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The Impact of Institutional Investor Holdings on Short-Term Debt Financing for Long-Term Use in Listed Companies

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Abstract. Reasonable investment and financing arrangements are a crucial prerequisite for the high-quality development of listed companies. However, Chinese listed companies exhibit the phenomenon of short-term debt financing for long-term use. Institutional investors can mitigate this practice by participating in corporate governance. This study examines the impact of institutional investor holdings on short-term debt financing for long-term use among Chinese A-share listed companies on the Shanghai and Shenzhen stock exchanges from 2007 to 2024. Results indicate that institutional investor holdings effectively reduce this practice, with findings remaining robust after stability tests. Mediation analysis reveals that institutional holdings mitigate short-term debt for long-term use by easing the financing constraints faced by listed companies. Heterogeneity analysis further indicates that stable institutional investors and independent institutional investors exert a stronger moderating effect on this practice.

Keywords: Institutional investors, short-term debt for long-term use, financing constraints.

1. Introduction

Among Chinese listed companies, there is a widespread phenomenon where short-term liabilities dominate while long-term debt financing remains relatively insufficient. As long-term debt levels fall significantly below the scale of long-term assets, some enterprises are compelled to repeatedly roll over short-term debt to fund long-term investment projects, thereby forming a classic short-term debt financing model for long-term purposes. This practice fundamentally undermines corporate financial stability by amplifying operational uncertainties and liquidity pressures, ultimately exerting significant negative impacts on both corporate performance and debt security.

Institutional investors occupy a unique dual role within capital markets: they are both shareholders of their portfolio companies and active participants in external markets. On one hand, they can exercise voting rights and participate in board decision-making as shareholders, implementing direct oversight. On the other hand, they exert powerful external constraints through market behaviors such as “voting with their feet.” Regarding investment efficiency, institutional investors enhance capital allocation efficiency by curbing management's excessive investment impulses or providing support and oversight when investments are insufficient (Tang, Yunshu et al., 2018). From an agency theory perspective, institutional investors' oversight function effectively counters opportunistic behavior by corporate insiders. Based on this analysis, this paper utilizes data from Chinese A-share listed companies on the Shanghai and Shenzhen exchanges from 2007 to 2024 to examine the impact of institutional investor holdings on short-term debt financing for long-term purposes.

The research significance of this paper manifests in two aspects. Theoretically, existing studies have predominantly explored the fundamental factors behind short-term debt for long-term use from the perspectives of macro-financial policies and management agency problems. This study, however, examines the impact of institutional investor holdings on short-term debt for long-term use from the perspective of corporate governance structures. It conducts a mediation analysis based on financing constraints and categorizes institutional investors into stable vs. transactional and independent vs. non-independent types to explore governance differences among these investor types, thereby enriching the literature on corporate investment and financing maturity mismatches. In practice, while

short-term debt offers lower funding costs and greater financing flexibility, excessive short-to-long mismatch heightens corporate liquidity risks. Consequently, identifying appropriate mitigation strategies holds significant importance for preventing systemic financial risks. By examining the impact of institutional investor holdings on short-to-long mismatch in listed companies, this study provides valuable insights for policymakers seeking to expand institutional investor participation in an orderly manner and for enhancing internal and external governance mechanisms within listed companies.

2. Literature Review

2.1. Research on Institutional Investors

Regarding whether institutional investor ownership enhances governance efficiency, academic discourse primarily encompasses three distinct perspectives: positive, neutral, and negative governance effects. The positive governance view posits that institutional investors exert a favorable influence on corporate governance. Chhaochharia (2012) demonstrates that institutional shareholders impose multifaceted constraints on management investment behavior. Liang Shangkun (2018) found that institutional ownership helps reduce firms' cost stickiness. Liu Xinzheng (2021) revealed that institutional investors' collective holdings significantly enhance their ability to counterbalance controlling shareholders and curb asset stripping by strengthening the credibility of exit threats and forming voting blocs. Some studies express skepticism or rejection of institutional investors' governance effects, forming the ineffective governance and negative governance perspectives. Institutional investors' positive-feedback trading strategy of chasing rallies and selling on dips exacerbates operational instability during market volatility (Dennis, 2002). Nashier (2016) synthesizes both positive and negative evidence regarding institutional investors, concluding that positive oversight and negative impacts often coexist in institutional holdings, but ultimately deems their overall effect on corporate governance ineffective. Gong Haochuan (2021) points out that overly stringent trading regulations may generate negative incentives that not only weaken the motivation for coordinated governance among institutional investors but may even harm corporate governance.

