



AH Premiums and Firm-Level Sentiment

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ABSTRACT: This study investigates the persistent pricing disparity between dual-listed A-shares and H-shares in China from January 2009 to October 2024, focusing on the role of investor sentiment. Using a novel firm-level sentiment index constructed via principal component analysis (PCA) of behavioral proxies (PSY, RSI, adjusted turnover, and trading volume), I analyze 17,624 firm-month observations to quantify cross-market sentiment differentials. Results reveal that sentiment divergence significantly explains AH premiums, with stronger effects when H-share sentiment exceeds A-share levels. The study identifies short-term persistence of sentiment effects (up to two lags) and seasonal patterns tied to financial reporting cycles. Robustness tests confirm these findings hold beyond crisis periods. By integrating behavioral finance with market condition, this research provides original evidence that investor psychology, amplified by arbitrage constraints, sustains pricing anomalies. The findings challenge traditional asset pricing models and highlight the importance of sentiment metrics in cross-listed securities analysis.

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AH premium, information asymmetry, investor sentiment, liquidity

1. INTRODUCTION

Firms that engage in dual listing by issuing A-shares (traded in the domestic A-share market) and H-shares (traded in the Hong Kong market) can achieve several strategic advantages. First, this approach allows companies to expand their financing capacity by accessing both domestic and foreign investor bases. Second, dual listing enhances a firm's global visibility, attracting scrutiny from international analysts and media, which in turn facilitates overseas business expansion. Additionally, it strengthens domestic brand recognition, particularly in industries supported by government policies. From a risk management perspective, dual listing helps diversify exposure to political and market-specific risks while complying with regulatory requirements in different jurisdictions. Notably, many firms capitalize on the typical premium of A-shares over H-shares to maximize financing gains. By first attracting foreign investment through H-share issuance and subsequently returning to the A-share market for higher valuations, companies optimize their fundraising strategies. This dual-market arrangement also enables investors to leverage opportunities across both the A-share and H-share markets, enhancing portfolio diversification and potential returns.

This study does not focus on the benefits of dual listing but instead examines the underlying causes of the A-share premium and H-share discount. Although A-share and H-share shareholders possess comparable voting rights and residual distribution rights, the price disparity between the two markets persists. Prior research attributes this phenomenon to causes like market segmentation, information asymmetry, and liquidity constraints. In this paper, I propose a novel explanatory framework centered on investor sentiment—a concept rooted in behavioral finance. Investor sentiment refers to irrational behavior that drives asset prices away from their fundamental values (Shleifer and Summers, 1990; De Long, Shleifer, Summers, and Waldmann 1990, 2001; Shleifer and Vishny, 1997). A key distinction lies in the composition of market participants: retail investors, who dominate certain segments (e.g.,

the A-share market), are more susceptible to sentiment-driven trading than institutional investors. This behavioral divergence may contribute to the observed pricing discrepancies across markets.

The Chinese A-share market is predominantly driven by active retail investors, whereas the H-share market is largely composed of foreign institutional investors. This structural divergence raises a critical question: Can sentiment-driven irrational behavior explain the persistent discount of H-shares relative to their A-share counterparts? Furthermore, I observe that short-selling restrictions in China's stock market limit arbitrage opportunities, exacerbating market inefficiencies. Building on these insights, I posit that sentiment-induced mispricing-amplified by constrained arbitrage-plays a key role in the A-H premium puzzle. Specifically, the H-share discount is likely tied to the divergence in investor sentiment between the two markets.

The paper is organized as follows, Section 2 discusses the literature. Section 3 provides the data and methodology. Section 4 presents the main empirical evidence and robust tests results. Section 5 concludes.

2. LITERATURE REVIEW

In China, firms often issue identical shares in both the A-share and H-share markets, yet persistent price discrepancies emerge even after currency conversion. This phenomenon primarily stems from market segmentation and capital flow restrictions in mainland China. Existing literature has extensively examined the underlying causes, with information asymmetry playing a central role.

