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INVESTOR SENTIMENT DIVERGENCE AND STOCK MARKET PERFORMANCE: EVIDENCE FROM CHINA

ABSTRACT

This paper uses the CSI 300 index as a sample to empirically examine the impact of sentiment differences between retail and institutional investors on stock excess returns, measured by the buy-sell imbalance indicator (BSI). The benchmark regression results reveal that sentiment differences between investors have a statistically significant negative effect on stock excess returns. These findings remain robust after conducting a series of tests, including using alternative samples, excluding outlier years, and incorporating firm-level control variables. Mechanism analysis indicates that institutional investor sentiment plays a dominant role in driving excess stock returns, and the negative impact of sentiment differences is more pronounced in environments with higher information transparency. Furthermore, heterogeneity analysis demonstrates that the negative effect of sentiment differences is more significant in small firms, state-owned enterprises, and firms with high analyst coverage. These findings offer both theoretical and practical insights, providing empirical evidence on how sentiment differences influence stock excess returns and offering valuable recommendations for investors and policymakers.

Keywords: investor sentiment, sentiment divergence, buy-sell imbalance (BSI), information environment, stock price performance, excess stock returns

JEL Classification: G12, G14

INTRODUCTION

The functioning of the capital market is always influenced by the factor of investor sentiment. Behavioural finance mentions that in addition to rational factors such as fundamental economic conditions, irrational factors such as investor sentiment and cognitive biases can also have an impact on stock prices and stock yields. In the Chinese market, retail investors make up the majority of investors, and these investors lack both knowledge and professional training, which leads them to be affected by emotional fluctuations, noise, and other irrational investor decisions. This type of behaviour can cause market prices to deviate from value, resulting in "market anomalies".

With the continuous improvement and development of China's capital market, the proportion of institutional investors is increasing, but the influence of retail investors in the market still cannot be ignored. Therefore, studying the difference in sentiment between retail investors and institutional investors and how this difference specifically affects the excess returns of stocks has been an ongoing concern in both academia and the industry. Research in this area is not only innovative in theory, but also important in practice and understanding of the Chinese stock market.

In view of this, this paper selects the CSI 300 index as a sample for the period 2015-2023 and employs the buy-sell imbalance indicator to measure the sentiment divergence between retail investors and institutional investors and the impact of this divergence on the future excess returns of stocks. The study shows that when there is a significant sentiment divergence between these two types of investors, it reduces the future excess returns of stocks. This phenomenon is mainly due to information asymmetry and gaps in expertise capabilities. Institutional investors have better access to market information

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and they tend to be professionally trained with better expertise capabilities and therefore invest more rationally. In contrast, retail investors are more influenced by the market and make irrational investment behaviours due to the lack of information and expertise. In addition, this paper constructs an interaction term between the information transparency indicator and the sentiment difference indicator and obtains the conclusion that the negative impact of the sentiment difference between institutional investors and retail investors on stock differential returns is more significant in an environment with higher information transparency.

The contributions of this study are reflected in the following points: (1) it enriches the existing research perspectives on differential stock returns. This paper examines the impact on stock excess returns from the perspective of sentiment differences between institutional investors and retail investors, and the results expand the knowledge of stock returns in academia and the industry; (2) creatively using information transparency as a research mechanism, enriching the market's understanding of the mechanisms affecting stock returns while empirically demonstrating that investor sentiment differences any impact on stock excess returns; and (3) this paper starts from the Chinese market. The findings are of great significance in protecting investors' interests and promoting the healthy development of China's capital market.

LITERATURE REVIEW

With the development of behavioural finance research, numerous theoretical and empirical studies have revealed that capital markets are not fully efficient, and their participants are not entirely rational. As a core branch of behavioural finance research, investor sentiment highlights the critical aspect of investor irrationality. Traditional finance adheres to the notion that fundamental values determine stock prices, while behavioural finance emphasizes the profound impact of investor psychology and behavioural characteristics on stock prices. Broadly speaking, investor sentiment is viewed as a subjective belief about future cash flows and investment risks that are not based on facts (Baker & Wurgler, 2006). Furthermore, investor sentiment not only influences overall market returns (Brown & Cliff, 2004; De Long et al., 1990) but also affects individual stock returns and even has a significant impact on liquidity (Debata et al., 2018), adjusting the information efficiency of capital markets and thus influencing the information content in stock prices (Baker M et al., 2006). In terms of stock market risk, existing research generally acknowledges that investor sentiment has an essential impact on market volatility (Zhang et al., 2021), firm-specific risk (Daniel et al., 1998; Li, 2023), and stock price bubbles (Shiller et al., 2000; Pan, 2020).

Faced with the same stock, individual investors and institutional investors may exhibit vastly different emotional reactions, with this difference stemming from belief biases among investors (Ding et al., 2019). Individual investors often exhibit irrational characteristics such as overconfidence and anchoring bias, leading to market prices deviating from their intrinsic values (Hong et al., 1999; Bohl and Brzeszczyński,2006). Studies have confirmed (Zhang et al., 2017) that dramatic fluctuations in Chinese investors' sentiment can cause significant changes in stock returns. Moreover, the higher the degree of information asymmetry, the greater the volatility of investor sentiment, which can further drive-up stock prices and create bubbles (Wang et al., 2018; Agarwal et al., 2024).

