

The Research on the Influence of Foreign Shareholding Ratio on Stock Return

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Abstract

With the continuous improvement of the openness of China's capital market, the shareholding ratio of foreign capital in the A-share market has been rising steadily, and its impact mechanism on stock returns has become an important issue of concern in both academic and practical circles. Based on the data of Shanghai-Hong Kong and Shenzhen-Hong Kong Stock Connect stocks from 2014 to 2023, this paper empirically studies the dynamic impact of foreign capital's shareholding ratio on A-share stock returns and its transmission path. The research finds that there is a significant negative correlation between foreign capital's shareholding ratio and stock returns; meanwhile, from the perspective of market reaction, the choice of stock liquidity in the transmission mechanism validates the rationality of this theory.

Keywords

Foreign Ownership Ratio; Stock Liquidity; Stock Return.

1. Introduction

In recent years, with the acceleration of China's capital market opening-up process, the shareholding scale of foreign capital in the A-share market has significantly increased. By the end of 2023, the proportion of foreign capital holding in the A-share market had exceeded 4%, and in some core assets, the shareholding ratio even surpassed 30%, becoming a marginal pricing force that cannot be ignored. The continuous inflow of foreign capital has not only changed the investor structure of the A-share market but also profoundly influenced the formation mechanism of stock returns. However, the transmission path between foreign capital holdings and stock returns remains unclear: Is the impact driven by short-term liquidity effects or long-term fundamental value discovery? Does asymmetry exist under different market conditions? Answering these questions holds important implications for regulatory policy formulation, investor asset allocation, and capital market opening strategies.

2. Literature Review

2.1. Foreign Shareholding

Current research primarily examines the impact of foreign capital inflows on markets and enterprises. Gu Songnan (2019) noted that large-scale foreign capital entry may trigger market volatility due to macroeconomic conditions and investor psychology [1]. Yang Peng (2018) argued that while stock price fluctuations are linked to financial openness, they fundamentally depend on a nation's economic characteristics and political system [2]. Wang Tao (2018) demonstrated through theoretical modeling that domestic stock market returns are constrained by both local and global factors, with foreign capital flows exerting a guiding effect on domestic capital flows [3].

2.2. Impact of Foreign Shareholding on Liquidity

Yang Qiuping et al. (2022) demonstrated that stock liquidity formation is influenced by trader behavior [4]. Market participants with information advantages tend to widen bid-ask spreads when trading with uninformed counterparts to offset information asymmetry-induced losses. As transaction costs increase, stock liquidity consequently deteriorates.

2.3. Impact of Liquidity on Stock Returns

Foreign ownership will attract greater attention from domestic investors, enhancing market competition through increased liquidity and ultimately reducing stock premiums via the market's price discovery mechanism. Xu Shoufu et al. (2022) found that improved stock liquidity significantly boosts corporate financial asset investments, with this effect being more pronounced in firms with higher relative returns on financial assets and non-state-owned enterprises [5].

3. Theoretical Analysis

The impact of foreign ownership on stock returns is primarily mediated through foreign capital's market influence, which indirectly reduces returns by dampening individual stock liquidity. Firstly, foreign ownership absorbs tradable shares, thereby reducing market activity [6]. Secondly, foreign investors' information advantage positions them as informed traders, prompting other investors to reduce liquidity and widen bid-ask spreads to avoid losses. Lastly, foreign investors are typically institutional investors, and the information networks among institutional investors enable mutual learning, leading to insider trading and market manipulation. This results in higher transaction costs and lower liquidity [7-9].

The liquidity premium theory posits that investors demand higher expected returns for illiquid stocks as compensation for their lower trading convenience, with this excess return constituting the liquidity premium. High-liquidity stocks, characterized by narrow bid-ask spreads and low transaction costs, enable rapid capital conversion, thus attracting investors willing to accept lower returns. Conversely, illiquid stocks face greater trading frictions, often resulting in significant price volatility or even inability to sell promptly when liquidation is required, compelling investors to demand higher risk compensation.