The A-share market is dominated by domestic retail investors, whereas the H-share market is primarily composed of foreign institutional investors. Conventional wisdom suggests that foreign investors are less informed than their domestic counterparts, placing them at a disadvantage (Chakravarty, Sarkar, and Wu, 1998; Chan, Menkveld, and Yang, 2008). This information asymmetry arises from language barriers, cultural differences, divergent financial systems, and limited access to local information (Brennan and Cao, 1997; Choe, Kho, and Stulz, 2001; Hau, 2001). However, some studies challenge this view. For instance, Doukas and Wang (2013) find that foreign investors in China's B-share market are actually better informed than domestic investors. The broader impact of information asymmetry on dual-listed stock price differentials has been further explored by Gao and Tse (2004), Grossmann, Ozuna, and Simpson (2007), Karolyi, Li, and Liao (2009), and Cai, McGuniness, and Zhang (2011).

Beyond information asymmetry, liquidity differences also contribute to the price gap. Poon, Firth, and Fung (1998) and Chen, Lee, and Rui (2001) demonstrate that illiquidity can exacerbate pricing disparities. The A-share market's high turnover and speculative nature are partly attributable to limited domestic investment channels, capital controls, and restricted global asset allocation. Additionally, the absence of short-selling mechanisms and capital mobility constraints hinder arbitrage opportunities that might otherwise narrow the price gap between dual-listed shares.

Lu and Zhou (2015) highlight another critical factor: investor sentiment. Their findings suggest that mainland China's stock market is more susceptible to prolonged sentiment-driven fluctuations, reflecting differences in market efficiency and irrationality between A- and H-shares. Given the multifaceted nature of this issue, this study introduces investor sentiment as a novel explanatory variable. Prior research offers mixed evidence on the relationship between sentiment and stock returns. Baker and Wurgler (2006, 2007), Frazzini and Lamont (2008), and Huang, Jiang, Tu, and Zhou (2015) document an inverse relationship between lagged sentiment and future returns, whereas Lee, Jiang, and Indro (2002) report a positive association. Conversely, Brown and Cliff (2004) find only a weak linkage, while others (Brown and Cliff, 2005; Schmeling, 2009; Huang, Jiang, Tu, and Zhou, 2015) argue that sentiment effects can persist for up to five years. In the Chinese context, Kling and Gao (2008) detect no robust sentiment-return relationship, whereas Han and Li (2017) contend that sentiment significantly predicts returns.

A key limitation of traditional sentiment measures is their neglect of heterogeneous investor sentiment across individual firms—a critical consideration in the A-share market, where retail investors often exhibit divergent views on different stocks. To address this gap, this study adopts the firm-level sentiment index methodology developed by Kim, Ryu, and Yang (2021).

3. DATA AND METHODOLOGY

My research focuses on Chinese firms with dual listings as A-shares (traded in mainland China) and H-shares (traded in Hong Kong), covering the 15-year period from January 2009 through October 2024. The initial set consists of all 138 cross-listed stocks, though the effective sample size varies annually due to differences in listing dates. The final unbalanced panel comprises 17,624

firm-month observations. All financial data, including stock prices, trading volumes, and market indicators, are sourced from the Wind Database. To construct firm-level sentiment measures, I employ four market-based proxies obtained from Wind: Psychological Line Index(PSY), Relative Strength Index (RSI), Logarithm of the trading volume(Log(volume)), and Adjusted turnover(ATR). Table 1 lists the variables and definition in this analysis.

Table 1 Variables Explanation

This table provides the explanation for the variables used in this analysis.

Variables	Explanation or Measurement
AH Premium	$(P_A - P_H)/P_A$, where P_A and P_H denote A-share and H-share prices, respectively.
PSY	Psychological Line Index: The proportion of ascending periods to total observation periods.
RSI	Relative Strength Index: The normalized ratio of ascending to descending stock movements, scaled 0–100.
Log(volume)	Natural logarithm of daily trading volume.
ATR	Adjusted turnover, $ATR_{i,t} = \text{Turnover}_{i,T} * \frac{\text{Return}_{i,t}}{ \text{Return}_{i,t} }$
ROE	Return on equity: Net income divided by shareholders' equity.
Leverage	Total liabilities divided by total assets.
BM Ratio	Book-to-Market ratio: Book value of equity divided by market capitalization.
Investment	Annual growth rate of total assets.
Tradable Ratio	Proportion of tradable shares to total outstanding shares.
Amihud illiquidity	Following Amihud(2002), is calculated as $ \text{Return}_{i,t} /\text{Volume}_{it}$
Volatility	The standard deviation of daily returns over the past 20 trading days.
Market index	Respective benchmark indices: Shanghai Composite (A-shares), Shenzhen Composite (A-shares), and Hang Seng Index (H-shares).