Due to their limited ability to access information, retail investors often participate in the market as uninformed traders, making investment decisions based on non-informational factors and transmitting their emotions to the market (Baker and Wurgler, 2006). Subsequent investors make decisions based on the previous trading situation, accumulating emotions and influencing stock prices. Influenced by self-cognitive biases, individual investors are more optimistic about positive news and overestimate the value of small-cap companies while underestimating risks due to "small probability obsession" (BARBERIS N, HUANG M, 2008). The limited information channels and cognitive biases make individual investors' emotions more volatile. Individual investors are more prone to exhibiting irrational characteristics such as the herd effect than institutional investors and react differently to the same information (Jin & Myers, 2006). When individual investors unthinkingly follow public information due to cognitive biases, institutional investors remain cautious. With their higher rationality and lower emotional levels, institutional investors demonstrate higher stock pricing efficiency (Lakonishok et al., 1992; Boehmer and Kelley,2009).

In contrast, institutional investors possess stronger internal information acquisition capabilities and higher levels of professionalization (Fung et al., 2024; Buss and Breugem, 2018). Their herding behaviour facilitates information exchange, moderating radical emotions. Institutional investors can more accurately assess a company's intrinsic value by leveraging their professional knowledge and informational advantages. When sentiment is high, they tend to make rational judgments, avoiding extreme emotions from influencing decision-making. Additionally, institutional investors can engage in arbitrage trading, correcting market mispricing. When sentiment is high, they actively participate in arbitrage, reducing market irrational volatility and lowering A-share premiums.

Furthermore, institutional investors have abundant resources and channels for acquiring and analyzing market information, enabling them to identify market opportunities and risks accurately. This informational advantage allows institutional investors' sentiments to reflect market realities better. They adopt systematic investment strategies and are less influenced by emotional fluctuations. In contrast, as noise traders (De Long et al., 1990; Ye and Tan,2021), individual investors exhibit stronger irrational characteristics (Barber, 2001; Abideen et al., 2023). Under the influence of the "information cocoon" (Sunstein, 2002; Wang and Chen, 2024) and the "ostrich effect" (KARLSSON N, 2009), individual investors are more susceptible to biased information, displaying overconfidence, anchoring bias, and availability bias. Therefore, institutional investors' sentiment has a more prominent impact on stock excess returns. Based on the above analysis, we believe that there are often significant differences in sentiment between individual and institutional investors, which are transmitted to the market, affecting stock price performance.

AIMS AND OBJECTIVES

The purpose of this study is to empirically examine whether and how investor sentiment differences affect stock excess returns. The ultimate goal is to provide references for investors' decision-making and offer suggestions for the healthy development of China's capital market.

METHODS

Data and samples

In this paper, the constituent stocks of the CSI 300 index from January 1, 2015, to December 31, 2023, are used as samples, and the frequency is daily data. The CSI 300 Index consists of the 300 largest and most liquid stocks selected from China's Shanghai and Shenzhen stock markets, aiming to comprehensively reflect the overall performance of the Shanghai and Shenzhen A-share markets with good representativeness. All data in this article are sourced from WIND and CSMAR databases.

Variables

Following Kumar et al. (2006), we first calculate the relative optimism of individual and institutional investors using the inflow and outflow of funds as follows:

$$BSI_{i,t} = \left(INFLOW_{i,t} - OUTFLOW_{i,t}\right)/\left(INFLOW_{i,t} + OUTFLOW_{i,t}\right), \quad (1)$$

where $INFLOW_{i,t}$ *and* $OUTFLOW_{i,t}$ *represent the inflow and outflow of funds for stock i at time t by investors, respectively.*

Following previous literature (Campbell et al. 2005), we classify individual and institutional traders based on order size. The specific classification standard in the Wind Database is as follows: Retail investors are defined as those with order amounts under RMB 40,000, while institutional investors are those with order amounts exceeding RMB 1 million. To measure the difference in sentiment between the two types of investors, we calculate the bullish sentiment indicators for individual investors and institutional investors, denoted as $BSI_{i,t}^{IND}$ and $BSI_{i,t}^{INI}$, respectively. The sentiment difference between the two is then calculated using the following formula:

$$BSI_{i,t}^{DIFF} = \left|BSI_{i,t}^{IND} - BSI_{i,t}^{INI}\right|. \quad (2)$$

The dependent variable is the stock's excess return (*EXCRET*), measured as the difference between the logarithmic return of the stock considering cash dividends reinvested (*RET*) and the risk-free rate. Following Fama et al. (2015), we also control for the market risk factor (*MKT*), size risk factor (*SMB*), book-to-market ratio risk factor (*HML*), profitability risk factor (*RMW*), and investment level risk factor (*CMA*).

Table 1 presents the descriptive statistics for the main variables used in our analysis. It includes 555,904 observations for the stock excess return (*RET*) and the excess return adjusted for risk-free rate (*EXCRET*), with means of 0.0009 and -0.0034, respectively, indicating a slightly positive return for *RET* and a slightly negative return for *EXCRET* over the sample period. The bullish sentiment indicators for individual investors (BSI^{IND}) and institutional investors ($BSI_{i,t}^{INI}$) are based on 556,450 and 545,860 observations, respectively, with averages of 0.0444 and -0.0766, suggesting that individual investors tend to be more optimistic than institutional investors. The difference in sentiment between the two types of investors

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($BSI_{i,t}^{DIFF}$), calculated using 545,852 observations, has an average value of 0.3654, indicating a significant divergence in sentiment. Additionally, the table provides statistics for the market risk factor (MKT), size risk factor (*SMB*), book-to-market ratio risk factor (*HML*), profitability risk factor (*RMW*), and investment level risk factor (*CMA*), each based on 656,700 observations. These risk factors have means close to zero, with standard deviations ranging from 0.0052 to 0.0131, reflecting their variability over the sample period.

Table 1. Descriptive Statistics of Main Variables.