2.2. Research on Short-Term Debt for Long-Term Use

Although the use of short-term debt carries higher financial risks, it offers two distinct advantages: first, financing costs are generally lower than those of long-term debt; second, it provides greater flexibility in raising and allocating funds. On the downside, using short-term debt for long-term purposes exacerbates a firm's liquidity risk, thereby increasing the likelihood of debt default and even bankruptcy. First, it may directly distort corporate investment behavior. Sheng Mingquan (2020) found that it exacerbates inefficient investment and weakens cash flexibility, thereby damaging total factor productivity. Zhao Yanming et al. (2021) further pointed out that this pattern not only directly deepens the degree of corporate underinvestment but also indirectly reinforces this negative effect by raising risk-bearing levels. Second, it directly elevates firms' overall costs and risks. Stakeholders such as creditors, perceiving heightened risk, demand additional compensation, leading to increased financial expenses (Zhang, X. M. et al., 2021).

2.3. Research on Institutional Investors and Short-Term Debt for Long-Term Use

Most existing empirical studies indicate that institutional investors can influence firms' short-term debt for long-term use behavior through multiple channels. Research from various scholars provides support from perspectives such as holding characteristics and behavioral patterns. Xu Ailing (2017) found that institutional investors can mitigate agency problems by reducing firms' available free cash flow, thereby effectively curbing excessive investment by management. Shang Hangbiao (2022), using all A-share listed companies from 2008 to 2019 as a sample, discovered that institutional investors can lower agency costs and reduce overinvestment through oversight governance and bailout governance effects. Ward (2020) demonstrated that institutional investor monitoring mitigates

overinvestment driven by managers' career concerns. Focusing on institutional investors' field research activities, Hong Pan (2024) examined non-financial A-share listed companies in China from 2012 to 2020, confirming that such research primarily curbs short-term debt for long-term use through information effects and corporate governance effects.

2.4. Critical Literature Review

Based on a review of the literature, existing research on the effects of institutional investors on corporate governance can be categorized into three types: positive, neutral, and negative governance. The impact of improved corporate governance efficiency on firms' short-term debt for long-term use is self-evident. While short-term debt for long-term use offers flexibility advantages, it also increases firms' liquidity risk. Existing studies exploring the relationship between institutional investors and firms' short-term debt for long-term use have largely focused on the overinvestment perspective.

Building upon existing research, this paper examines the impact of institutional investor ownership on short-term debt financing for long-term purposes among listed companies, starting from the perspective of corporate governance structures. The study focuses on testing whether institutional investor ownership can alleviate financing constraints and thereby reduce the extent of short-term debt financing for long-term purposes among listed companies. This provides empirical evidence from the debt maturity structure perspective to understand the governance role of institutional investors.

3. Theoretical Foundations and Hypothesis Formulation

3.1. Relevant Theoretical Foundations

3.1.1. Theory of Information Asymmetry

In his paper “The Market for Lemons” (1970), Akerlof pointed out that during transactions, sellers typically possess more information than buyers regarding the quality and characteristics of goods. This information advantage tempts sellers to set transaction terms that favor themselves rather than reflect true value, leading buyers to suffer losses due to their information disadvantage. Such market failures stem from systematic disparities in information access between transaction parties—information asymmetry. The separation of ownership and management grants executives informational advantages over shareholders, potentially driving inefficient investments to pursue private gains—such as building corporate empires or enhancing personal reputations. Institutional investors, serving dual roles as external stakeholders and active monitors, leverage professional analytical capabilities, diverse information networks, and substantive corporate influence to impose effective oversight and constraints. Information asymmetry also critically constrains firms' ability to secure long-term financing. Bronson et al. (2006) found that higher institutional ownership correlates with stronger corporate inclination to voluntarily disclose internal control self-assessment reports, thereby significantly reducing investigation, contracting, and monitoring costs in credit transactions. This enhanced trust foundation increases firms' likelihood of securing long-term loans, ultimately curbing short-term debt for long-term financing.

3.1.2. Principal-Agent Theory

The core of agency theory lies in analyzing the contractual relationships and management conflicts arising from the separation of ownership and management rights. Shareholders delegate operational decision-making authority to management, expecting them to maximize shareholder value. However, due to divergent utility functions between the two parties, agents may deviate from principals' objectives to pursue private interests, thereby triggering conflicts of interest. Agency theory posits that such conflicts may drive inefficient investment decisions within firms, particularly leading to overinvestment where investment scale exceeds optimal levels. Institutional investors, occupying dual roles as corporate shareholders and external regulators, actively gather and analyze information about listed companies to safeguard their investment interests. Leveraging their expertise, they can

monitor and deter improper conduct by insiders. Furthermore, as a unique governance force bridging controlling shareholders and retail investors, institutional investors influence corporate decisions and disclosure quality through participation in corporate governance and oversight of listed company operations. This engagement helps mitigate excessive investment stemming from agency problems.

