionary savings, and the positive effect of organization capital on the corporate financialization is no longer significant.

We use the KZ and WW indices to measure financing constraints, and use the five-year rolling standard deviation of cash flows to measure cash flow volatility (CFV), and divided the sample into high and low groups according to industry median (Marwick, Hasan, and Luo 2020). Table 8 results show that when grouped by KZ index and cash flow volatility, the positive effect of organization capital on corporate financialization holds significantly within both groups, suggesting that organization capital still promotes corporate financialization even for firms with weak precautionary saving incentives, which is not in line with theoretical expectations. In contrast, regression results grouped by the WW index show that the positive effect of organization capital on corporate financialization is not significant within either group, indicating that for firms with high precautionary saving motives, an increase in organization capital does not significantly contribute to corporate financialization, again inconsistent with theoretical expectations. Accordingly, we rule out the precautionary savings theory as an explanation of the mechanism by which organization capital positively affects corporate financialization.

4.5.2 | Executive Overconfidence Theory Test

The positive effect of organization capital on corporate financialization may be explained by the theory of executive overconfidence. Existing studies have found that overconfident executives tend to have upwardly biased cash flow expectations and a stronger risk appetite, thus overestimating investment opportunities and distorting investment decisions (Huang et al. 2011). Duchin et al. (2017) found that executive overconfidence tends to be associated with more financial investments. Xue et al. (2023) also found that overconfident executives have higher risk-taking incentives and risk tolerance and therefore are more willing to take on risky financial investment projects. Organization capital is partly attached to key talent, including executives, so if executives in organization capital are characterized by overconfidence, and as a result distort firms' investment decisions and skew portfolios towards risky financial investments, this can similarly lead to increased levels of corporate financialization. If the positive relationship between organization capital and corporate financialization is due to executive overconfidence in organization capital, we would expect the positive effect of organization capital on corporate financialization to hold significantly in the group of overconfident executives and not in the group of non-executive overconfident executives.

The first measure of executive overconfidence is the CEO personal characteristics (Overconfidence1), which consists of the following five dimensions (Li and Zhang 2022). (1) Gender. Male managers tend to be more egotistical and aggressive than female managers, so if the CEO is a man, the value is taken as 1, otherwise it is 0. (2) Age. Older managers are more risk averse and have a better objective understanding of their capabilities than younger managers, so if the age of the CEO is less than the sample mean, the value is taken as 1, otherwise it is 0. (3) Education. Highly educated people are more confident in their abilities and more likely to be overconfident than those with low education. Therefore, if the education of the CEO is a bachelor's degree or higher, the value is taken as 1, otherwise it is 0. (4) Professional background. A CEO with a professional educational background in economics and management has a better understanding of risk and return and is more cautious in making management decisions than a CEO without a professional educational background in economics and management. Therefore, if the CEO does not have a professional background in economics and management, the value is taken as 1, otherwise it is 0. (5) Duality. If the CEO is also the chairman of the board of directors, it will potentially increase the CEO's recognition of his or her own competence and create an overconfidence problem. Therefore, if the CEO is also the chairman of the board, the value is taken as 1, otherwise it is 0. We summed the scores of the above indicators, and executive overconfidence exists in firms with a composite score of 4 and above, otherwise there is no executive overconfidence.

The second measure of executive overconfidence is earnings forecast bias (Overconfidence2). We select companies that have disclosed their earnings forecasts for the first quarter, half-year, third quarter and annual reports. Earnings forecasts predict the range of changes in corporate net profit and its growth rate, including nine categories: " expected increase, expected decrease, first loss, continuing loss, continuing

TABLE 8 | Precautionary savings theory tests. This table reports possible explanations for the positive correlation between organization capital and corporate financialization based on precautionary savings theory. Columns (1) and (2) show the interpreted results based on KZ index. Columns (3) and (4) show the interpreted results based on WW index. Columns (5) and (6) show the interpreted results based on cash flow volatility.