	Obs.	Mean	Std.	Min	50%	Max
RET	555,904	0.0009	0.0308	-0.2001	0.0000	3.5903
EXCRET	555,904	-0.0034	0.0308	-0.2046	-0.0041	3.5862
BSI^{IND}	556,450	0.0444	0.1726	-1.0000	0.0440	1.0000
BSI^{INI}	545,860	-0.0766	0.3440	-1.0000	-0.0678	1.0000
BSI^{DIFF}	545,852	0.3654	0.2874	0.0000	0.2995	2.0000
MKT	656,700	0.0002	0.0131	-0.0925	0.0005	0.0650
SMB	656,700	0.0002	0.0094	-0.0802	0.0008	0.0545
HML	656,700	-0.0001	0.0078	-0.0380	-0.0005	0.0537
RMW	656,700	0.0001	0.0064	-0.0366	-0.0001	0.0616
CMA	656,700	-0.0001	0.0052	-0.0385	-0.0001	0.0222

Model specification

We employ the following baseline regression model to examine the impact of investor sentiment differences on stock price performance:

$$EXCRET_{i,t} = \alpha_0 + \alpha_1 BSI_{i,t}^{DIFF} + \alpha_2 MKT_{i,t} + \alpha_2 SMB_{i,t} + \alpha_2 HML_{i,t} + \alpha_2 RMW_{i,t} + \alpha_2 CMA_{i,t} + \gamma_t + \mu_i + \varepsilon_{i,t}, \quad (3)$$

where $EXCRET_{i,t}$ is the excess return of stock i at time t; α_0 is the intercept term; α_1 is the coefficient for the difference in investor sentiment ($BSI_{i,t}^{DIFF}$); α_1 to α_6 are the coefficients for the market risk factor ($MKT_{i,t}$), size risk factor ($SMB_{i,t}$), book-to-market ratio risk factor ($HML_{i,t}$), profitability risk factor ($RMW_{i,t}$), and investment level risk factor ($CMA_{i,t}$), respectively; γ_t is the time-specific effect; μ_i is the stock-specific effect; $\varepsilon_{i,t}$ is the error term.

RESULTS

Benchmark results

Table 2 presents the correlation coefficient matrix for the key variables in our analysis. It shows the relationships between the excess return adjusted for specific factors (*EXCRET*), various investor sentiment indicators, and market and risk factors. Notably, *EXCRET* has a negative correlation with the bullish sentiment indicator for individual investors (BSI^{IND}) and a positive correlation with the bullish sentiment indicator for institutional investors (BSI^{INI}). The difference in sentiment between individual and institutional investors (BSI^{DIFF}) shows a negative correlation with *EXCRET*.

Table 2. Correlation Coefficient Matrix.

	EXCRET	BSI^{IND}	BSI^{INI}	BSI^{DIFF}	MKT	SMB	HML	RMW	CMA
EXCRET	1.000								
BSI^{IND}	-0.448	1.000							
BSI^{INI}	0.338	-0.447	1.000						
BSI^{DIFF}	-0.121	0.150	-0.305	1.000					
MKT	0.446	-0.205	0.163	-0.091	1.000				
SMB	0.101	-0.015	0.009	-0.026	0.040	1.000			
HML	-0.187	0.057	-0.057	0.035	-0.144	-0.510	1.000		
RMW	-0.100	0.020	-0.009	0.024	-0.120	-0.723	0.314	1.000	
CMA	-0.035	0.038	-0.040	0.003	-0.043	0.426	0.168	-0.616	1.000

Table 3 presents the benchmark regression results examining the impact of investor sentiment differences (measured by BSI^{DIFF}) on excess stock returns (*EXCRET*). The results are reported across five different model specifications. In all five columns, the coefficient for BSI^{DIFF} is consistently negative and statistically significant at the 1% level. This suggests that a greater divergence in sentiment between individual and institutional investors is associated with lower excess returns. The magnitude of the effect, although small, is robust across different model specifications.

Table 3. Benchmark Regression Results. Note: ***, **, and * represent the 1%, 5%, and 10% significance levels, respectively, and the t-values are included in parentheses.

	(1)	(2)	(3)	(4)	(5)
BSI^{DIFF}	-0.014***	-0.014***	-0.009***	-0.009***	-0.009***
	(-13.101)	(-13.154)	(-9.808)	(-10.960)	(-10.904)
MKT			1.080***	1.042***	1.041***
			(31.043)	(31.156)	(32.934)
SMB				0.144**	0.122**
				(2.402)	(2.059)
HML				-0.423***	-0.431***
				(-3.120)	(-3.297)
RMW					-0.032
					(-0.451)
CMA					0.014
					(0.165)
Constant	0.002***	0.002***	-0.0003	-0.001***	-0.001***
	(3.898)	(3.037)	(-0.518)	(-3.669)	(-3.754)
Year fixed effect	No	Yes	Yes	Yes	Yes
Sector fixed effect	No	Yes	Yes	Yes	Yes
N	545,353	545,353	545,353	545,353	545,353
Adj. R2	0.0147	0.0169	0.208	0.224	0.224

Column (2) of Table 3 adds fixed effects, i.e., fixing year and industry, and the regression coefficient is -0.014 and significant at the 1% level, consistent with the conclusions in Column (1). This indicates that the conclusion remains robust after considering year and industry, and in the later regressions, year and industry are fixed anyway. Columns (3)-Column (5) regression coefficients remain negatively significant after the factors of Market Risk (MKT), Size (SMB), Book-to-Market Ratio (HML), Profitability (RMW), and Level of Investment (CMA) are included as control variables in the model, respectively. This remains consistent with the previous findings and proves the significance and robustness of the relationship. With the inclusion of more control variables, the adjusted R-squared value increases significantly, indicating that the model better explains the variability of excess returns.