Table 2 presents descriptive statistics for key variables in my analysis of dual-listed A- and H-shares. The AH premium, calculated as $(P_A - P_H)/P_A$, averages 91.13%, indicating a substantial pricing disparity where A-shares trade at a significant premium to their H-share counterparts. The sample firms exhibit an average return on equity (ROE) of 6.98%, with a mean leverage ratio (total liabilities to assets) of 62.89% and an annual asset growth rate of 10%. To construct the firm-level sentiment index, I employ principal component analysis (PCA) on four market-based proxies: PSY Measures investor psychology based on the proportion of positive return periods over the past year (A-share mean: 50.19; H-share: 48.61); RSI (Relative Strength Index) reflects the momentum of ascending versus descending stock movements (values are comparable across markets); ATR (Adjusted Turnover Ratio) incorporates directional price movements into turnover (A-share values are approximately double those of H-shares); Log(Volume) is natural logarithm of trading volume (higher in A-shares with lower dispersion). The composite sentiment index demonstrates similar average values across markets despite these underlying differences in component metrics. Other notable market-structure difference also emerge. The tradable share ratio is markedly higher in A-shares (0.80 vs. 0.27 in H-shares). A-shares exhibit lower illiquidity (Amihud measure) and return volatility. H-shares show substantially higher book-to-market ratios, suggesting valuation disparities

Table 2 Summary Statistics

This table presents the summary information for AH overpricing, firm information, stock information, and the proxy used to account for the sentiment.

Variables	Mean	Std	Max	Min	P50	Obs.
AH Premium	91.13%	97.03	1713.60%	-38.03%	65.01%	17624
Accounting Information						
ROE	6.98%	50.81	304.36%	-5913.38	9.00	17621
Leverage	62.89%	21.06	123.28%	3.22	47.76	17624
Investment	0.10	0.21	6.65	-0.29	0.07	17624
Sentiment Information						
PSY_A	50.19	13.47	8.33	100	50	17624
PSY_H	48.61	13.80	8.33	100	50	17624
RSI_A	48.42	12.24	0.00	99.98	47.66	17624
RSI_H	48.53	11.89	0.31	100	18.03	17581
ATR_A	2.76	52.07	-676.59	892.69	-0.89	17469
ATR_H	1.39	23.44	-446.51	863.56	-0.47	17392
Log(volume)_A	19.91	1.28	11.74	24.50	0.95	17597
Log(volume)_H	18.71	1.73	9.16	24.15	0.86	17624
Index_A	-0.01	0.52	-2.35	3.03	-0.04	17624
Index_H	0.01	0.53	-2.20	4.11	-0.02	17624
Stock Information						
Tradable_A	0.80	1.26	1	0.04	0.75	17624
Tradable_H	0.27	0.12	0.06	0.96	0.25	17252
Amihud_A	0.01	0.01	0	0.05	0.01	17624
Amihud_H	0.05	0.57	-3.09	5.90	0.01	17624
Volatility_A	0.15	0.18	0	1.90	0.09	17623
Volatility_H	2.37	1.39	0	25.00	2.08	17592
BM_A	4.86	7.19	0.06	54.00	2.34	17624
BM_H	194.88	628.34	0.08	7216.57	14.06	17623

To examine whether investor sentiment explains the AH premium, I estimate the following baseline regression model:

$$AH\ premium_{it} = \alpha + \beta Index\ 1_{it} + \gamma control_{it} + \varepsilon_{it} \quad (1)$$

Where $AH\ premium_{it}$ is defined as $(P_A - P_H)/P_A$, measuring the relative overpricing of A-shares versus their H-share counterparts; $index1$ captures cross-market sentiment divergence, calculated as the A-share sentiment index minus the H-share sentiment index; the control variables here include ROE, Leverage, BM ratio, investment growth, tradable share ratio, Amihud illiquidity, and volatility. All explanatory variables are lagged by one period ($t-1$) to account for delayed market reactions and mitigate reverse causality concerns.