3.1.3. Shareholder Activism Theory

Shareholder activism refers to the investment strategy and practice whereby shareholders proactively exercise their rights under the law and articles of association to oversee and influence management decisions and corporate operations, with the aim of safeguarding their interests, improving corporate governance, or enhancing enterprise value. When exercising shareholder rights, institutional investors can not only leverage their professional investment expertise to effectively guide companies toward standardized investment practices; but also leverage substantial capital and extensive market resources to exert substantive influence over management decisions, thereby safeguarding their legitimate rights and interests from improper encroachment. As the institutional investor base continues to expand, diversify in type, and benefit from an increasingly refined capital market regulatory environment, their role has evolved from traditional passive financial investors to active governance participants practicing shareholder activism.

3.2. Analysis of Influence Mechanisms and Research Hypotheses

3.2.1. Base Case Scenario

Institutional investors exhibit distinct characteristics such as specialized investment management, diversified investment portfolios, and standardized investment practices. They typically engage in corporate governance through both internal actions and external interventions. By participating in governance processes, institutional investors aggregate and compare governance practices and information across companies, thereby accumulating richer experience and developing more professional judgment capabilities (Li Wei'an and Li Bin, 2008). Institutional investors are often regarded as advocates for minority shareholders. Leveraging their information advantage and professional judgment, they actively monitor the rationality of resolutions made at shareholder meetings, board of directors meetings, and supervisory board meetings, blocking proposals that may harm minority shareholders' interests (Pound, 1988). They effectively fulfill their oversight function by “voting with their hands.” Therefore, as institutional investors' shareholding ratios increase, their enthusiasm and influence in corporate governance also grow, enabling them to more effectively constrain management's moral hazards and opportunistic behaviors. Ultimately, this exerts a restraining effect on the phenomenon of short-term debt being used for long-term purposes within enterprises. Based on this, Hypothesis 1 is proposed for verification:

Hypothesis 1: Institutional investor shareholding can reduce the extent of short-term debt being used for long-term purposes in listed companies.

3.2.2. Intermediary Mechanism Hypothesis

Financing constraints limit a firm's ability to obtain long-term capital, thereby prompting it to use short-term debt to support long-term investments. Institutional investors help reduce information asymmetries between firms and their stakeholders, enhancing the trust of external investors and creditors in the firm. For financial institutions such as banks, the participation of institutional investors can be viewed as a form of external validation, alleviating their concerns about lending risks and making them more willing to provide firms with longer-term, relatively lower-cost credit support. As enterprises broaden their long-term financing channels and improve financing conditions, their excessive reliance on short-term debt diminishes, and the tendency to use short-term debt for long-term purposes weakens. Therefore, institutional investors can alleviate financing constraints, thereby influencing the debt maturity structure of enterprises and reducing the use of short-term debt for long-term purposes. Based on the above analysis, Hypothesis 2 is proposed for verification:

Hypothesis 2: Institutional investor ownership can reduce the extent to which listed companies use short-term debt for long-term purposes by alleviating financing constraints.

4. Research Design

4.1. Dependent variables and independent variables

This study selected Shanghai and Shenzhen A-share listed companies from 2007 to 2024 as the research sample. The sample underwent the following screening and processing: (1) Financial enterprises were excluded based on the CSRC's 2012 Guidelines for Industry Classification of Listed Companies; (2) ST, *ST, and PT companies were removed; (3) Observations with severe missing values in key variables were deleted; (4) All continuous variables underwent tail trimming at the 1% and 99% percentiles. Data were sourced from the Guotai An (CSMAR) database.

4.2. Variable Definition

4.2.1. Dependent variables and independent variables

The dependent variable is short-term debt used for long-term purposes. This paper adopts the measurement metric developed by Zhong Kai et al. (2016) based on the cash flow statement, calculated as follows:

Short-term debt used for long-term purposes = [Cash outflow from investing activities (e.g., fixed asset purchases) – (Increase in long-term debt + Increase in equity + Net cash flow from operating activities + Cash inflow from fixed asset sales)] / Total assets

The dependent variable is institutional investor ownership, measured by the proportion of shares held by institutional investors in listed companies.

4.2.2. Mediating Variable

Financing constraints serve as the key mediating variable in examining how institutional investor ownership influences short-term debt for long-term use. This study employs the KZ Index as the primary indicator of financing constraints, developed based on the methodology proposed by Wei Zhihua et al. (2014).