The regression coefficients in columns (1)-(5) are consistently negative, which suggests that the difference in sentiment between retail and institutional investors plays an important role in the performance of excess stock returns. The possible explanation for this is that the differences in the sentiment of each type of investor amplify market uncertainty and volatility, which in turn is transmitted to the volatility of stock prices, leading to lower stock excess returns. Overall, this finding emphasizes the importance of paying attention to investor sentiment differences as an influential factor in the concern for excess stock returns, which plays an important role in protecting the interests of investors and caring for the health of the stock market.

Endogeneity issues

Table 4 reports the results of endogeneity tests conducted to assess the potential for reverse causality or omitted variables. In column (1), the lagged value of BSI^{DIFF} ($L.BSI^{DIFF}$) is included as an explanatory variable to capture the potential impact of past sentiment differences on current excess returns. The coefficient is positive and statistically significant at the

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1% level. Column (2) includes the one-period ahead of BSI^{DIFF} ($F.BSI^{DIFF}$) to test for the possibility of reverse causality, the coefficient on $F.BSI^{DIFF}$ is also positive and statistically significant at the 1% level.

Furthermore, we employed the two-stage least squares (2SLS) method, using the lagged value of BSI^{DIFF} as an instrumental variable, to address the endogeneity issue caused by omitted variables. Columns (3) and (4) present the regression results for the first and second stages, respectively. We found that the regression coefficient of $L.BSI^{DIFF}$ on *EXCRET* is 0.198 and statistically significant at the 1% level in the first stage. In the second stage, the regression coefficient of BSI^{DIFF} on *EXCRET* remains significant at the 1% level, with a value of -0.010, which is consistent with the results in Table 3.

Table 4. Results of Endogeneity Tests. Note: ***, **, and * represent the 1%, 5%, and 10% significance levels, respectively, and the t-values are included in parentheses.

	(1)	(2)	(3)	(4)
	EXCRET	EXCRET	$\mathbf{BSI^{DIFF}}$	EXCRET
L. BSI^{DIFF}	0.002***		0.198***	
	(7.013)		(18.033)	
F. BSI^{DIFF}		-0.002***		
		(-4.198)		
BSI^{DIFF}				-0.010***
				(-4.285)
IMR				0.440
				(0.074)
MKT	1.059***	1.057***	-1.966***	1.042***
	(31.176)	(33.298)	(-15.677)	(16.752)
SMB	0.095*	0.137**	-0.144	0.092
	(1.731)	(2.140)	(-0.844)	(0.747)
HML	-0.438***	-0.435***	0.579**	-0.431***
	(-3.250)	(-3.260)	(2.316)	(-3.482)
RMW	-0.049	-0.026	0.039	-0.046
	(-0.667)	(-0.348)	(0.212)	(-0.246)
CMA	0.033	-0.013	0.213	0.034
	(0.386)	(-0.147)	(0.766)	
Constant	-0.006***	-0.004***	0.272***	-0.001
	(-23.933)	(-15.486)	(39.498)	(-0.129)
Year fixed effect	Yes	Yes	Yes	Yes
Sector fixed effect	Yes	Yes	Yes	Yes
N	430,040	429,932	425,749	425,413
Adj. R2	0.260	0.210	0.083	0.059

Robustness checks

In this part, the paper will conduct some robustness tests to further corroborate the robustness of the main findings.

Table 5 reports the results of the robustness tests. Columns (1) and (2) show the regression results of 100 and 200 stocks randomly selected from the CSI 300 index, respectively. By randomly selecting the sample stocks, although the total sample size is reduced from the previous one, the regression coefficients are -0.010 and both are significant at the 1% level, respectively, which is consistent with the previous findings, suggesting that the difference in investor sentiment negatively affects the stock excess returns and remains robust to different samples of stocks.

Table 5. Results of Robustness Tests. Note: ***, **, and * represent the 1%, 5%, and 10% significance levels, respectively, and the t-values are included in parentheses.

	(1)	(2)	(3)	(4)
BSI^{DIFF}	-0.010***	-0.010***	-0.009***	-0.009***
	(-7.028)	(-9.830)	(-10.552)	(-10.828)
MKT	1.030***	1.049***	1.041***	1.041***
	(26.375)	(30.347)	(29.701)	(32.626)
SMB	0.144*	0.148**	0.095**	0.121**
	(1.651)	(2.467)	(1.967)	(2.056)
HML	-0.399**	-0.452***	-0.392***	-0.427***
	(-2.154)	(-3.264)	(-3.031)	(-3.253)
RMW	-0.037	-0.035	-0.040	-0.031
	(-0.467)	(-0.472)	(-0.549)	(-0.434)
CMA	-0.008	0.028	-0.017	0.010
	(-0.073)	(0.287)	(-0.218)	(0.119)
LnSIZ				-0.001***
				(-6.482)
LEV				0.0002
				(0.486)
MB				0.0003
				(0.632)
Constant	-0.002***	-0.001***	0.001	0.016***
	(-2.994)	(-3.367)	(1.354)	(6.163)
Year fixed effect	Yes	Yes	Yes	Yes
Sector fixed effect	Yes	Yes	Yes	Yes
N	183,680	368,337	430,957	542,945
Adj. R2	0.248	0.225	0.191	0.224

2015 and 2020 are two unusual years for the Chinese stock market. Both the stock price crash in 2015 and the new crown epidemic outbreak in 2020 will have an impact on the excess return of stocks. So, referring to the existing studies, this paper excludes 2015 and 2020 and regresses them again, and the regression results are shown in Column (3). As can be seen from the results of column (3), the regression coefficient is -0.009 and significant at the 1% level, which indicates that the results remain unchanged after excluding abnormal years. That is, investor sentiment differences still have a negative impact on stock excess returns and the conclusion is robust.