In conclusion, the following hypothesis is proposed:

Hypothesis 1: Foreign ownership will restrain the stock returns of firms.

4. Selection of Experimental Samples and Variables

4.1. Sample Selection and Data Sources

This study employs A-share market listed company data from 2014 to 2023 as the sample. To ensure the reliability of the selected data, the following procedures were applied during empirical analysis: (1) Exclusion of ST, *ST, and financial sector companies; (2) Removal of companies with shorter listing periods within two-year windows, as dividend yield calculations require three consecutive years of financial data; (3) Elimination of samples with missing or significantly abnormal data during the selected period. Additionally, all continuous variables underwent tail-trimming at the 1% level. The required research data was sourced from the Guotai An Database (CSMAR).

4.2. Definition of Key Variables

Annual return on stock. This data uses the annual return on individual stocks, which accounts for cash dividend reinvestment, as a proxy variable for the annual return on holding the stock, denoted as $Yretwd$, as shown in Table 1.

The following formula calculates the annual return rate of individual stocks, considering cash dividend reinvestment:

$$Yretwd_{n,t} = P_{n,t} / P_{n,t-1} - 1$$

$P_{n,t}$: The comparable closing price of stock n on the last trading day of year t , adjusted for cash dividend reinvestment; $P_{n,t-1}$: The comparable closing price of stock n on the last trading day of year $t-1$, adjusted for cash dividend reinvestment.

Foreign ownership ratio. This data adopts the methodology of Li Zhen et al. (2020), using the aggregate foreign ownership ratio of the top ten foreign shareholders as a proxy variable for foreign ownership, denoted as Pof_1 [10]. In the robustness test, the aggregate foreign ownership ratio of the top five foreign shareholders serves as a surrogate for the core explanatory variable, represented by Pof_2 . Additionally, to account for foreign investment in the A-share market through channels such as QFII, the foreign ownership ratio of individual stocks held by QFII is used as a surrogate for the core explanatory variable, denoted as $QFRIO$. Control variables. Drawing on relevant studies, this research selects the following as control variables: debt-to-asset ratio (Lev), financing constraint index (KZ), total asset growth rate ($TAGR$), sustainable growth rate (SGR), firm size ($Size$), and book-to-market ratio (BM).

Mediating variables. Based on relevant studies, we select stock turnover rate as the mediating variable to measure the impact of foreign ownership on individual stock liquidity, denoted as $ToverOsY$.

Table 1. Main Variables Table

type of variable	Variable name	variable symbol
explained variable	annual return on stock	$Yretwd$
explanatory variable	foreign ownership QFII individual stock holding ratio	Pof_1 、 Pof_2 $QFRIO$
metavariable	stock turnover rate	$ToverOsY$
controlled variable	asset-liability ratio financing constraint index total assets growth rate sustainable growth rate company size book value to market value ratio Number of shares held by QFII in individual stocks	Lev KZ $TAGR$ SGR $Size$ BM $QFNUM$

5. Empirical Results Analysis

5.1. Main Regression Analysis

Table 2. Main Regression Analysis Table

	(1)
VARIABLES	$Yretwd$
Pof_1	-0.476**
	(-1.66)
Control	YES
Ind&Year FE	YES
Observations	4,384
R-squared	0.115

The primary regression analysis demonstrated that the explanatory variables significantly explained the dependent variable at the 1% significance level. All control variables also exhibited strong statistical significance during the regression process, further validating the validity of our control variable selection. As shown in Table 2, the negative coefficients of the explanatory variables indicate that an increase in foreign ownership proportion exerts a corresponding inhibitory effect on stock returns in China's A-share market. This confirms Hypothesis 1.