	(1)	(2)	(3)	(4)	(5)	(6)
	KZ > Median	KZ < Median	WW > Median	WW < Median	CFV > Median	CFV < Median
Dep.Var	Fin	Fin	Fin	Fin	Fin	Fin
OC	0.024***	0.014*	0.014	0.000	0.017**	0.017**
	(0.007)	(0.008)	(0.010)	(0.007)	(0.008)	(0.008)
Size	−0.000	0.000	−0.001	−0.001	0.000	−0.001
	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)
ROA	0.021	0.164***	−0.009	0.046	−0.010	0.014
	(0.015)	(0.026)	(0.020)	(0.028)	(0.019)	(0.021)
Age	−0.001	0.007***	0.005***	0.004***	0.002	0.002
	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)
Lev	−0.018***	−0.016**	0.028***	0.013**	0.016**	−0.003
	(0.006)	(0.008)	(0.008)	(0.007)	(0.007)	(0.006)
Tobinq	0.001	−0.005***	0.001	0.002*	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
SOE	0.001	−0.001	−0.001	0.001	−0.000	−0.000
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Board	−0.002	0.005	0.016***	−0.005	0.001	0.004
	(0.004)	(0.005)	(0.006)	(0.004)	(0.005)	(0.004)
Growth	0.002	0.004	0.011**	0.001	0.000	0.003
	(0.002)	(0.003)	(0.005)	(0.001)	(0.002)	(0.003)
Top	0.009	−0.003	0.007	0.003	−0.012*	0.006
	(0.006)	(0.006)	(0.008)	(0.005)	(0.006)	(0.006)
Dual	−0.003	−0.002	−0.006***	−0.002	−0.005**	−0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Obs.	8400	8412	6702	6706	6666	6676
Ind FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Adj. R^2	0.015	0.051	0.014	0.018	0.009	0.019

Notes: Robust standard errors clustered at the firm level. Definitions of the variables are provided in the Appendix.
***Indicates significance at the 1% level.
**Indicates significance at the 5% levels.
*Indicates significance at the 10% level.

surplus, slight increase, slight decrease, uncertainty and reversal of loss". We determine whether executives are overconfident by comparing the forecast and actual values of listed companies on net profit and its growth rate (Huang et al. 2011). Executive overconfidence is considered to exist in a company if the following occurs at least once in the same year: (1) the actual value of net profit is lower than the lower limit of the forecasted value; (2) the actual growth rate of net profit is lower than the lower limit of the forecasted growth rate; (3) a large increase is forecasted, but the actual growth rate is less than 50%; (4) a slight decrease is forecasted, but the actual decrease is more than 50%; and (5) an increase is forecasted, but the actual growth rate is less than zero; (6) forecast profit, but the actual loss.

Table 9 reports regression results grouped by CEO personal characteristics in columns (1) and (2), and by earnings forecast bias in columns (3) and (4). The results show that the regression

TABLE 9 | Executive overconfidence theory test. This table reports possible explanations for the positive correlation between organization capital and corporate financialization based on executive overconfidence theory. Columns (1) and (2) show the interpreted results based on personal characteristics of CEO. Columns (3) and (4) show the interpreted results based on earnings forecast bias.

Dep.Var	(1) Overconfidence1==1 Fin	(2) Overconfidence1==0 Fin	(3) Overconfidence2==1 Fin	(4) Overconfidence2==0 Fin
OC	0.021**	0.014**	0.032**	0.013*
	(0.009)	(0.006)	(0.014)	(0.008)
Size	0.001	−0.001	0.001	−0.001
	(0.001)	(0.001)	(0.002)	(0.001)
ROA	0.019	0.010	0.005	0.021
	(0.023)	(0.019)	(0.022)	(0.022)
Age	0.006***	0.004***	−0.001	0.007***
	(0.002)	(0.001)	(0.003)	(0.002)
Lev	0.003	0.014**	−0.005	0.021***
	(0.008)	(0.005)	(0.010)	(0.006)
Tobinq	0.000	0.002**	0.002	0.000
	(0.001)	(0.001)	(0.002)	(0.001)
SOE	0.003	−0.001	0.003	−0.001
	(0.003)	(0.002)	(0.003)	(0.002)
Board	0.000	0.000	−0.004	0.003
	(0.006)	(0.004)	(0.007)	(0.005)
Growth	0.004	0.003	0.003	0.003
	(0.004)	(0.002)	(0.003)	(0.003)
Top	0.014*	−0.006	−0.003	−0.003
	(0.008)	(0.005)	(0.010)	(0.006)
Dual	0.002	−0.002	0.002	−0.003
	(0.002)	(0.002)	(0.003)	(0.002)
Obs.	5572	10,446	4039	8521
Ind FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adj. R^2	0.035	0.019	0.020	0.026