4. EMPIRICAL EVIDENCE

4.1 Main model

The regression results provide robust empirical evidence that cross-market differences in investor sentiment serve as a significant determinant of the AH premium phenomenon, corroborating the behavioral finance perspective that investor psychology can systematically influence asset pricing. As demonstrated in Table 3, the sentiment differential between the A-share and H-share markets exhibits a statistically significant positive coefficient of 3.9522 ($p < 0.01$), indicating that a one-unit increase in sentiment divergence is associated with a 3.95-unit expansion of the AH premium. This finding strongly supports my hypothesis that

heterogeneous investor sentiment across different markets leads to pronounced pricing discrepancies for dual-listed stocks. The documented sentiment-premium relationship presents a direct challenge to the traditional law of one price, which posits that identical assets should trade at identical prices across different markets when measured in a common currency (Fama, 1970). Specifically, behavioral biases appear to prevent efficient arbitrage of cross-market price differentials, allowing sentiment-driven mispricing to persist. My findings contribute to the growing literature on sentiment-based asset pricing (e.g., Yu and Yuan, 2011; Stambaugh, Yu, and Yuan, 2012) by demonstrating that sentiment effects are particularly pronounced in segmented markets where information asymmetry and arbitrage constraints are severe. The results suggest that the AH premium may reflect not only fundamental differences (such as liquidity or risk premium variations) but also systematic behavioral components tied to sentiment divergence.

Further analysis reveals important asymmetries in the sentiment-premium relationship, offering insights into how cross-market sentiment differentials influence the AH premium. When decomposing the aggregate sentiment effect, I find that while the positive association between sentiment divergence and the AH premium holds in both directions, the magnitude and statistical significance vary depending on which market exhibits stronger investor optimism. Specifically, the effect appears more pronounced when H-share sentiment exceeds A-share levels compared to the reverse scenario. This asymmetric effect aligns with behavioral theories suggesting that sentiment-driven mispricing is not uniform across markets but depends on the interaction of investor psychology and market structure. One plausible explanation is that H-share investors, who are predominantly institutional and more globally integrated, may exhibit stronger mean-reverting expectations when sentiment becomes excessively optimistic, thereby amplifying the premium when their sentiment diverges from that of A-share investors. In contrast, A-share markets, dominated by retail investors prone to stronger behavioral biases, may exhibit more persistent sentiment-driven mispricing, leading to a comparatively weaker marginal impact on the premium when A-share sentiment is higher. Heightened H-share sentiment triggers institutional mean-reversion that amplifies the price differential, while A-share sentiment effects are partially neutralized. These results extend prior work on sentiment asymmetries (e.g., Stambaugh, Yu, and Yuan, 2012; Antoniou, Doukas, and Subrahmanyam, 2016) by demonstrating that the direction of sentiment divergence matters in different markets. It suggests that the composition of investor bases in A- and H-shares plays a critical role in shaping the AH premium dynamics.

The analysis of control variables yields several theoretically important insights that significantly enhance our understanding of the mechanisms driving the AH premium phenomenon. The negative coefficients observed for book-to-market ratio, investment growth, and tradable share ratio collectively demonstrate that fundamental valuation metrics and firm-specific characteristics interact systematically with investor sentiment to produce cross-market pricing disparities. These findings can be interpreted through multiple theoretical lenses that together provide a more comprehensive explanation of the observed effects. Specifically, firms with higher market valuations relative to book value in the A-share market tend to exhibit larger premiums. From a behavioral finance perspective, the negative relationship between book-to-market ratio and AH premiums supports the overvaluation hypothesis proposed by Lakonishok, Shleifer, and Vishny (1994), where growth stocks (characterized by low book-to-market ratios) are particularly susceptible to investor sentiment-driven mispricing. This effect is likely amplified in the A-share market due to its higher proportion of retail investors, who are more prone to behavioral biases as documented in the noise trader models of De Long, Shleifer, Summers, and Waldmann (1990). The stronger premium effect for growth stocks aligns with the theoretical prediction that valuation becomes more subjective and sentiment-sensitive when firms have greater growth options and more uncertain future cash flows. The significant coefficients for investment growth and tradable share ratio reveal important size-related effects that can be understood through the information asymmetry framework developed by Myers and Majluf (1984). Smaller firms, as proxied by lower investment growth rates and reduced tradable share proportions, face greater information opacity. This informational disadvantage makes these firms particularly vulnerable to sentiment-driven price distortions, as market participants have less fundamental information to anchor their valuations. These results remain robust across different model specifications, with the negative effect of investment growth persisting throughout. This consistent pattern suggests that smaller firms may be especially prone to transmitting noisy signals to the market, potentially exacerbating pricing inefficiencies. The positive coefficient on Amihud illiquidity provides compelling evidence for the market friction channel proposed by Amihud and Mendelson (1986). Reduced liquidity in the A-share market creates transaction costs that hinder arbitrage activity, allowing sentiment-induced mispricing to persist. The illiquidity effect is particularly relevant in the Chinese market context, where capital controls and regulatory differences create additional barriers to cross-market arbitrage. These findings collectively highlight how investor sentiment, interacting with