5.2. Robustness Analysis

5.2.1. Replacement of Explanatory Variables

Replace the sum of foreign ownership shares held by the top ten shareholders of listed companies with the sum of foreign ownership shares held by the top five shareholders, and substitute the original variable Pof01 with Pof02. While keeping control variables and the dependent variable unchanged, repeat the main regression analysis steps and perform robustness analysis using the regression results as shown in Column (1) of Table 3. Additionally, to examine foreign investment in the A-share market through channels such as QFII, use the shareholding ratio of QFII in individual stocks as a proxy for the core explanatory variable, replacing the original variable Pof01 with QFRIO, as illustrated in the results of Column (2).

Table 3. Robustness Analysis Table

	(1)	(2)
VARIABLES	Yretwd	Yretwd
Pof02	-0.017*	
	(-0.07)	
QIRIO		-0.028***
		(-3.33)
QINUM		0.013*
		(1.89)
Control	YES	YES
Ind&Year FE	YES	YES
Observations	4,384	4,384
R-squared	0.436	0.437

After the replacement of the explanatory variables, the stability analysis results are consistent with the conclusions of the main regression analysis. The increase of foreign ownership still has a significant effect on the growth of stock returns at the 1% level.

5.2.2. Quantile Regression

Quantile regression reveals the heterogeneous characteristics of foreign ownership effects across different yield distribution intervals, particularly excelling at capturing nonlinear changes in foreign capital's role under extreme market conditions. This is crucial for understanding foreign investors' stabilizing effects or market amplification effects during crises. By comparing regression coefficients across different quantiles, we can identify differential impacts of foreign ownership on high-yield and low-yield stocks. For instance, the study may demonstrate that foreign capital's reinforcing effect on high-performing stocks is more pronounced than its stop-loss effect on loss-making stocks.

Table 4. Results of Robustness Analysis for Quantile Regression

	(1)	(2)	(3)
	0.25th percentile	0.5th percentile	0.75th percentile
VARIABLES	Yretwd	Yretwd	Yretwd
Pof01	-0.271** (-1.13)	-0.419* (-1.77)	-0.836*** (-2.98)
Control	YES	YES	YES
Ind&Year FE	YES	YES	YES
Observations	4,384	4,384	4,384
R-squared	0.436	0.437	0.439

As shown in Table 4, the results from separate analysis of the sample divided into three clusters are largely consistent with the primary regression analysis. The proportion of foreign ownership shows similar negative impacts on stock returns across all three quantiles, with all demonstrating statistically significant effects. This indicates that foreign ownership's influence on stock returns remains consistent regardless of distribution range, consistently exerting a restraining effect.

5.3. Heterogeneity Test and Endogeneity Analysis

5.3.1. Classification of Samples based on Corporate Ownership and Industry

To differentiate state-owned enterprises (SOEs) from non-SOEs, we examine how property rights nature modulates foreign ownership effects. Given SOEs' advantages in policy support and financing access, foreign investors' stakeholding in them is often driven by long-term strategic positioning or policy arbitrage motives, resulting in relatively moderate returns. In contrast, non-SOEs typically face tighter financing constraints, where foreign investment can significantly enhance corporate governance and market recognition, generating stronger positive returns. As shown in Table 5 (Columns 1 and 2), this comparative analysis helps identify whether foreign ownership's value creation mechanisms differ by property rights nature, providing a basis for optimizing foreign participation in SOE governance under mixed-ownership reform.

Table 5. Heterogeneity Analysis Results

	(1) state-owned enterprise	(2) Non-state-owned enterprises
VARIABLES	Yretwd	Yretwd
Pof01	-0.364*** (1.18)	-0.077* (-0.27)
Control	YES	YES
Ind&Year FE	YES	YES
Observations	1,856	2,528
R-squared	0.526	0.389

The regression coefficients from the classification analysis demonstrate that foreign ownership significantly enhances the return rates of state-owned enterprises (SOEs) compared to non-SOEs, indicating heightened market attention toward SOEs. Their investment activities exert stronger market-driving effects, triggering volatility through information feedback

mechanisms that ultimately influence corporate stock returns. In contrast, non-SOEs exhibit lower attractiveness to foreign investors, resulting in negligible market fluctuations. This confirms SOEs' greater sensitivity to foreign ownership.