4.2.3. Control Variables

To mitigate omitted variable bias and ensure unbiased estimation of the core explanatory variable, this study incorporates a series of control variables based on existing research. These variables are selected from both financial and governance dimensions: Financial controls include firm size, debt-to-asset ratio, return on assets, growth rate, operating cash flow, and fixed asset ratio. Governance controls encompass board size, equity concentration, and management shareholding ratio.

Table 1. Key Variable Definitions

Variable Type	Variable Name	Variable Symbol	Variable Definition
Dependent Variable	Short-Term Debt for Long-Term Use	SFLI	Cash outflow from investing activities (e.g., fixed asset purchases) - (increase in long-term debt + increase in equity + net cash flow from operating activities + cash inflow from fixed asset sales), adjusted for scale effects using prior year total assets
		SDLA	Short-Term Debt Ratio (Short-Term Debt / Total Debt) minus Short-Term Asset Ratio (Short-Term Assets / Total Assets)
Explanatory Variable	Institutional Investor Ownership	INS	Institutional investor ownership ratio of listed companies
Moderator Variable	Financing Constraint	KZ	Calculated by classifying net operating cash flow/total assets at beginning of year, cash dividends/total assets at beginning of year, cash holdings/total assets at beginning of year, debt-to-asset ratio, and Tobin's Q value. Performs ordered logistic regression based on the formula, calculates regression coefficients, and determines the financing constraint level for each listed company.
Control Variables	Firm Size	SIZE	Log of total assets at period end
	Debt-to-Asset Ratio	LEV	Ratio of total liabilities to total assets at period end
	Return on Assets	ROA	Ratio of net profit to total assets at period end
	Firm Growth	GROWTH	Revenue growth rate
	Operating Cash Flow	CF	Net cash flow from operating activities / Total assets at period-end
	Fixed Asset Ratio	FA	Net fixed assets / Total assets
	Board Size	BOARD	Natural logarithm of total board members
	Shareholding Concentration	TOP1	Shareholding ratio of largest shareholder
	Management Shareholding Ratio	MH	Management shareholding quantity / Total issued shares

4.3. Model Construction

To examine the impact of institutional investor holdings on the short-term debt and long-term financing practices of listed companies, this paper references existing literature by Li Yifei et al. (2022) and Li Zengfu et al. (2022) to construct the following multiple regression model:

$$SFLI_{it} = \gamma_0 + \gamma_1 INS_{it} + \gamma_2 CONTROL_{it} + \sum YEAR + \sum COMPANY + \varepsilon_{it} \quad (1)$$

Subscripts i and t denote individual samples and years, respectively. SFLI is the dependent variable representing the degree of short-term debt financing for long-term use. INS serves as the core explanatory variable, representing the proportion of institutional investor holdings. CONTROL_it denotes control variables. This study also controls for fixed effects of year (YEAR) and company (COMPANY), where ε_it represents the random error term.

Second, to examine the presence of mediation effects, the following set of mediation effect testing equations is constructed:

$$KZ_{it} = \alpha_0 + \alpha_1 INS_{it} + \alpha_2 CONTROL_{it} + \sum YEAR + \sum COMPANY + \varepsilon_{it} \quad (2)$$

$$SFLI_{it} = \beta_0 + \beta_1 INS_{it} + \beta_2 SA_{it} + \beta_3 CONTROL_{it} + \sum YEAR + \sum COMPANY + \varepsilon_{it} \quad (3)$$

4.4. Descriptive Statistics and Correlation Analysis

Table2 presents descriptive statistics for key variables. The Short-to-Long Financing Index (SFLI) for listed companies ranges from a minimum of -0.9855 to a maximum of 0.2554. The sample mean of this variable is -0.0951. Although negative, its economic implication represents the maximum extent to which long-term funds can support long-term investments. Since long-term funds must also be allocated to other long-term purposes, this negative mean does not negate the existence of overall investment-financing maturity mismatch within enterprises. Moreover, the SDLA indicator—a direct measure of short-term debt for long-term use—shows both a mean of 0.2614 and a median of 0.2779, both significantly positive. This strongly supports the fundamental judgment that short-term debt for long-term use is prevalent among A-share listed companies. The mean institutional investor ownership ratio is 43.99%, indicating that institutional investors hold a substantial share in A-share listed companies, with their role as key market participants becoming increasingly prominent. Regarding control variables, the mean firm size (SIZE) is 22.3314 with a standard deviation of 1.2668, covering firms with substantial size variation. The mean debt-to-asset ratio (LEV) is 0.4360, ranging from a maximum of 0.8842 to a minimum of 0.0628, falling within a reasonable range.

