

Institutional Investor and Firm Financialization: Evidence from China

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ABSTRACT

This paper explores the role of institutional investors from a perspective of firm financialization by selecting listed companies in the Shanghai Stock Exchange and Shenzhen Stock Exchange as a sample for the study. We find that institutional investor ownership can reduce firm financialization. This result still holds after a series of robustness checks, such as the firm-year fixed effects model and additional control variables in the regression model. Additionally, the effect of institutional investors on financialization is more pronounced for firms with large size, which indicates that better corporate governance can provide support to the monitoring role of institutional investors. In all, our findings support strong insight on how regulators rationally lead institutional investors to adopt appropriate investment strategies and orient the finance industry to support the development of the real economy, consequently driving the revolution of the finance industry.

Keywords: Institutional investors, Firm financialization, China, Firm size.

1. INTRODUCTION

Institutional investors are increasing rapidly and have become an emerging force in the capital market. Compared with individual investors, institutional investors maximize the benefits of capital allocation or management with more advantages in terms of professionals, scale, the ability to collect information, and strong motivation to suppress corporate earnings management [1][2][3]. The continuous improvement of the system ensures that institutional investors can effectively implement their own rights. Existing literature documents that institutional investors do pay attention to the internal governance of listed companies, and to a certain extent can influence the management decisions of listed companies.

However, there is controversy about the relevant research on the role of institutional investors in emerging capital markets. Especially in the context of the imperfect governance structure of listed companies in China, whether institutional investors adopt speculative behavior or participate in the governance of

listed companies needs to be further tested by empirical research. On the one hand, institutional investors can effectively supervise the behavior of major shareholders and improve corporate governance. On the other hand, institutional investors always behave like retail investors. Specifically, they may pursue short-term gains and trade frequently. This increases investment costs and intensifies market volatility, which is not conducive to the stability of the capital market. Unlike the existing literature, this paper explores the role of institutional investors from the perspective of firm financialization.

Many studies have focused on financialization of non-financial corporations (hereafter, NCFs). However, the definition of financialization is still various and ambiguous. One of its definitions is that the effect of financial motives, financial markets, financial participants, and financial institutions are increasingly important in the operation of domestic and international economics [4]. Financialization can also be defined as a pattern in which entities accumulate profits via financial channels rather than operating activities such as transaction and manufacture [5]. Additionally,

financialization indicates that NFCs are exposed more to financial markets [6]. In this study, financialization is defined as the corporate investment in financial assets. It is believed that NFCs have been increasingly engaging in investments in financial assets and financial subsidiaries and thus have obtained an increasing share of interest from such investments [7]. This means that NFCs are increasing their share of financial assets in firm portfolios [8]. If financial assets provide a higher return than do real assets, NFCs will tend to invest more funds in financial assets [9]. Therefore, fewer funds will be available for the investment in real assets. Because of the higher return, NFC managers have incentives to focus more on the financial assets, concentrating on short-term returns rather than long-term growth [7]. Thus, it is believed that investment in financial assets inhibits the fixed investment [7]-[10]. Financialization provides entities with a fall-back option to invest funds in reversible short-term investments rather than irreversible long-term fixed assets, and thus the investment in financial assets crowd out physical accumulation [10]. Because of higher returns resulting from financial involvement, entities are inclined to invest in reversible short-term financial assets instead of irreversible long-term fixed investment projects [10]. This suggests that managers may transfer from long-termism to short-termism. Therefore, NFC management may be driven less by long-term operating strategies but tend to increase the exposure to financial investments [7]. Thus, NFCs tend to increase their investments in financial assets and operate as financial participants.