Notes: Robust standard errors clustered at the firm level. Definitions of the variables are provided in the Appendix.
***Indicates significance at the 1% level.
**Indicates significance at the 5% levels.
*Indicates significance at the 10% level.

coefficients of organization capital are significantly positive within both the executive overconfidence and no overconfidence groups, which suggests that organization capital still positively affects corporate financialization even in the absence of executive overconfidence. Accordingly, we rule out the executive overconfidence theory as an explanation of the mechanism by which organization capital positively affects the corporate financialization.

4.5.3 | Resource-Based Theory Test

In the resource-based theory perspective, organization capital can reduce corporate financialization by performing value-creating functions that have a range of positive impacts on firms, such as improved performance and lower cost of lending (Danielova et al. 2023; Li and Wu 2021). Although this theoretical expectation is not supported by the results of the basic regressions, this alone

does not yet prove that resource-based theory does not hold in our study. Specifically, the resource base view argues that the possession of scarce resources provides the basis for value creation, but does not guarantee competitive advantage or value creation. The possession of scarce resources is only a necessary but not sufficient condition for value creation. Resources can only create value if they are deployed and utilized appropriately within the context of the firm's environment (Lippman and Rumelt 2003). This suggests that the value-creating function of organization capital may only hold true in specific environmental contexts. In addition, studies have similarly demonstrated that the dynamism and munificence of the firm's external environment affects the potential value of resources and capabilities, and that the value of resources changes when the external environment changes, so that the value-creating function of resources depends, at least in part, on the firm's external environment (Sirmon, Hitt, and Ireland 2007). Correspondingly, the negative effect of organization capital on the corporate financialization under the resource-based theory view may also hold only in specific environmental contexts, and to test this conjecture, we consider both environmental dynamism and munificence.

Environmental dynamism portrays the degree of unpredictable change in the firm's environment (Goll and Rasheed 2004). Uncertainty from the actions of the industry or potential competitors can result in the competitive advantage of organization capital not being sustained in the long term, and the value-creating capacity of organization capital being lost as a result of rapid changes in the marketplace and customer needs. Therefore, when environmental dynamism is high, organization capital is unable to reduce the corporate financialization by performing a value creation function. However, when environmental dynamism is low, the resource advantages of organization capital are sustained over time, creating more value and higher real returns for the firm, thus reducing corporate financialization. Environmental munificence captures the ability of the environment to support the sustained growth of an organization and is the scarcity or abundance of key resources that a firm needs to operate in a given environment (Goll and Rasheed 2004; Sirmon, Hitt, and Ireland 2007). Low environmental munificence means that firms cannot easily obtain key resources from the marketplace, and that firms can only build resources of competitive advantage by cultivating them through internal development. At this point, organization capital is very important and valuable to firms. Firms with organization capital can create greater benefits for their customers than their competitors, and therefore have a greater competitive advantage and hence value creation. In this environment, organization capital can reduce the corporate financialization by performing a value-creating function. However, when environmental munificence is high, all firms have easy access to key resources from outside. The importance and value of organization capital is reduced, and it is not able to create higher benefits compared to competitors. At this point, organization capital is unable to reduce the corporate financialization by performing a value-creating function. Therefore, if the resource-based theory of organization capital holds, we can expect the negative relationship between organization capital and corporate financialization to hold significantly in the low environmental dynamics and low environmental richness groups, but not within the high environmental dynamism and high environmental munificence groups.