In addition, firm-level control variables such as firm size, book-to-market ratio and financial leverage also affect the performance of individual stocks and investors' access to information thereby affecting stock excess returns. So, it is also necessary to consider the impact of these control variables on the results. Therefore, this paper adds these control variables to the regression model and regresses them again and the results are given in column (4). The results reported in column (4) show that after adding the control variables firm size (LnSIZ), leverage (LEV) and market capitalization-to-book ratio (MB), the regression coefficient is -0.009 and significant at 1% level, with no change in significance or direction, which further indicates the robustness of the findings and that the difference in investor sentiments negatively affects the excess stock returns.

Mechanism exploration

In this section, we further analyze the mechanism of investor sentiment differences in influencing stock price performance in terms of the sentiment of the two types of investors and the information environment of listed companies.

Table 6 shows the results of the mechanism test, where we first examine the impact of the two types of investor sentiment on their sentiment differences and stock price performance, as shown in columns (1) and (2). In column (1), the regression coefficient of individual investor sentiment is 0.058, but it is insignificant. The regression coefficient of institutional investor

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sentiment is -0.227. It is significant at the 1% level, i.e., the higher the institutional investor sentiment, the smaller the difference in sentiment between the two types of investors. In column (2), the regression coefficient of individual investor sentiment is -0.058 and significant at a 1% level, i.e., the higher the sentiment of individual investors, the worse the stock price performance. The regression coefficient of institutional investors' sentiment is 0.012 and significant at a 1% level, i.e., the higher the sentiment of institutional investors, the better the stock price performance. These results indicate that the two types of investor sentiment have significantly different impacts on stock price performance and that market performance rises only when institutional bullishness is present. In addition, institutional investor sentiment has a more significant positive effect on sentiment differences than individual investors. These show that the negative impact of sentiment differences on stock price performance is primarily dominated by institutional investors.

Table 6. Results of Mechanism Tests. Note: ***, **, and * represent the 1%, 5%, and 10% significance levels, respectively, and the t-values are included in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)
	$\mathbf{BSI^{DIFF}}$	EXCRET	EXCRET	EXCRET	$\boldsymbol{BSI^{INI}}$	
BSI^{DIFF}			-0.004**	-0.001*		-0.007***
			(-2.540)	(-1.908)		(-7.488)
BSI^{IND}	0.058	-0.058***	-0.073***		-0.930***	
	(1.581)	(-9.082)	(-9.990)		(-17.803)	
BSI^{INI}	-0.227***	0.012***		0.036***		
	(-18.946)	(8.544)		(17.220)		
$BSI^{DIFF} \times BSI^{IND}$			0.008			
			(1.065)			
$BSI^{DIFF} \times BSI^{INI}$				-0.016***		
				(-9.037)		
OPA						0.001**
						(2.212)
$BSI^{DIFF} \times OPA$						-0.004***
						(-4.431)
MKT	-0.852***	0.847***	0.862***	0.947***	1.751***	1.041***
	(-11.250)	(36.433)	(37.193)	(33.979)	(11.615)	(32.942)
SMB	-0.221**	0.119***	0.118***	0.127**	-0.013	0.122**
	(-2.029)	(2.718)	(2.663)	(2.394)	(-0.101)	(2.063)
HML	0.331***	-0.401***	-0.409***	-0.404***	-0.874***	-0.431***
	(3.108)	(-4.209)	(-4.205)	(-3.575)	(-3.291)	(-3.299)
RMW	-0.106	-0.022	-0.021	-0.034	0.136	-0.033
	(-0.796)	(-0.411)	(-0.396)	(-0.526)	(0.951)	(-0.465)
CMA	-0.351	0.096	0.087	0.056	-0.662***	0.015
	(-1.607)	(1.399)	(1.239)	(0.714)	(-4.017)	(0.169)
Constant	0.350***	-0.001***	-0.0001	-0.003***	-0.028***	-0.002***
	(45.284)	(-6.058)	(-0.210)	(-9.697)	(-8.002)	(-4.027)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Sector fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
N	545,852	545,353	545,353	545,353	545,852	545,353
Adj. R2	0.132	0.366	0.353	0.292	0.209	0.225

To further test the above conjecture, we add the interaction terms of the two types of investor sentiment indicators with the sentiment difference indicator to the benchmark regression model separately, see Column (3) and Column (4). In column (3), the coefficient of the interaction term between individual investor sentiment and sentiment variance is 0.008, but it is not significant, which indicates that individual investor sentiment does not play a proper moderating role in the process of sentiment variance affecting stock price performance. In column (4), the interaction term coefficient between institutional investors' sentiment and sentiment difference is -0.016, which is significant at the 1% level, indicating that high institutional investors' sentiment exacerbates the negative impact of sentiment difference on stock price performance. Individual investors, often characterized by less professional knowledge and more irrational behaviour, may not substantially or consistently impact market dynamics when sentiment varies. Their decisions might be more scattered and less predictable, thus failing to consistently mitigate or exacerbate the effects of sentiment variance on stock prices. When institutional sentiment is high, it may lead to overvaluation or undervaluation of stocks, exacerbating the discrepancies caused by sentiment differences and affecting stock prices more severely.

Finally, we analyze the mechanism by which sentiment differences affect stock price performance from the perspective of information transparency of listed companies. We use the information environment rating of listed companies as a measure of information transparency of listed companies; the higher the rating, the higher the information transparency, which is obtained from the CSMAR database. Column (5) shows the regression results after adding the interaction term between the information transparency variable and the sentiment difference. Interestingly, the regression coefficient is -0.004 and is significant at the 1% level, i.e., the higher the information transparency, the higher the negative impact of the sentiment difference on stock price performance.