The influence of financialization is examined by a series of empirical research. Orhangazi finds that a negative correlation between financialization and real investment exists [7]. High profits resulting from investments in financial assets change NFCs' investment behavior and result in a decrease in real investment [7]. Moreover, investments in financial assets shorten the horizon of NFC management and intensify uncertainty [7]. Tori and Onaran find that both financial payments and income adversely affect investments in fixed assets by the NFCs; a higher level of investments in financial assets is related to a stronger negative influence of financial income on firm's investment [10]. Their findings support the negative relationship between financial assets and real assets. Davis considers the impact of shareholder value norms on the NFCs' investment behavior and finds that shareholder value orientation depresses the availability of funds for physical investments [8]. Luo and Zhu find that financialization affects the income distribution in China and that the income inequality between financial sectors and other sectors enhance due to financialization [11]. Stockhammer argues that financialization results in a slowdown in accumulation [6]. Demir finds that increasing rates of return gap and uncertainty have an economically and statistically decreasing effect on fixed

investment, while the opposite is true regarding financial assets [12].

The reasons for choosing the Chinese stock market are as follows. Firstly, institutional investors are playing more and more significant roles in China. Since 1998, regulators began allowing professional investment managers to market their services to the public for the first time. Chinese financial investors have become a major force in the financial investment market with their increasing holdings. A recent survey of China's top 20 fund managers by Institutional Investor showed that their assets under management had surpassed \$1 trillion [13], marking a milestone for the industry. Secondly, with the continuous development of China's financial institutions, economic financialization is increasingly obvious. The Chinese economy has a "trend towards firm financialization". The proportion of financial assets in total assets of listed manufacturing enterprises in China increased from 10.3 % in 1996 to 22.9% in 2015. The annual growth rate exceeds 6.4%. According to the Wind database, 34% of China's listed enterprises bought financial products in October 2018, totaling 1.34 trillion yuan [13]. This indicates that China is well developed in the financialization of enterprises. Thus, the Chinese stock market provides an ideal setting for us to explore the impact of institutional investors on firm financialization.

Adopting the listed companies in the Shanghai Stock Exchange and Shenzhen Stock Exchange as the sample, this paper explores the effect of institutional investors on firm financialization. Empirical evidence shows that institutional investor ownership can reduce firm financialization. This result still holds after a series of robustness checks including re-estimating the regression model using firm-year fixed effects, adding more well-potential omitted variables in the regression model. Additionally, the above effect is more pronounced for firms with large size.

We contribute to the existing literature in several ways. Firstly, we add new evidence on the impact of institutional investors in the emerging market, such as China. The negative relationship between institutional investor ownership and firm financialization indicates that institutional investors in China play a monitoring role in the capital market. Secondly, we also provide a new determinant of firm financialization from the view of institutional investors, which can provide support to constrain the financial investment behavior of non-financial firms and promote the stable development of the capital market.

2. HYPOTHESIS DEVELOPMENT

At present, China's economy has shown signs of excessive financialization. In contrast to the downturn in the real economy, the real estate and financial industries

are significantly active. Specifically, since the capital investment income of the financial sector is significantly higher than that of the real sector, it will inevitably lead to the acceleration of the outflow of social capital from the real economy, thereby forming a trend of financialization of the real economy. However, the virtual economy that is separated from the real economy will generate systemic risks, which will cause asset bubbles [14] and increase the vulnerability of the economic system and exacerbate the possibility of financial crises [15].

Meanwhile, after nearly three decades of the modern corporate system reform, listed companies in China have established a modern corporate system. In this process, the influence of institutional investors in corporate governance has continued to increase. The impact of institutional investors on the company's financial investment behavior is the focus of the hypothetical research in this section.

As external investors independent of major shareholders and insiders, institutional investors have both the motivation and ability to play an important role in external corporate governance mechanisms [16]. Institutional investors holding company stocks will become the most important external supervision mechanism, which can weaken the motivation of managers to seize the private interests of management power and reduce the encroachment of the interests of major shareholders.

To begin with, compared with individual investors, institutional investors are accompanied by huge investments when they enter the target company. They can enjoy a greater right to speak with their strong financial strength when participating in corporate governance. Once the controlling shareholder or management makes an investment decision that is not conducive to the company's long-term development, institutional investors can rely on their high shareholding ratio to intervene in decision-making—for example, voting against the shareholder meeting or dumping stocks on the secondary market. This can reduce the behavior of major shareholders to seek private gains of control and play a role in the supervision and restraint of the management, thereby curbing the short-sighted behavior of the management. In this way, it promotes the convergence of the interests of management and shareholders, thus inhibiting the degree of firm financialization.