Table 2. Descriptive Statistics of Key Variables

Variable	N	Mean	p50	SD	Min	Max
SFLI	38353	-0.0951	-0.0695	0.1765	-0.9855	0.2554
SDLA	38353	0.2614	0.2779	0.2240	-0.4225	0.7254
INS	38353	43.9928	45.7866	24.2517	0.4350	90.8632
SIZE	38353	22.3314	22.1387	1.2668	20.0674	26.3050
LEV	38353	0.4360	0.4321	0.1993	0.0628	0.8842
ROA	38353	0.0335	0.0333	0.0596	-0.2125	0.1964
GROWTH	38353	0.2988	0.1080	0.7986	-0.6664	5.4511
CF	38353	0.0511	0.0486	0.0661	-0.1346	0.2456
FA	38353	0.2233	0.192	0.1599	0.0027	0.6985
BOARD	38353	2.1246	2.1972	0.2004	1.6094	2.7081
TOP1	38353	33.9056	31.6200	14.6246	8.9100	73.8200
MH	38353	11.7543	0.3474	18.0007	0.0000	66.1694

5. Empirical Analysis

5.1. The Impact of Institutional Investor Holdings on Short-Term Debt Financing for Long-Term Use in Listed Companies

Table3 presents the benchmark regression results demonstrating the impact of institutional investor holdings on the short-term debt financing of listed companies.

Table 3. The Impact of Institutional Investor Holdings in Listed Companies on Short-Term Debt for Long-Term Use

Variables	(1) SFLI	(2) SFLI
INS	-0.3032*** (-21.59)	-0.1814*** (-14.52)
SIZE		-0.0432*** (-16.32)
LEV		0.0476*** (4.36)
ROA		-0.9760*** (-47.11)
GROWTH		-0.0306*** (-11.99)
CF		-0.9739*** (-61.92)
FA		0.1593*** (11.52)
BOARD		0.0184** (2.19)
TOP1		0.0012*** (6.69)
MH		-0.0004*** (3.08)
_cons	-0.0374*** (6.06)	0.9088*** (15.66)
N	38021	38021
adj. R^2	0.1178	0.3546

Note: Values in parentheses indicate t-values. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. The same applies below.

Column (1) controls only for firm and year fixed effects. Results show that the coefficient for institutional investor ownership (INS) is -0.3032, significantly negative at the 1% level. In Column (2), after incorporating all control variables, the INS coefficient remains -0.1814 and is highly significant at the 1% level. The results indicate that institutional ownership significantly reduces the extent of short-term debt used for long-term purposes in listed companies, supporting Research Hypothesis 1.

5.2. Robustness Tests

5.2.1. Alternative Measures of the Dependent Variable

To examine whether the benchmark regression results are affected by the measurement method of the dependent variable, this study conducts robustness tests by replacing the dependent variable's measurement approach. Drawing on the methodologies of Liu Xiaoguang and Liu Yuanchun (2019) and Li Zengfu et al. (2022), the degree of short-term debt used for long-term purposes was remeasured using the difference between the short-term debt ratio and the short-term asset ratio. The regression results based on this new measurement method are presented in Table 4. The core conclusions remain unchanged, indicating that the research findings exhibit good robustness.

Table 4. Replace explanatory variable regression results

Variables	(1) SDLA	(2) SDLA
INS	-0.1130*** (-6.70)	-0.0613*** (-3.69)
SIZE		-0.01544*** (-3.13)
LEV		-0.1502*** (-8.59)
ROA		-0.1813*** (-7.03)
GROWTH		-0.0059*** (-3.40)
CF		-0.1063*** (-5.50)
FA		0.413*** (17.86)
BOARD		0.1363 (1.08)
TOP1		-0.0003 (-1.27)
MH		-0.0004* (-1.85)
_cons	0.311*** (41.92)	0.6061*** (5.62)
N	38021	38021
adj. R^2	0.5938	0.6205

5.2.2. Lags the explanatory and control variables by one period

Considering the potential time lag in the impact of institutional investor holdings on listed companies' short-term debt financing, this study lags the core explanatory variable (institutional investor holding ratio) and all control variables by one period before conducting the regression analysis. Table 5 reports the corresponding regression results. Column (1) presents the regression results using only the one-period lagged core explanatory variable without incorporating control variables. Column (2) further includes the one-period lagged control variables. The estimated coefficient for the one-period lagged institutional investor shareholding ratio (L.INS) is negative in both columns, indicating that after lagging the explanatory variable, institutional investor shareholding still exhibits a negative correlation with short-term debt financing for long-term purposes among listed companies.