Regarding the conclusion that investor sentiment differences have a greater negative impact on stock excess returns with higher information transparency, the possible explanations are:

1. There is a lot of company-level information in the market, and more information is available to both institutional and retail investors. Retail investors, who mostly lack professional training and have relatively weak knowledge reserves, may disagree when faced with a large amount of information, i.e., speculate on the future trend of a stock from different perspectives, and thus make different investment decisions. This leads to investor sentiment differences will be affected by the negative impact of information transparency and increase, the result of greater differences is a reduction in excess stock returns.
2. The more transparent the information, any differences or inconsistencies in the company's performance are more likely to be exposed, when the sentiment differences appear, the market all kinds of subjects will be more strongly reacted to this. Investors become more sensitive to such discrepancies and adjust their expectations and investment decisions accordingly, thus exacerbating the impact of sentiment discrepancies on excess stock returns.

Heterogeneity analysis

Due to differences in company size, ownership structure, and analyst coverage, firms may exhibit distinct performance and behaviour in the market. Therefore, in this section of heterogeneity testing, we categorize our selected samples based on market capitalization (large vs. small), ownership type (state-owned vs. non-state-owned), and analyst coverage (low vs. high) to conduct grouped regressions. This approach allows us to investigate how investor sentiment differences impact stock excess returns across different sample groups.

Table 7 shows the results of the heterogeneity analysis, with columns (1) and (2) showing the regression results for the subgroups of large-scale firms and small-scale firms, respectively. BSI^{DIFF} has coefficients of -0.008 and -0.009, respectively, and both are significant at the 1% level, with the absolute value of the latter being slightly larger than that of the former, suggesting that the negative impact of sentiment differences on share price performance is more pronounced among small-scale firms. Small-scale firms are typically less diversified and may have a higher concentration of risk, making them more sensitive to changes in investor sentiment. In contrast, large-scale firms often have more diversified revenue streams and a stronger financial position, which can help them weather negative sentiment more effectively.

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Table 7. Results of Heterogeneity Tests. Note: ***, **, and * represent the 1%, 5%, and 10% significance levels, respectively, and the t-values are included in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)
	Large size	Small size	State-owned	Non-state-owned	High analyst cov-erage	Low analyst cover-age
BSI^{DIFF}	-0.008***	-0.009***	-0.010***	-0.008***	-0.011***	-0.008***
	(-6.669)	(-11.303)	(-7.960)	(-8.949)	(-11.287)	(-8.138)
MKT	1.077***	1.013***	1.056***	1.029***	1.038***	1.034***
	(18.770)	(40.431)	(33.178)	(21.777)	(39.359)	(27.344)
SMB	-0.071*	0.290***	0.031	0.188**	0.060	0.182***
	(-1.891)	(5.290)	(0.586)	(2.356)	(0.908)	(2.900)
HML	0.069	-0.854***	-0.313**	-0.508**	-0.527***	-0.276**
	(0.503)	(-19.724)	(-2.484)	(-2.521)	(-3.851)	(-2.133)
RMW	-0.095	0.071	-0.066	-0.017	0.133*	-0.184**
	(-0.994)	(0.902)	(-0.662)	(-0.196)	(1.957)	(-2.488)
CMA	0.044	-0.034	0.337***	-0.211***	-0.246***	0.209*
	(0.291)	(-0.476)	(2.865)	(-3.235)	(-3.463)	(1.866)
Constant	-0.008***	-0.0004	0.002**	-0.001*	-0.001***	-0.001
	(-6.669)	(-0.776)	(2.387)	(-1.899)	(-3.204)	(-1.483)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Sector fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
N	252,540	292,813	224,564	320,789	254,909	290,444
Adj. R2	0.299	0.221	0.282	0.201	0.232	0.230

Columns (3) and (4) show the regression results for subgroups of state-owned and non-state-owned firms, respectively. The coefficients of BSI^{DIFF} are -0.010 and -0.009, respectively, and both are significant at the 1% level, and the absolute value of the former is slightly larger than that of the latter, suggesting that the negative impact of sentiment differences on stock performance is pronounced in state-owned enterprises.

Possible explanations for this are: firstly, due to the uniqueness of their nature, state-owned enterprises are often subject to greater government intervention in their operation and operation, and their performance in the market is more closely watched by investors. Once investor sentiment is inconsistent with market expectations, their share prices will fluctuate more, thus affecting the return on investor investment; second, compared with non-state-owned enterprises, state-owned enterprises are involved in major national strategic undertakings, much of the information is not publicly available, so that investors have access to more limited information. The limited information will allow investors, especially retail investors, to be influenced by noise and other terms in the field of behavioural finance, thus making wrong investment decisions affecting the stock returns of such companies; finally, the market's perception of the risks associated with state-owned enterprises is also different from that of non-state-owned enterprises. SOEs are perceived by the market and investors as bearing higher political and regulatory risks, which can make investors more sensitive to negative sentiment and thus result in fewer excess returns being earned.

Columns (5) and (6) show the regression results for the subgroups with high and low analyst coverage, respectively. The coefficients of BSI^{DIFF} are -0.010 and -0.008, respectively, and both are significant at the 1% level, with the absolute value of the former being slightly larger than that of the latter, suggesting that the negative impact of sentiment differences on stock price performance is more pronounced among firms with high analyst coverage.

Analyst attention is always an important factor in a company's share price performance and stock returns. Compared to companies with low analyst attention, companies with high analyst attention receive more attention from investors because they deliver more information to the market. If the performance of such companies is different from investors' expectations, then the impact of investor sentiment will lead to abnormal fluctuations in the company's share price, which will result in fewer related excess stock returns; in addition, companies with a high analyst focus have a broader investor base, which will further amplify the impact of the difference in investor sentiment on the excess stock returns of various types of investors.