Moreover, institutional investors are more professional and experienced, and can help companies integrate resources with their advantages in information collection and processing and contact establishment. In the company's decision-making process, institutional investors can make more objective and accurate judgments on the long-term benefits and market prospects of the company's R&D projects [15]. For their

own interests, they will put pressure on the management of the invested company to reduce the motivation of earnings management. In addition, institutional investors can more fully observe the company's production and operation conditions through on-site investigations and face-to-face communication with the company's management and employees, thereby enhancing its information advantage and effectively reducing the company's information asymmetry [18]. In this way, the short-sighted behavior of managers can be reduced, and the management can be more effectively encouraged to provide sufficient efforts and contributions for the creation of shareholder value, thereby inhibiting the degree of firm financialization.

In addition, institutional investors have an incentive to intervene in corporate investment decisions and prevent companies from making investment behaviors that meet short-term income goals without considering long-term development. Because the increase in the shareholding ratio of institutional investors will inevitably reduce the liquidity of their holdings, they will intervene in the governance of the invested company through their control capabilities [19]. Specifically, when a company's performance deteriorates, it is more difficult for institutional investors to withdraw from the company in the short term because they cannot sell stocks at will. Therefore, they will pay more attention to the opportunistic behaviors of blockholders or management and supervise companies to make long-term production and operation decisions to ensure the continuity of returns. In this sense, institutional investors can increase the information content of stock prices, improve asset pricing efficiency, stabilize the market, and inhibit the degree of firm financialization.

In general, when institutional investors play the role of major shareholders in pursuit of their own interests, they can actively participate in corporate governance through "voting by hand". The existence of such a supervision and governance mechanism can reduce management's myopia, prompt companies to increase R&D expenditure and other long-term value-oriented investment behaviors [20], thereby inhibiting listed companies from investing in financial assets. Based on the above analysis, the following hypothesis is proposed:

H1a: *Ceteris paribus*, institutional investors, can reduce the degree of firm financialization.

However, it is undoubted that some short-termism institutional investors exist in financial markets. These investors tend to have high portfolio turnover, so their holding duration is low [21]. Because of their short investment horizon and lack of focus on particular firms, these investors are likely to be myopic traders chasing short-term gains [21]. Bushee finds that short-termism investors result in short-term investment

decisions by managers and induce these managers to put priority on short-term gains, impairing long-term earnings [22][23]. Therefore, those short-termism institutional investors can also take advantage of their high shareholding ratio to negatively affect managers' investment decision-making behavior. This means that in order to obtain high and immediate returns, short-sighted institutional investors may encourage company managers to focus on short-term investments such as marketable securities and debt instruments held for trading, thus intensifying the firm financialization.

As discussed earlier, existing literature states that the investment in financial assets shortens the horizon of NFC managers, which impairs their incentive to invest in fixed assets or reduces the funds available for physical accumulation, intensifying uncertainty [7][8]. This means that higher and more immediate return resulting from investments in financial assets changes NFC investment behavior and tempts managers to focus more on short-term return rather than long-term growth [7]. Therefore, a higher proportion of investments in financial assets negatively affect NCF's investment strategy [7][10], thus exacerbating firm financialization. Thus, institutional investors with short-term horizons have the same influence on NFC managers as firm financialization. In other words, short-termism institutional investors take advantage of firm financialization to achieve their purpose to obtain short-term gains. It is found that those institutional owners who focus on short-term gains invest less in Research and Development (R&D) than do those who focus on long-term growth [22]. This means institutional owners with short-term horizons invest less in fixed assets that bring long-term earnings. Additionally, for companies with a higher proportion of short-termism institutional investor holdings, their management tends to reduce investment in R&D to avoid a decrease in current earnings [22]. Therefore, short-termism institutional investors pay attention not to the real investment that contributes to long-term growth but to the investment in financial assets that lead to short-term gains.