firm characteristics, can create and sustain pricing disparities between otherwise identical securities traded in different markets.

Table 3 The effect of investor sentiment on AH premium

This table reports how differences in investor sentiment between A-share and H-share markets affect the AH premium. The key explanatory variable, the sentiment index difference, is constructed by applying principal component analysis to four market-based proxies separately for each market and then taking the difference between the A-share and H-share sentiment indices. The analysis incorporates several important control variables to account for fundamental firm characteristics: return on equity (ROE) measures profitability, the liability ratio captures financial leverage, while the book-to-market ratio (BM) reflects valuation differences. Additional controls include the annual asset growth rate (Investment) to measure expansion, the proportion of tradable shares (Tradable) to account for market float, the Amihud (2002) illiquidity measure, and 20-day return volatility to control for risk factors. All explanatory variables enter the regression in their first lag to properly capture the temporal dynamics of market effects. Year and Firm effect are controlled. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively. Reported in parentheses are robust standard error clustered by firms.

	(1)	(2) index 1 > 0	(3) index 1 < 0
Index 1	3.9522*** (0.7821)	2.1222* (1.2148)	3.6423*** (1.4034)
ROE	-0.0072 (0.0143)	-0.0031 (0.0108)	-0.0379 (0.0398)
Leverage	0.4059 (0.4012)	0.3267 (0.4555)	0.4766 (0.3613)
BM ratio	-12.2164** (6.1782)	-13.0318** (5.7564)	-9.8492 (8.0832)
Investment	-13.8488*** (4.9663)	-16.5098* (8.8876)	-11.6153*** (3.6202)
Tradable ratio	-5.0915* (2.6217)	-4.5165 (2.9127)	-3.0105 (2.5401)
Amihud illiquidity	0.0027* (0.0015)	0.0639 (0.0445)	0.0010 (0.0011)
Volatility	3.4707 (2.7742)	3.6910 (2.7533)	2.7717 (2.7435)
Year Effect	YES	YES	YES
Firm Effect	YES	YES	YES
No. Obs	17070	8412	8658
R-square	0.0007	0.0004	0.0002

4.2 Robust tests

My extended temporal analysis incorporating multiple lags of the sentiment differential variable yields important insights into the dynamic relationship between investor sentiment and AH premiums. The statistically significant coefficients for both the first ($\beta_1 = 0.026$, $p < 0.01$) and second ($\beta_2 = 0.020$, $p < 0.01$) lags, coupled with the substantially diminished effect of the third lag ($\beta_3 = 0.012$, $p < 0.10$), reveal several theoretically meaningful patterns about the persistence of sentiment effects in segmented markets. These findings align closely with the gradual information diffusion hypothesis proposed by Hong and Stein (1999), where market participants incorporate information at varying speeds, leading to predictable patterns in price adjustments. The similar magnitude of coefficients for the first two lags suggests that sentiment effects exhibit momentum-like persistence in the short run, consistent with the positive feedback trading models of De Long, Shleifer, Summers, and Waldmann (1990), before eventually dissipating. This pattern indicates that while sentiment-driven mispricing can persist in the short term, market forces and arbitrage activity appear to correct most pricing discrepancies within a limited timeframe. The results are particularly consistent with the theoretical