Table 5. One-period lag regression results

Variables	(1) SFLI	(2) SFLI
L.INS	-0.0590*** (-12.05)	-0.0959*** (-6.09)
L.SIZE		0.1084*** (26.83)
L.LEV		-0.3357*** (-23.30)
L.ROA		-0.6031*** (-20.27)
L.GROWTH		-0.0014 (0.83)
L.CF		-0.1387*** (-6.47)
L.FA		-0.1729*** (-9.95)
L.BOARD		0.0000 (0.00)
L.TOP1		0.0003 (1.49)
L.MH		-0.0010*** (5.29)
_cons	-0.0680*** (-27.88)	-2.2359*** (-5.29)
YEAR	YES	YES
COMPANY	YES	YES
N	32397	32397
adj. R^2	0.0322	0.1928

5.2.3. Endogeneity Test

To address potential endogeneity issues in the model that may distort empirical results, this study employs the instrumental variables approach. Drawing on the methodology of Rubin and Smith (2009) and Li Chuntao et al. (2018), the annual stock turnover rate (ToverTlY) is selected as the instrumental variable for institutional investor ownership share. A higher turnover rate typically indicates shorter holding periods for stocks, which contrasts with the long-term value investment preferences of institutional investors. Therefore, it is expected to be negatively correlated with the institutional investor ownership ratio, satisfying the condition that the instrument variable is related to the endogenous explanatory variable. Simultaneously, this indicator does not directly influence a firm's internal financial decisions, theoretically meeting the requirement of exogeneity.

Table 6. Instrumental Variables Method

Variables	(1) INS	(2) SFLI
ToverTlY	-0.0067*** (-38.45)	
INS		0 .1815*** (3.76)
SIZE	0.0383*** (35.52)	-0.0595*** (-20.31)
LEV	-0.0420*** (-9.12)	0.0704*** (7.81)
ROA	0.2440*** (23.85)	-1.0613*** (-48.00)
GROWTH	0.0021*** (3.09)	-0.0314*** (-25.08)
CF	0.0105 (1.29)	-0.9733*** (-64.51)
FA	-0.0368*** (-6.27)	0.1722*** (15.64)
BOARD	0.0598*** (15.06)	-0.0047 (-0.59)
TOP1	0.0054*** (75.81)	0.0008*** (-2.72)
MH	-0.0037*** (-58.92)	0.0009*** (4.14)
N	38021	38021
Phase 1 F-value	1478.28	

Column (1) presents the results of the first-stage regression. The estimated coefficient for the instrumental variable stock annual turnover rate (ToverTlY) on the endogenous explanatory variable institutional investor shareholding ratio (INS) is significantly negative and highly significant at the 1% level. The F-value is 1478.28, indicating no under-identification issues with the instrumental variable. Column (2) presents the results of the second-stage regression. After controlling for endogeneity, the estimated coefficient for institutional investor ownership (INS) remains significantly negative at the 1% level. Even after employing the instrumental variables method to mitigate endogeneity bias, an increase in institutional investor ownership still significantly reduces the extent to which listed companies use short-term debt to finance long-term obligations.

5.3. Analysis of Mediation Effects Based on Financing Constraints

According to the regression results in Table 3, the first step in testing the mediation effect is satisfied: institutional investor ownership and the short-to-long debt ratio of listed companies exhibit a significant negative correlation, allowing progression to the second step. Table 7 presents the results of testing the mediation effect of financing constraints.

Column (1) of Table 7 reports the regression results with financing constraints (KZ) as the dependent variable. The results show that the estimated coefficient for institutional investor ownership (INS) is -0.2015, significant at the 5% level. This indicates that an increase in the proportion of institutional investor ownership can significantly reduce the degree of financing constraints faced by listed companies. Column (2) presents the regression results incorporating both the core explanatory variable and the mediating variable. Here, the coefficient for institutional investor ownership (INS) is -0.1556, remaining significant at the 1% level; the coefficient for the mediating variable, financing

constraints (KZ), is 0.0406, also significantly positive at the 1% level. Using stepwise mediation analysis, we confirm that financing constraints indeed mediate the relationship. Comparing coefficients reveals that after adding the mediator, the absolute value of the direct effect coefficient for institutional ownership decreases from 0.1814 in the baseline model to 0.1556, indicating partial mediation by financing constraints. Thus, Hypothesis 2 receives empirical support. Institutional investors' professional research and information oversight can narrow the information gap, transmit positive signals to the market, reduce external financing risk premiums, and improve corporate financing environments. Moreover, the role of long-term capital in alleviating short-term debt financing for listed companies is self-evident.