Depending on different institutional behaviors, institutional investors have distinct impacts on the firm financialization. It is believed that only independent institutional investors with long-term horizons can exert the monitoring effect on corporate governance [24] and thus inhibit financialization that impairs firms' long-term growth. Unlike long-termism institutional investors, short-termism institutional investors have high portfolio turnover, focus on firms' current performance, and thus encourage financialization that leads to short-term gains. Consequently, although institutional investors with long-term horizons could supervise and inhibit the firm financialization, some institutional investors who chase short-term gains could induce managers to change investment behaviors and

thus intensify the level of the firm financialization. Thus, the following hypothesis is proposed:

H1b: *Ceteris paribus*, institutional investors can intensify the level of firm financialization.

3. DATA AND METHODOLOGY

3.1. Data and Sample

This paper selects all listed companies in the Shanghai Stock Exchange and the Shenzhen Stock Exchange from 2007 to 2017 as the research sample. We selected 2007 as our initial year because Chinese listed companies began implementing the new version of Accounting Standards for Business Enterprises in 2007. For the initial research sample, this paper excludes the following samples: (1) the sample of listed companies in the financial industry; (2) the sample of ST (Special Treatment) listed companies; (3) the samples of listed companies with missing financial data.

Related data, including institutional investors, firm financialization, and listed companies' financial data, come from the CSMAR database (China Stock Market & Accounting Research Database). This paper completes the preliminary sorting and calculation in Excel and uses Stata 15.0 software for data processing and analysis.

Then, in order to mitigate the influence of extreme values, this paper winsorizes the top and bottom 1% of each variable's distribution to ensure the robustness of the research results as much as possible. Finally, a total of 29,422 observations are obtained in this paper.

3.2. Variables

The dependent variable is firm financialization, financial assets ratio (*Fin_ratio*), which is measured as the ratio of financial investments in all assets. The main independent variable is *Inst*, which is measured as the ratio of institutional investors' holdings. In addition, we also include some control variables that may affect managers' decision to invest in financial assets in the regression model, including the size of the company, book-to-market ratio, leverage ratio, return on assets, and the age of listed companies. These control variables are considered and abbreviated as *Size*, *BM*, *Lev*, *ROA*, and *Age*, respectively.

High leverage threatens corporate autonomy because increasing debts indicates higher cash flows paid to creditors [7]. As a result, firms' discretionary cash flows decrease. This means that a firm's management could not have sufficient cash flows to invest in financial assets. Hence, we control for *Lev*. It is believed that previous high returns or low book-to-market ratios indicate that the bubble has been accumulating for a long time, so risks significantly increase [25]. This

means that firm management may avoid the investment in financial assets to circumvent the bubble burst. Conversely, if firms have low past returns, they will invest in financial assets to improve their returns in the short term. Thus, we also control for *BM* and *ROA* in response to their impact on firm financialization. To minimize the effects of outliers for companies with considerable assets and companies listed longer than the new enter, *Size* and *Age* have been taken logarithm from the original data.

3.3. Model

The hypotheses to be tested are that financial assets are a function of institutional investors' holdings and other control variables. The empirical model conducted in this research is:

$$Fin_ratio_{t+1} = \beta_0 + \beta_1 Inst_t + \sum_{n=2}^m \beta_n (nthControlVariable_t) + \varepsilon_{t+1} \quad (1)$$

In this model, β_i represents regression coefficients; ε indicates an error item; Other control variables include $Size_t$, BM_t , Lev_t , ROA_t , and $lnAge_t$. *Fin_ratio* measures financial assets held by an entity and indicates financial assets as a percentage of total assets. *Inst_t* represents institutional holdings in an entity. A negative (positive) β_1 indicates that institutional holdings tend to decrease (increase) the proportion of financial assets held by an entity. Table 1 shows the definitions of variables used in our analysis. All continuous variables are winsorized at 1% at both tails.