Referring to the existing studies (Chen et al. 2017; Keats and Hitt 1988), environmental dynamism (Envir_dy) is represented by the volatility of the industry's operating revenue over a five-year period, environmental munificence (Envir_mu) is represented by the average growth rate of operating revenue in one industry over a five-year period. To obtain these two indictors, we estimate a regression model where the dependent variable is the natural log of operating income, and the independent variable is time. Then, we use the antilog of the standard error of the regression coefficient as the measurement of environmental dynamism, and use the antilog of the regression coefficient as the measurement of environmental munificence.

Table 10 reports the results of the regressions based on the grouping of environmental dynamism and environmental munificence. The results show that the coefficient of organization capital is significantly positive regardless of whether environmental dynamism or environmental munificence is high or low. We do not find evidence that organization capital negatively affects the corporate financialization, which suggests that the resource-based theory does not hold in this paper.

5 | Additional Analysis

The frequent occurrence of natural disasters in recent years has had a series of adverse effects on firms, including damage to physical assets, lower profits and increased difficulty in obtaining loans, making them an external risk factor that cannot be ignored in the decision-making process of firms (Brown, Gustafson, and Ivanov 2021; Hsu et al. 2018; Huang, Kerstein, and Wang 2017; Wang 2023). So, do firms with higher organization capital change their financial asset allocation decisions in the face of external natural disaster shocks? We provide further analysis here.

The previous analysis has demonstrated that the positive correlation between organization capital and corporate financialization is mainly driven by agency theory, where key talents in organization capital push up the level of corporate financialization for the purpose of maximizing self-interest. And when firms is hit by a severe natural disaster, its operating income and operating profit will be significantly reduced, and the risk of cash flow volatility will increase dramatically (Huang, Kerstein, and Wang 2017; Pankratz, Bauer, and Derwall 2023). This not only reduces the funds available for on-the-job spending or over-investment by key talents, but also reduces the compensation packages of key talents whose performance appraisal criteria are linked to the performance of the firm. Existing research points to the fact that when firms experience a decline in operation performance, managers have an incentive to increase their financial investments in order to hide the failure of the firm's operation activities (Feng et al. 2022). Thus, when natural disasters undermine firm performance, the incentives of key talents to make speculative high returns through financial investments are further strengthened. And existing research similarly demonstrates that natural disasters engage managers of moderately distressed firms in risk-taking, prompting them to tilt their portfolios toward riskier segments (Aretz, Banerjee, and Pryshchepa 2019). Therefore, we expect the positive association between organization

TABLE 10 | Resource-based theory test. Columns (1) and (2) show the interpreted results based on environmental dynamism. Columns (3) and (4) show the interpreted results based on environmental munificence.

	(1)	(2)	(3)	(4)
	Envir_dy > Median	**Envir_dy < Median**	**Envir_mu > Median**	**Envir_mu < Median**
Dep.Var	**Fin**	**Fin**	**Fin**	**Fin**
OC	0.012*	0.022***	0.018**	0.021***
	(0.007)	(0.007)	(0.009)	(0.007)
Size	0.000	−0.001	0.001	−0.001
	(0.001)	(0.001)	(0.001)	(0.001)
ROA	0.015	0.019	−0.009	0.051**
	(0.020)	(0.018)	(0.018)	(0.021)
Age	0.005***	0.004***	0.002	0.006***
	(0.001)	(0.001)	(0.002)	(0.001)
Lev	0.017**	0.007	0.006	0.017***
	(0.007)	(0.006)	(0.007)	(0.006)
Tobinq	0.003**	−0.000	0.002	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
SOE	0.001	−0.001	−0.002	0.001
	(0.002)	(0.002)	(0.002)	(0.002)
Board	0.000	0.003	−0.003	0.005
	(0.005)	(0.004)	(0.005)	(0.004)
Growth	0.003	0.003	0.002	0.003
	(0.003)	(0.003)	(0.003)	(0.003)
Top	−0.006	0.007	−0.004	0.004
	(0.006)	(0.006)	(0.006)	(0.005)
Dual	−0.005**	0.000	−0.001	−0.003*
	(0.002)	(0.002)	(0.002)	(0.002)
Obs.	8080	8909	8081	8908
Ind FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adj. R^2	0.023	0.026	0.029	0.020

Notes: Robust standard errors clustered at the firm level. Definitions of the variables are provided in the Appendix.
***Indicates significance at the 1% level.
**Indicates significance at the 5% levels.
*Indicates significance at the 10% level.

capital and corporate financialization to be stronger when exposed to natural disaster shocks.