Table 7. Institutional Investors, Financing Constraints, and Short-Term Debt for Long-Term Use

Variables	(1) Financing Constraints KZ	(2) Short-Term Debt for Long-Term Use SFLI
KZ		0.0406*** (31.62)
INS	-0.2015** (2.15)	-0.1556*** (-12.44)
SIZE	-0.6200*** (-22.98)	-0.0282*** (-9.65)
LEV	7.2759*** (68.21)	-0.2537*** (-18.43)
ROA	-4.7140 *** (-24.90)	-0.8041*** (-38.94)
GROWTH	-0.0546*** (-4.75)	-0.0325*** (-12.84)
CF	-14.9431*** (-108.88)	-0.3756*** (15.45)
FA	3.3850 (0.56)	-0.002 (-0.01)
BOARD	-0.1900** (-2.45)	0.0267** (3.23)
TOP1	-0.012*** (-6.93)	0.0017*** (9.22)
MH	-0.0160*** (-12.43)	0.0007*** (5.36)
_cons	13.838*** (22.81)	0.5982*** (9.37)
YEAR	YES	YES
COMPANY	YES	YES
N	38021	38021
adj. R^2	0.8214	0.0639

5.4. Analysis of Institutional Investor Heterogeneity

Different investor types exhibit distinct investment preferences, holding periods, and corporate governance motivations, leading to varying effects on listed companies' short-term debt for long-term use. From a heterogeneity perspective, this study further examines the differential impacts of different institutional investor types on listed companies' short-term debt for long-term use.

Drawing upon the research of Li Zhengguang et al. (2015), this study categorizes institutional investors into two types—stable-holding and trading-oriented—based on the core characteristic of holding stability. Stable-holding institutional investors typically possess a longer-term perspective,

stronger motivation to actively engage in corporate governance, and deeper insight into internal corporate information. Consequently, they may more effectively mitigate agency costs, thereby producing distinct governance effects on short-term debt financing for long-term investment compared to trading-oriented institutional investors.

Table 8. Analysis of Heterogeneity Between Stable and Trading Institutional Investors

Variables	(1) Stable Institutional Investors SFLI	(2) Trading Institutional Investors SFLI
INS	-0.2627*** (-11.61)	-0.1589*** (-8.66)
SIZE	-0.0492*** (-10.78)	-0.0346*** (-8.87)
LEV	0.0605*** (3.33)	0.0683*** (4.11)
ROA	-0.8996*** (-24.83)	-1.0196*** (-36.99)
GROWTH	-0.0329*** (-8.80)	-0.0260*** (-7.76)
CF	-0.9629*** (-40.19)	-0.9467*** (-40.23)
FA	0.1694*** (7.26)	0.1603*** (7.95)
BOARD	0.0221* (1.69)	0.0183 (1.51)
TOP1	0.0011*** (3.49)	0.0013*** (4.96)
MH	-0.0007* (1.76)	-0.0008*** (-4.19)
_cons	1.0952*** (10.85)	0.685*** (8.04)
YEAR	YES	YES
COMPANY	YES	YES
N	17131	16619
adj. R^2	0.3530	0.3873
Intergroup Coefficient Difference Test	0.102***	

As shown in the table above, among transactional institutional investors, the coefficient between Institutional Shareholding (INS) and Short-Term Debt for Long-Term Use (SFLI) is -0.1589; For stable institutional investors, the coefficient between institutional investor holdings (INS) and short-term debt used for long-term financing (SFLI) is -0.2627, which is negatively significant at the 1% level. This indicates that among stable institutional investors, institutional holdings exert a stronger mitigating effect on companies' short-term debt used for long-term financing. This finding also passed the test for coefficient differences between groups.

To further examine the differential governance effects of institutional investor holdings on firms' short-to-long debt financing, this study adopts the approach of Yang, Haiyan et al. (2012). Based on whether business ties or potential conflicts of interest exist between institutional investors and their portfolio companies, institutional investors are categorized into independent and non-independent types. This study classifies securities investment funds, social security funds, and Qualified Foreign

Institutional Investors (QFII) as independent institutional investors, while all other institutional investors are categorized as non-independent.