Table 1. VARIABLE DEFINITIONS

Variable	Definition
<i>Fin_ratio_{t+1}</i>	The proportion of financial assets to total assets in year <i>t</i> +1.
<i>Inst_t</i>	The percentage of shares held by institutional investors in year <i>t</i> .
<i>Size_t</i>	The natural logarithm of the book value of total assets in year <i>t</i> .
<i>BM_t</i>	Book-to-market ratio, calculated by the book value of equity divided by the market value of equity in year <i>t</i> .
<i>Lev_t</i>	Financial leverage, calculated by the book value of total debt divided by the book value of total assets in year <i>t</i> .
<i>ROA_t</i>	Return on assets, calculated by the net profits divided by the book value of total assets in year <i>t</i> .
<i>lnAge_t</i>	The natural logarithm of firm listing years in year <i>t</i> .
<i>Shrholder1_t</i>	The proportion of shares held by the largest shareholder in year <i>t</i> .
<i>Mgshare_t</i>	The proportion of shares held by management personnel in year <i>t</i> .
<i>Board_t</i>	The proportion of independent directors in a board in year <i>t</i> .
<i>Cash_t</i>	The proportion of cash and cash equivalents held by entities in year <i>t</i> .

4. RESULTS

4.1. Analysis of Descriptive Statistics

Table 2 provides descriptive statistics for variables used in the regression analysis. The mean value of the financialization ratio (*Fin_ratio*) is 0.06, with a standard deviation of 0.09, which means that 6% of assets are invested in financial projects. The minimum value is 0, and the maximum value is 0.49. *Inst* has a mean value of 0.30, and the standard deviation is 0.23, which is covering from 0 to 0.84. *Size* has a mean value of 6.43, with a standard deviation of 0.54. The maximum and minimum values are 5.27 and 7.93, respectively. The mean value of Book-to-Market Ratio (*BM*) is 0.95 with a standard deviation is 0.9. The minimum value is 0.09, and the maximum value is 5.56. The mean value of the Leverage ratio (*Lev*) is 0.42, suggesting that the leverage level of Chinese listed companies during the sample period is relatively high. The standard deviation is 0.23, the minimum is 0.02, and the maximum is 1.16. The company's debt situation is different, and the pressure on debt repayment is also different. The average return on assets (*ROA*) is 0.04, with a standard deviation is 0.07, showing that the profitability of the sample enterprises is relatively good. The minimum is -0.28, and the maximum is 0.22. The average value of *lnAge* is 2.18, the standard deviation is 0.71, which is covering from 0.69 to 3.22.

Table 2. SUMMARY STATISTICS

Variable	N	mean	sd	min	p50	max
<i>Fin_ratio</i>	22055	0.06	0.09	0	0.02	0.49
<i>Inst</i>	29420	0.3	0.23	0	0.27	0.84
<i>Size</i>	29421	6.43	0.54	5.27	6.43	7.93
<i>BM</i>	27187	0.95	0.9	0.09	0.67	5.56
<i>Lev</i>	29416	0.42	0.23	0.02	0.41	1.16
<i>ROA</i>	29414	0.04	0.07	-0.28	0.03	0.22
<i>lnAge</i>	29420	2.18	0.71	0.69	2.3	3.22

4.2. Analysis of Correlation Coefficients

Pearson correlation analysis of the variables is presented in Table 3. Even though the coefficient is insignificant, *Fin_ratio* is negatively correlated with *Inst*, indicating that institutional ownership can reduce the financial investment behavior of listed companies. *Fin_ratio* is negatively correlated with *BM* and *Lev*. *ROA* is negatively correlated with *BM*, *Lev*, and *lnAge*. All correlation coefficients are significant at a confidence level of 1%.