CONCLUSIONS AND DISCUSSION

This paper empirically examines the impact of sentiment differences between retail investors and institutional investors on stock excess returns using daily data of the CSI 300 index from 2015-2023 as a sample. The benchmark regression results show that investor sentiment differences have a negative and significant impact on stock excess returns, i.e., greater sentiment differences among various types of investors correspond to lower stock excess returns. This finding holds after employing a series of robustness tests such as selecting a different sample, excluding outlier years and including firm-level control variables. Endogeneity tests similarly corroborate the negative impact of investor sentiment differences on stock excess returns. The mechanism analysis shows that institutional investor sentiment plays a dominant role in influencing stock excess returns and that the negative impact of sentiment differences on stock excess returns is greater in an environment of greater information transparency. Finally, the heterogeneity analysis shows that the negative impact of sentiment differences is more significant among small firms, state-owned firms, and firms with higher analyst coverage, and provides an explanation for this.

Unlike prior relevant literature, which typically examines retail and institutional investor sentiment in isolation (e.g., Baker & Wurgler, 2006; Fung et al., 2024), this paper focuses on the differences between retail and institutional investor sentiment. By doing so, it provides a more nuanced understanding of how conflicting sentiments between these two groups influence stock excess returns. This approach offers deeper insights into the dynamics of investor behaviour and its impact on market outcomes. Additionally, the mechanism analysis reveals that the predictive power of sentiment differences is stronger in environments with higher information transparency, a finding that contrasts with earlier studies suggesting that sentiment-related factors primarily affect markets in opaque information settings (e.g., Seok, Cho & Ryu, 2006). This mechanism test also clarifies the role of information transparency, which provides a basis for companies and investors to explore ways to improve stock returns in the future Furthermore, the heterogeneity analysis reveals stronger effects of sentiment differences in state-owned enterprises and firms with high analyst coverage. This finding contrasts with prior literature, which suggests that sentiment primarily affects stocks that are more difficult to value (e.g., Baker & Wurgler, 2006). The contrasting results provide new insights into the conditional nature of sentiment-driven market behaviour. These contributions advance the existing literature by offering a more comprehensive framework for understanding the interplay between investor sentiment and stock market dynamics. Finally, this paper emphasizes the relationship between investor sentiment differences and stock excess returns based on a Chinese sample, which provides experience for domestic and foreign investors when investing in the Chinese stock market.

ADDITIONAL INFORMATION

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CONFLICT OF INTEREST

The Authors declare that there is no conflict of interest.

REFERENCES

1. Abideen, Z. U., Ahmed, Z., Qiu, H., & Zhao, Y. (2023). Do behavioral biases affect investors' investment decision making? Evidence from the Pakistani equity market. *Risks, 11*(6), 109. https://doi.org/10.3390/risks11060109
2. Agarwal, V., Taffler, R. J., & Wang, C. (2024). Investor emotions and market bubbles. *Review of Quantitative Finance and Accounting*, 1-31. https://doi.org/10.1007/s11156-024-01309-w
3. Baker, M., & Wurgler, J. (2006). Investor sentiment and the cross-section of stock returns. *The Journal of Finance, 61*(4), 1645-1680. https://doi.org/10.1111/j.1540-6261.2006.00885.x
4. Barber, B. M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *The Quarterly Journal of Economics, 116*(1), 261-292. https://doi.org/10.1162/003355301556400
5. Barberis, N., & Huang, M. (2008). Stocks as lotteries: The implications of probability weighting for security prices. *The American Economic Review, 98*(5), 2066-2100. https://doi.org/10.1257/aer.98.5.2066
6. Boehmer, E., & Kelley, E. K. (2009). Institutional investors and the informational efficiency of prices. *The Review of Financial Studies, 22*(9), 3563-3594. https://doi.org/10.1093/rfs/hhp028

DOI: 10.55643/fcaptp.2.61.2025.4632

7. Bohl, M. T., & Brzeszczyński, J. (2006). Do institutional investors destabilize stock prices? Evidence from an emerging market. *Journal of International Financial Markets, Institutions and Money, 16*(4), 370-383. https://doi.org/10.1016/j.intfin.2005.05.005

8. Brown, G. W., & Cliff, M. T. (2004). Investor sentiment and the near-term stock market. *Journal of Empirical Finance, 11*(1), 1-27. https://doi.org/10.1016/j.jempfin.2002.12.001

9. Buss, A., & Breugem, M. (2018). Institutional Investors and Information Acquisition: Implications for Asset Prices and Informational Efficiency (No. 12900). *CEPR Discussion Papers*. https://doi.org/10.2139/ssrn.2908236

10. Campbell, J. Y., Ramadorai, T., & Vuolteenaho, T. O. (2005). Caught on tape: institutional order flow and stock returns. *NBER,* 11439. https://doi.org/10.3386/w11439

11. Daniel, K., Hirshleifer, D., & Subrahmanyam, A. (1998). Investor psychology and security market under- and overreactions. *The Journal of Finance, 53*(6), 1839-1885. https://doi.org/10.1111/0022-1082.00077

12. De Long, J. B., Shleifer, A., Summers, L. H., & Waldmann, R. J. (1990). Noise trader risk in financial markets. *Journal of Political Economy, 98*(4), 703-738. https://doi.org/10.1086/261703

13. Debata, B., Dash, S. R., & Mahakud, J. (2018). Investor sentiment and emerging stock market liquidity. *Finance Research Letters, 26*(9), 15-31. https://doi.org/10.1016/j.frl.2017.11.006

14. Ding, W., Mazouz, K., & Wang, Q. (2019). Investor sentiment and the cross-section of stock returns: new theory and evidence. *Review of Quantitative Finance and Accounting, 53*, 493-525. https://doi.org/10.1007/s11156-018-0756-z