To test this speculation, we estimate the following model:

$$Fin_{it} = \alpha_0 + \alpha_1 OC_{it-1} + \alpha_2 Dis_{it-1} + \alpha_3 OC_{it-1} \times Dis_{it-1} + \alpha_4 \sum Controls_{it-1} + Industry + Year + \varepsilon_{it} \quad (5)$$

Dis_{it-1} is an indicator of natural disasters in the province where the firm is registered at the end of year $t-1$. We measure

natural disasters using the number of disaster occurrences (Dis_num) and disaster economic losses (Dis_loss). And the interaction term coefficient α_3 is the moderating effect.

Columns (1) and (2) of Table 11 report the results of regressions with the number of disaster occurrences and economic losses from disasters as moderating variables, respectively. Year fixed effects are no longer controlled for in the moderated regressions because they control for time-level influences that do not vary with firms and are prone to multicollinearity with natural disasters. The results show that the coefficient of the interaction

TABLE 11 | The moderating tests are based on natural disasters. Column (1) reports the results of regression with the number of natural disasters as the moderating variable. Column (2) reports the results of regressions with economic losses from natural disasters as the moderating variable.

Dep.Var	(1) Fin	(2) Fin
OC	−0.008	0.013**
	(0.010)	(0.005)
Dis	0.004***	−0.004
	(0.001)	(0.192)
C.OC#C.Dis	0.009**	2.541**
	(0.004)	(1.271)
Size	−0.001**	−0.002**
	(0.001)	(0.001)
ROA	0.021	0.022
	(0.014)	(0.014)
Age	0.004***	0.005***
	(0.001)	(0.001)
Lev	0.010**	0.011**
	(0.004)	(0.004)
Tobinq	−0.001	−0.001
	(0.001)	(0.001)
SOE	−0.001	−0.001
	(0.001)	(0.001)
Board	0.000	0.001
	(0.003)	(0.003)
Growth	0.002	0.003
	(0.002)	(0.002)
Top	0.003	0.002
	(0.004)	(0.004)
Dual	−0.002	−0.002*
	(0.001)	(0.001)
Obs.	17,060	17,060
Ind FE	YES	YES
Adj. R^2	0.006	0.003

Notes: Robust standard errors clustered at the firm level. Definitions of the variables are provided in the Appendix.
***Indicates significance at the 1% level.
**Indicates significance at the 5% levels.
*Indicates significance at the 10% level.

term between organization capital and natural disasters is significantly positive, indicating that the positive effect of organization capital on corporate financialization will be stronger when firms are hit by natural disasters.

6 | Conclusion

In this paper, we investigate the impact of organization capital on corporate financialization. Our empirical test based on the data of all A-share listed firms in China from 2014 to 2020 finds that organization capital has a significant positive effect on firms' financialization. Through the mechanism analysis, we find that the positive effect of organization capital on corporate financialization is mainly explained by agency theory, while the precautionary savings theory, the executive overconfidence theory and the resource-based theory are not supported by the empirical results in the paper. In the additional analysis, we further find that external natural disaster shocks reinforce the consequences of myopic investment caused by organization capital.