Table 3. CORRELATION COEFFICIENTS

	<i>Fin_ratio</i>	<i>Inst</i>	<i>Size</i>	<i>BM</i>	<i>Lev</i>	<i>ROA</i>	<i>lnAge</i>
<i>Fin_ratio</i>	1						
<i>Inst</i>	-0.009	1					
<i>Size</i>	0.097***	0.649***	1				
<i>BM</i>	-0.099***	0.113***	0.159***	1			
<i>Lev</i>	-0.143***	0.108***	0.116***	0.462***	1		
<i>ROA</i>	0.064***	0.132***	0.161***	-0.173***	-0.406***	1	
<i>lnAge</i>	0.066***	0.336***	0.376***	0.214***	0.323***	-0.181***	1

4.3. Analysis of Baseline Results

Table 4 presents the OLS results of the impact of *Inst* on firm financialization, using industry and year fixed effects model. The results of two regression models are used to test our hypotheses. These two models are derived from one measure of firm financialization. In column (1), the first regression model does not include control variables, including *Size*, *BM*, *Lev*, *ROA*, and *lnAge*. However, these control variables indeed affect firm managers’ decisions to invest in financial assets. For instance, a higher leverage ratio indicates that an entity may encounter liquidity problems, so the entity may not have sufficient cash available to invest in financial assets. Therefore, it is necessary to take the impact of these control variables into account. As a result, in column (2), the second model includes these control variables.

Table 4. BASELINE RESULTS

Dependent variable =	<i>Fin_ratio</i>	<i>Fin_ratio</i>
	(1)	(2)
<i>Inst</i>	-0.015*** (-5.52)	-0.014*** (-4.00)
<i>Size</i>		0.000 (0.14)
<i>BM</i>		-0.004*** (-3.77)
<i>Lev</i>		-0.074*** (-22.15)
<i>ROA</i>		0.006 (0.54)
<i>lnAge</i>		0.018*** (15.36)
Constant	0.034*** (6.29)	0.030** (2.49)
Observations	22,054	20,139
R-squared	0.136	0.159
Industry FE	Yes	Yes
Year FE	Yes	Yes

H1a is supported by the negative and significant coefficients of *Inst* in regressions. Elaborately, the coefficients of the variable *Inst* in column (1) and column (2) are -0.015 and -0.014, respectively. Both coefficients are statistically significant at the 1% level, indicating a strong negative relationship between firm financialization and institutional investors’ sharing holdings. This means that institutional investors control

the excessive level of firm financialization. Therefore, this result is consistent with the notion that institutional investors monitor NFCs, orient their investors toward long-term growth, and thus inhibit firm financialization.

4.4. Robustness Checks

In this section, we conduct two robustness checks to test the robustness of our results, including firm-year fixed model and adding additional control variables.

4.4.1. Firm and Year Fixed Effects Model

To alleviate problems resulting from unobservable time-invariant firm-specific characteristics, like some time-invariant firm-specific factors, we re-estimate the regression of the original model by using the firm and year fixed effects model to check whether our results are robust. The results of the fixed effects model are shown in Table 5.

Table 5. ROBUSTNESS CHECK: FIRM AND YEAR FIXED EFFECTS MODEL

Dependent variable =	<i>Fin_ratio</i>	<i>Fin_ratio</i>
	(1)	(2)
<i>Inst</i>	-0.007** (-2.11)	-0.012*** (-3.02)
<i>Size</i>		0.001 (0.50)
<i>BM</i>		-0.007*** (-5.82)
<i>Lev</i>		-0.043*** (-12.07)
<i>ROA</i>		-0.032*** (-3.51)
<i>lnAge</i>		0.035*** (9.64)
Constant	0.037*** (20.70)	-0.005 (-0.32)
Observations	22,054	20,139
R-squared	0.163	0.173
Industry FE	Yes	Yes
Year FE	Yes	Yes

As shown in Table 5, the coefficient of the variable *Inst* in the first column and the second column is significantly negative at the 5% level and the 1% level, respectively. This implies that our results are not affected by time-invariant firm-specific characteristics

and that the negative relationship between financialization and institutional holdings remain robust.