15. Fama, E. F., & French, K. R. (2015). A five-factor asset pricing model. *Journal of Financial Economics, 116*, 1-22. https://doi.org/10.1016/j.jfineco.2014.10.010

16. Fung, S., Obaid, K., & Tsai, S. C. (2024). Information acquisition and processing skills of institutions and retail investors around information shocks. *Journal of Empirical Finance, 77*, 101495. https://doi.org/10.1016/j.jempfin.2024.101495

17. Hong, H., & Stein, J. C. (1999). A unified theory of underreaction, momentum trading, and overreaction in asset markets. *The Journal of Finance, 54*(6), 2143-2184. https://doi.org/10.1111/0022-1082.00184

18. Jin, L., & Myers, S. C. (2006). R² around the world: New theory and new tests. *Journal of Financial Economics, 79*(2), 257-292. https://doi.org/10.1016/j.jfineco.2004.11.003

19. Karlsson, N., Loewenstein, G., & Seppi, D. (2009). The ostrich effect: Selective attention to information. *Journal of Risk and Uncertainty, 38*(2), 95-115. https://doi.org/10.1007/s11166-009-9060-6

20. Kumar, A., & Lee, C. M. C. (2006). Retail investor sentiment and return comovement. *Journal of Finance, 61*, 2451-2486. https://doi.org/10.1111/j.1540-6261.2006.01063.x

21. Lakonishok, J., Shleifer, A., & Vishny, R. W. (1992). The impact of institutional trading on stock prices. *The Journal of Financial Economics, 32*(1), 23-43. https://doi.org/10.1016/0304-405X(92)90023-Q

22. Li, S., Hoque, H., & Liu, J. (2023). Investor sentiment and firm capital structure. *Journal of Corporate Finance, 80*, 102426. https://doi.org/10.1016/j.jcorpfin.2023.102426

23. Pan, W. F. (2020). Does investor sentiment drive stock market bubbles? Beware of excessive optimism! *Journal of Behavioral Finance, 21*(1), 27-41. https://doi.org/10.1080/15427560.2019.1587764

24. Seok, S., Cho, H., & Ryu, D. (2024) Dual effects of investor sentiment and uncertainty in financial markets. *The Quarterly Review of Economics and Finance*, *95*, 300-315. https://doi.org/10.1016/j.qref.2024.04.006

25. Shiller, R. J. (2000). Measuring bubble expectations and investor confidence. *Journal of Psychology and Financial Markets, 1*(1), 49-60. https://doi.org/10.1207/S15327760JPFM0101_05

26. Sunstein, C. R. (2002). The law of group polarization. *Journal of Political Philosophy, 10*(2), 175-195. https://doi.org/10.1111/1467-9760.00148

27. Wang, H., Wang, X., Bu, F., Wang, G., & Pan, Y. (2018). How the asymmetric information creates bubbles in stock market? *Open Journal of Social Sciences, 6*(8), 202-215. https://doi.org/10.4236/jss.2018.68016

28. Wang, J., & Chen, Z. (2024). SPCM: A Machine Learning Approach for Sentiment-Based Stock Recommendation System. IEEE Access, *12*, 14116-14129. https://doi.org/10.1109/ACCESS.2024.3357114

29. Ye, L., & Tan, Y. M. (2021). Noise trader risk-evidence from China's stock market. *Capital Markets Review, 29*(1), 59-72. https://doi.org/10.1016/j.intfin.2005.05.005

30. Zhang, W., Gong, X., Wang, C., & Ye, X. (2021). Predicting stock market volatility based on textual sentiment: A nonlinear analysis. *Journal of Forecasting*, *40*(8), 1479-1500. https://doi.org/10.1002/for.2777

31. Zhang, Y., Zhang, Y., Shen, D., & Zhang, W. (2017). Investor sentiment and stock returns: Evidence from provincial TV audience rating in China. *Physica A: Statistical Mechanics and its Applications, 466*, 288-294. https://doi.org/10.1016/j.physa.2016.09.043

Лу Б.

РОЗБІЖНОСТІ В НАСТРОЯХ ІНВЕСТОРІВ І ПОКАЗНИКИ ФОНДОВОГО РИНКУ: ДОКАЗИ З КИТАЮ

У цьому дослідженні для проведення оцінювання використано базовий показник – індекс CSI 300, за допомогою якого емпірично вивчено вплив різниці в настроях роздрібних інвесторів та інституційних інвесторів на надлишкову прибутковість акцій на основі індикатора дисбалансу купівлі та продажу (BSI). Результати еталонної регресії показують, що відмінності в настроях інвесторів мають статистично значущий негативний вплив на надлишкову прибутковість акцій. Актуальність цих висновків підтверджена використанням серії тестів на надійність, таких як вибір інших зразків, різні часові проміжки, включення контрольних змінних на рівні фірми. Проведений у дослідженні аналіз свідчить про те, що настрої інституційних інвесторів відіграють домінуючу роль у впливі на надлишкову прибутковість акцій і що негативний вплив різниці в настроях на надлишкову прибутковість акцій є більшим у середовищах із більшою інформаційною прозорістю. Крім того, аналіз гетерогенності показує, що негативний вплив відмінностей у настроях є більш значним у невеликих фірмах, державних компаніях і фірмах із високим рівнем залучення аналітиків. Ці висновки мають і теоретичну, і практичну цінність і є основою для рекомендації для інвесторів і політиків щодо того, як відмінності в настроях упливають на надлишкову прибутковість акцій.

Ключові слова: настрої інвесторів, дивергенція настроїв, дисбаланс між купівлею та продажем (BSI), інформаційне середовище, динаміка цін на акції, надлишок прибутковості акцій

JEL Класифікація: G12, G14

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