Our research has both theoretical and practical implications. At the theoretical level, we advance the literature on the drivers of corporate financialization, which previous studies have explored from the perspectives of the macroeconomic environment and economic policies, as well as micro-governance structures, ignoring the importance of firms' organization capital in investment decisions. In addition, we enrich the literature related to the economic consequences of organization capital by focusing our perspective on the financial investment behavior of firms, in contrast to the previous focus on firm performance, market performance and financing decisions. In addition, we examine the moderating effects of natural disasters, expanding the research on their impact on firms' investment decisions. At the practical level, we show that the agency problem that accompanies firms' organization capital will lead to a bias towards short-term, quick-profit financial assets. Moreover, this short-sighted behavior is exacerbated when firms experience external natural disasters shocks. Since the agency theory view of organization capital mainly stems from the resources attached to key talent, in order to reduce the negative impact of organization capital and to avoid the over-financialization of the firm due to agency problems, firms should adopt appropriate governance mechanisms or incentive mechanisms to reduce the agency problems between key talents and shareholders. This will, on the one hand, help to leverage the advantages of human resources in organization capital and, on the other hand, help enterprises to invest in a more long-term perspective. In addition, enterprises should pay more attention to building organization capital that is firm-specific. Since this type of capital is not attached to key talents, it does not add to the agency problem of the enterprise and reduces the risk of losing the resource advantage due to the loss of key talents, thus helping to create higher value and better returns for the enterprises.

Author Contributions

Yingying Qin is mainly responsible for the empirical analysis and article writing; Yishan Zhang is mainly responsible for putting forward the research views of the article; Yu-en Lin is mainly responsible for designing the overall experimental process; Jingbo Hu was responsible for literature review and data collection. All authors participated in the discussion of the research content and views of the article.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data underlying this article will be shared on reasonable request to the corresponding author.

Endnotes

[1] Data were obtained from the CSMAR database and hand-calculated by the authors.

[2] COVID-19 puts a large number of firms into abnormal business conditions. Considering that epidemic shocks are lagged, we restrict the sample to 2020 to reduce their impact on the empirical results.

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Appendix A: Variables definitions

Variable	Definition
Dependent variables	
Fin	The change in the ratio of financial assets to total assets, equal to (current financial assets/total assets - previous financial assets/total assets).
Independent variables	
OC	Organization capital/total assets, organization capital is measured according to Eisfeldt and Papanikolaou (2013).
Control variables	
Size	Natural logarithm of total assets plus 1.
ROA	Return on total assets, equal to (net profit/total assets).
Age	Natural logarithm of the number of years since a firm has been listed plus 1.
Lev	Leverage ratio, equal to (total liabilities/total assets).
Tobinq	Growth opportunity, equal to (market value/total assets).
SOE	Nature of shareholding, state-owned enterprises take the value of 1, non-state-owned enterprises take the value of 0.
Board	Board size, measured by natural logarithm of the number of board members plus one.
Growth	Operating income growth rate, equal to (current operating income - previous operating income)/previous operating income.
Top	Shareholding ratio of the largest shareholder.
Dual	Duality of CEO and chairman, when the chairman and CEO are the same person, the value is 1, otherwise it is 0.
Other variables	
Fin1	Total financial assets excluding long-term equity investments/total assets.
Fin2	Financial assets growth rate, measured by the logarithm of the current financial assets less the logarithm of the previous financial assets.
Fin3	Financial assets/total assets
Ind_ε	Industry growth uncertainty, measured as Hasan et al.(2022).
KZ	Financing constraints indicator 1.
WW	Financing constraints indicator 2.
CFV	Cash flow volatility, measured as the five-year rolling standard deviation of cash flows
IPI	Investor Protection Index, data from Beijing Technology and Business University.
FCF	Free cash flow, equal to (EBIT + depreciation and amortization - working capital additions - capital expenditures)/total assets.
Overconfidence1	CEO's personal characteristics, measured as Li and Zhang (2022).
Overconfidence2	Earnings forecast bias, measured as Huang et al. (2011)
Envir_dy	Environmental dynamics, measured as Keats and Hitt (1988).
Envir_mu	Environmental munificence, measured as Keats and Hitt (1988).
Dis_num	The number of natural disasters occurring in the province where the enterprise is located.
Dis_loss	Economic losses from natural disasters, equal to (economic losses from natural disasters/GDP).