4.4.2. Additional Control Variables

In addition to the fixed effects model, we add additional control variables, including *Shrholder1*, *Mgshare*, *Board* and *Cash*, in order to mitigate the impact of endogeneity. These variables may potentially affect the firm financialization, financial assets as a percentage of total assets. *Shrholder1* indicates the first majority shareholder, the percentage of share held by the largest shareholder. It is found that the largest shareholders take advantage of their voting power to manipulate corporate wealth and are directly involved in firm management [26]. Moreover, holdings concentration influences firm valuation, corporate governance, and future performance of firms in which institutional investors invest [21]. As a result, large shareholders play an increasingly active role in corporate governance, especially underperforming entities [27]. This indicates the largest shareholder in an entity can drive managers to make investment decisions. For instance, the largest shareholders may use their voting power to ask management personnel to invest more in financial assets to maximize their wealth. Therefore, *Shrholder1* should be considered as one of the additional control variables.

Mgshare means the percentage of shares held by management personnel. Managers who hold sufficient shares to dominate the board of directors could also expropriate and consume corporate resources [26]. As a result, depending on managers' risk preference and horizon, they could decide to invest more in financial assets in order to maximize the wealth of shareholders including themselves. Conversely, managers may become conservative or risk-averse and thus reduce the proportion of investment in financial assets because they are afraid of losing their own money. Therefore, *Mgshare* can affect financial assets as a percentage of total assets.

Board means the proportion of independent directors on a board. The Chinese securities regulatory commission (CSRC) implemented an independent director system in August 2001, requiring independent directors to supervise controlling shareholders on behalf of minority shareholders [28]. Therefore, independent directors play an important role in corporate governance

and thus monitor the decision-making about investment. This means an entity should get approval from independent directors when it decides to invest in financial assets, so independent directors can affect the firm's financialization.

Cash indicates the proportion of cash or cash equivalents held by an entity. Depending on the cash flow, firms' decisions to invest in financial assets are different. If entities have sufficient cash flows, they will invest more in financial assets, resulting in a higher proportion of financial assets in total assets. Conversely, firms with insufficient cash flows could invest less, so they may have a lower proportion of financial assets in total assets. Therefore, the proportion of cash or cash equivalents held by an entity can affect the firm financialization.

We then re-run the regression model. The results of additional control variables are presented in Table 6. We find that the coefficients on *Inst* still remain significantly negative across the six columns. Therefore, considering additional control variables to mitigate endogeneity, our finding of a negative relationship between institutional holdings and firm financialization still holds.

4.4.3. Additional Analysis of Firm Size

To further explore the impact of institutional investor ownership on firm financialization, we also examine the role of institutional investors under different corporate governance (such as different firm size). When the total assets of a given listed company are greater than the median total assets of listed companies in the same industry and the same year, it will be classified as a large market value listed company. Otherwise, it is classified as a small market listed company.

As is shown in Table 7, the absolute value of the regression coefficients on institutional investors in the first column (large size group) is larger and more significant than that in column 2, which indicates that the role of institutional investors on firm financialization is more pronounced in larger firms. The above results indicate that better corporate governance can support the positive effect of institutional investors.

Table 6. ROBUSTNESS CHECK: ADDITIONAL CONTROL VARIABLES

Dependent variable =	<i>Fin_ratio</i>	<i>Fin_ratio</i>	<i>Fin_ratio</i>	<i>Fin_ratio</i>	<i>Fin_ratio</i>
	(1)	(2)	(3)	(4)	(5)
<i>Inst</i>	-0.016*** (-4.39)	-0.014*** (-3.78)	-0.013*** (-3.83)	-0.014*** (-4.03)	-0.015*** (-4.05)
<i>Size</i>	0.000 (0.22)	0.000 (0.14)	-0.000 (-0.14)	0.000 (0.10)	-0.000 (-0.09)
<i>BM</i>	-0.004***	-0.004***	-0.004***	-0.004***	-0.004***