Table 9. Analysis of Heterogeneity Between Independent and Non-Independent Institutional Investors

Variables	(1) Independent Institutional Investors SFLI	(2) Non-Independent Institutional Investors SFLI
INS	-0.2627*** (-4.84)	-0.1754*** (-14.05)
SIZE	-0.0506*** (-19.20)	-0.0440*** (-16.62)
LEV	0.0576*** (5.23)	0.0490*** (4.48)
ROA	-1.0165*** (-50.04)	-0.9787*** (-47.35)
GROWTH	-0.0311*** (-12.08)	-0.0306*** (-11.98)
CF	-0.9736*** (-61.81)	-0.9739*** (-61.89)
FA	0.1650*** (11.90)	0.1601*** (11.57)
BOARD	0.0068 (0.80)	0.0182** (2.16)
TOP1	0.0001 (0.85)	0.0012*** (7.02)
MH	0.0002 (1.55)	-0.0004*** (-2.88)
_cons	1.0474*** (18.05)	0.9198*** (15.85)
YEAR	YES	YES
COMPANY	YES	YES
N	38021	38021
adj. R^2	0.3485	0.3540

As shown in the table above, among non-independent institutional investors, the coefficient between Institutional Shareholding (INS) and Short-Term Debt for Long-Term Use (SFLI) is -0.1754, which is negatively significant at the 1% level. Among independent institutional investors, the coefficient between institutional investor holdings (INS) and short-term debt used for long-term financing (SFLI) is -0.2627, negatively significant at the 1% level. This indicates that among independent institutional investors, institutional holdings exert a stronger mitigating effect on listed companies' short-term debt used for long-term financing. Independent institutional investors make decisions free from interference by listed companies, related parties, or controlling shareholders. Non-independent institutions often face conflicts of interest such as business synergies or equity ties, making their decisions susceptible to non-market factors. This difference in independence determines the objectivity and effectiveness of their governance actions.

6. Conclusions and Recommendations

6.1. Conclusions

This study employs empirical analysis using data from Shanghai and Shenzhen A-share listed companies between 2007 and 2024 to investigate the impact of institutional investor holdings on short-term debt financing for long-term purposes among listed firms. The primary findings are as follows:

(1) Institutional investor holdings effectively reduce the extent of short-term debt financing for long-term purposes among listed companies. This empirical result withstands robustness tests, and the use of the instrumental variables method overcomes potential endogeneity issues.

(2) This study further analyzes the mediating effect of institutional investor ownership on short-term debt financing for long-term investment. The mediating effect demonstrates that institutional investor ownership reduces short-term debt financing by alleviating endogenous financing constraints. Findings indicate that higher institutional ownership alleviates firms' financing constraints.

(3) Agency costs moderate the relationship between institutional ownership and short-term debt financing for long-term purposes. Higher agency costs, measured by management expense ratios, strengthen the inhibitory effect of institutional ownership on short-term debt financing. This indicates that in firms with more severe conflicts of interest between shareholders and management, the marginal effect of governance improvements brought by institutional investors is more pronounced.

(4) Finally, a grouped regression analysis by firm category reveals that the reduction in short-term debt financing for long-term investment by institutional investor ownership is more pronounced in firms with lower risk preferences, higher asset reversibility, and those operating in non-high-tech industries.

6.2. Countermeasures and Recommendations

(1) Encourage greater market participation by institutional investors

Prioritize expanding the equity investment allocation of medium- to long-term capital such as social security funds, pension funds, and insurance capital. Implement policies like tax incentives to promote long-term investment principles, thereby providing stable capital to the market. Simultaneously, strengthen legal safeguards for institutional investors' participation in corporate governance, supporting their effective oversight of corporate financial practices through voting rights and director nominations to curb management's tendency toward excessive reliance on short-term financing. Furthermore, enhance disclosure of listed companies' debt maturity structures and capital allocation to improve market transparency, enabling institutions to accurately identify maturity mismatch risks and optimize resource allocation. Guide institutions to abandon short-term ranking pressures by establishing evaluation systems focused on long-term performance and governance improvements, fostering patient capital and responsible investment principles. This will fundamentally drive enterprises to optimize debt structures and reduce short-term debt used for long-term purposes.

(2) Strengthen internal and external corporate governance mechanisms

This study confirms that institutional investor holdings can significantly curb short-term debt for long-term use by easing corporate financing constraints. However, the effectiveness of this transmission mechanism is not isolated but significantly constrained by both internal and external corporate governance environments. Therefore, to consolidate and amplify the positive governance effects of institutional investors, efforts must extend beyond guiding investors themselves. Concurrent improvements to internal and external management mechanisms of listed companies are essential to provide a solid institutional foundation for these effects to take hold. At the internal management mechanism level, recent institutional evolution centers on enhancing oversight effectiveness and decision-making professionalism. Establishing routine working mechanisms with

clear responsibilities and standardized procedures can effectively identify and constrain short-sighted management behaviors, including inappropriate debt maturity mismatches. At the external management mechanism level, the key lies in strengthening market constraints and optimizing the information environment. Robust external constraints primarily stem from sustained, rigorous market supervision, while their efficacy also derives from an increasingly refined information disclosure system.

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