5.3.2. Time-lagging the Explanatory Variables

To address the endogeneity issue in the study, we introduce a one-period lagged foreign ownership as the instrumental variable, denoted as Pof01_1. This variable satisfies two key criteria: it remains correlated with the original foreign ownership ratio while maintaining no direct relationship with stock returns, thus justifying its use as an instrumental variable. As shown in the regression results (Table 6), the lagged foreign ownership still demonstrates significant explanatory power for stock returns, consistent with the primary regression findings.

Table 6. Endogenous Analysis Results

VARIABLES	(1) Yretwd
Pof01_1	-0.079* (-0.37)
Control	YES
Ind&Year FE	YES
Observations	1,630
R-squared	0.410

Introducing time lag effects helps identify the dynamic characteristics of foreign ownership impacts. In the short term, foreign capital inflows may trigger herd behavior, driving up stock prices. The long-term effects, however, depend on whether foreign investors genuinely improve a company's fundamentals. By constructing lagged models, we can distinguish between the short-term liquidity effects and long-term value effects of foreign ownership, providing investors with a basis for developing differentiated strategies for short-term trading and long-term allocation.

5.4. Mediation Effect Test

As shown in Table 7, regression analysis reveals that the turnover rate significantly impacts stock holding returns, with a p-value of 0.01. Furthermore, a regression analysis between annual stock turnover rates and foreign ownership ratios of listed companies demonstrates statistical significance at the 1% level.

Table 7. Mediation Effect Test Table

VARIABLES	(1) Yretwd	(2) ToverOsY
ToverOsY	0.015* (9.77)	
Pof01		-6.634* (-1.49)
Control	YES	YES
Ind&Year FE	YES	YES
Observations	4,384	4,384
R-squared	0.453	0.180

The increase in foreign ownership has reduced stock turnover rates, which suppresses the liquidity of individual stocks. Meanwhile, higher turnover rates positively affect stock returns. The transmission results show that foreign ownership inhibits the growth of stock holding returns, consistent with the findings from principal regression analysis and robustness analysis. The statistical significance of the regression results validates the rationality of this transmission mechanism.

6. Summary and Recommendations

Under the investment trading mechanism, regulators should enhance risk warnings and investor guidance by clearly defining the quantity and proportion of foreign capital in the market, delineating its investment scope, and establishing exit mechanisms. While deepening financial openness, it is essential to thoroughly study the transmission mechanisms of financial risks, preemptively build prevention systems, set market risk warning thresholds, maintain fixed accounts for risk mitigation, address market vulnerabilities in emergencies, and improve the establishment of risk response mechanisms.

Listed companies should enhance financial transparency by ensuring the accuracy and timeliness of information disclosure to mitigate the impact of market information asymmetry. While introducing high-quality foreign institutions can help stabilize the market, their governance effectiveness remains constrained by information barriers. Therefore, improving information transmission efficiency is particularly crucial. When attracting foreign investment, priority should be given to large overseas investors with direct equity holdings rather than indirect shareholders.

Furthermore, the foreign investment access policy will be optimized by implementing a "negative list" management system, which explicitly prohibits or restricts foreign investment in certain industries, while setting upper limits on foreign ownership ratios in strategic sectors. Concurrently, enhanced monitoring of cross-border capital flows will be conducted, with a real-time database of foreign ownership established to prevent short-term speculative capital activities or malicious acquisitions.

In conclusion, it is essential to attract high-quality foreign investment through open policies while mitigating risks via regulatory measures. Governments must strike a balance between national security and economic efficiency, enterprises need to optimize their governance structures, and markets should enhance their resilience, ultimately achieving a win-win outcome for both foreign investment and the domestic economy.

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