	(-3.93)	(-3.77)	(-3.82)	(-3.86)	(-4.06)
<i>Lev</i>	-0.074***	-0.074***	-0.074***	-0.074***	-0.074***
	(-22.12)	(-22.13)	(-22.04)	(-22.22)	(-22.07)
<i>ROA</i>	0.005	0.006	0.007	0.007	0.007
	(0.45)	(0.54)	(0.61)	(0.62)	(0.59)
<i>lnAge</i>	0.018***	0.018***	0.018***	0.018***	0.018***
	(15.44)	(13.71)	(15.51)	(15.42)	(14.01)
<i>Shrholder1</i>	0.008*				0.008*
	(1.87)				(1.89)
<i>Mgshare</i>		-0.000			0.000
		(-0.03)			(0.02)
<i>Board</i>			0.022**		0.021*
			(1.98)		(1.92)
<i>Cash</i>				-0.001***	-0.001***
				(-3.66)	(-3.69)
Constant	0.026**	0.030**	0.025*	0.031**	0.021*
	(2.10)	(2.47)	(1.95)	(2.56)	(1.65)
Observations	20,135	20,138	20,042	20,122	20,020
R-squared	0.159	0.158	0.159	0.159	0.160
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes

Table 7. ADDITIONAL ANALYSIS: THE ROLE OF FIRM SIZE

Dependent variable =	<i>Fin_ratio</i> (1) large size	<i>Fin_ratio</i> (2) small size
<i>Inst</i>	-0.014***	-0.012**
	(-3.02)	(-2.32)
<i>Size</i>	-0.002	-0.013***
	(-0.77)	(-2.69)
<i>BM</i>	-0.001	-0.006***
	(-0.78)	(-3.75)
<i>Lev</i>	-0.090***	-0.066***
	(-17.35)	(-15.00)
<i>ROA</i>	-0.037**	0.031**
	(-2.23)	(2.09)
<i>lnAge</i>	0.010***	0.022***
	(5.69)	(13.91)
Constant	0.080***	0.092***
	(3.73)	(3.14)
Observations	9,463	10,676
R-squared	0.186	0.154
Industry FE	Yes	Yes
Year FE	Yes	Yes

5. CONCLUSIONS

This paper investigates the impact of institutional investors on firm financialization by selecting all listed companies in the Shanghai Stock Exchange and Shenzhen Stock Exchange as a sample for the study.

The study analyses data on a function of institutional investors' holdings and other control variables. We find that institutional investors' shareholdings are negatively related to firm financialization after controlling other variables that affect firm managers' decisions to invest in financial assets. This implies that institutional investors monitor corporate governance, encourage managers to focus on the firm's long-term growth, and thus inhibit firm financialization that leads to short-term gains. Our results still hold after a series of robustness checks such as firm and year fixed effects model and

additional control variables added to the empirical model. Moreover, the above effect is more pronounced in large-size firms than small-size firms, which indicates that better corporate governance can provide support to the monitoring role of institutional investors.

This paper also has significant policy implications. Compared with individual investors, institutional investors have greater economic power and therefore intervene in investment decisions detrimental to the firm. In addition, institutional investors are scalable and professional, and they have an incentive to intervene in firms' investment decisions to discourage short-sighted investment behavior made by firms to meet short-term goals. Thus, institutional investors can curb the extent of the excessive financialization of firms. They prevent real firms from over-engaging in financial investment and avoid macroeconomic tendencies of de-realization to deficiency. Overall, our results support the notion that institutional investors monitor corporate governance associated with investment, direct firm managers toward firm's long-term growth, and thus inhibit firm financialization.

Our study adds new evidence to the growing literature on the consequences of institutional investors in emerging markets such as China. It provides practical implications for both NFCs and institutional investors. Our results imply that institutional investors in China are playing a more monitoring role in the capital market. Thus, this paper sheds further light on how regulators reasonably manage institutional investors to adopt appropriate investment strategies and direct the finance industry to support the real economy and draws inspiration to the revolution of the finance industry. Additionally, we extend prior studies on financialization by providing a new influential factor that reduces the level of firm financialization, which can provide the support to constrain the financial investment behavior of

non-financial firms and promote the stable development of the capital market.

However, this study contains several limitations. For instance, this paper does not consider the different effects that institutional investor heterogeneity can have on firms' allocation of financial assets. Among them, funds can inhibit firms from allocating financial assets, and qualified foreign investors, insurance, and brokerage firms can promote firms to allocate more financial assets. This can be further studied in the future.

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