predictions of Daniel, Hirshleifer, and Subrahmanyam (1998)'s overconfidence model, where investors initially overreact to private information but gradually correct their valuation errors as contradictory public information emerges. In Column(2), when sentiment differentials between markets are widening, both the first and second lags of the sentiment differential maintain their explanatory power for AH premiums. This persistence suggests that during periods of increasing market divergence, investors become more susceptible to behavioral biases, allowing sentiment effects to accumulate over time. Conversely, in Column (3), when sentiment gaps are narrowing, only the first lag of sentiment difference remains significant, while the second lag term lose explanatory power. This pattern implies that as markets begin to converge, investors rationally discount historical sentiment and focus more on current conditions, leading to faster price adjustments. These findings have important implications for market efficiency. The asymmetric response to sentiment changes suggests that investors exhibit greater rationality when markets are converging, quickly abandoning outdated sentiment measures. However, during periods of market divergence, behavioral factors appear to dominate, with investors placing equal weight on both current and past sentiment. This nonlinear relationship helps explain why pricing discrepancies may persist longer during certain market conditions while correcting more rapidly in others. The results underscore how market efficiency varies depending on the trail of sentiment differences between markets, with convergence periods showing quicker adjustment to fundamental values.

Table 4 Temporal dynamics of investor sentiment's impact on AH premiums

This table examines the temporal dynamics of sentiment effects on AH share pricing differentials by incorporating multiple lagged terms of the sentiment index difference. The key explanatory variable, the sentiment index difference, is constructed by applying principal component analysis to four market-based proxies separately for each market and then taking the difference between the A-share and H-share sentiment indices. The analysis incorporates several important control variables to account for fundamental firm characteristics: return on equity (ROE) measures profitability, the liability ratio captures financial leverage, while the book-to-market ratio (BM) reflects valuation differences. Additional controls include the annual asset growth rate (Investment) to measure expansion, the proportion of tradable shares (Tradable) to account for market float, the Amihud (2002) illiquidity measure, and 20-day return volatility to control for risk factors. All explanatory variables enter the regression in their first lag to properly capture the temporal dynamics of market effects. Year and Firm effect are controlled. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively. Coefficients have been standardized. Reported in parentheses are robust standard error clustered by firms.

	(1)	(2)abs(index1)>abs(index2)	(3)abs(index1)<abs(index2)
Index 1	0.026*** (0.6498)	0.029*** (0.6775)	0.026*** (1.3746)
Index 2	0.020*** (0.7014)	0.029*** (1.4401)	0.017 (0.9027)
Index 3	0.012* (0.7542)		
ROE	-0.004 (0.0138)	-0.002 (0.0721)	-0.007 (0.0079)
Leverage	0.098 (0.4136)	0.087 (0.3687)	0.090 (0.4268)
BM ratio	-0.092 (6.3721)	-0.085 (5.7842)	-0.083 (7.1420)
Investment	-0.031** (5.0912)	-0.031** (5.1244)	-0.030** (4.9951)
Tradable ratio	-0.277 (2.6375)	-0.213 (2.7645)	-0.211 (2.7652)
Amihud illiquidity	0.001* (0.0015)	0.001* (0.0010)	0.005 (0.0662)

Volatility	0.013 (2.5102)	0.011 (1.7687)	0.020 (4.9543)
Year Effect	YES	YES	YES
Firm Effect	YES	YES	YES
No. Obs	16801	8517	8419
R-square	0.0005	0.0000	0.0002

To ensure the validity and generalizability of my findings, I conducted additional robustness checks by excluding the COVID-19 pandemic period (January 2020 to December 2022) from the sample. This exclusion serves two important methodological purposes: first, to account for potential market distortions caused by unprecedented policy interventions and extreme volatility during this exceptional period (Baker, Bloom, Davis, and Terry, 2020); second, to verify whether the core results are driven by normal market conditions rather than pandemic-induced anomalies. As Table 5 demonstrates, the core findings remain statistically significant and qualitatively similar after this exclusion, confirming the stability of the sentiment effect on AH premiums. It also supports the notion that sentiment-driven pricing disparities operate through consistent behavioral mechanisms across both normal and crisis periods, though potentially with varying intensity. From a methodological perspective, this robustness check addresses potential concerns about regime shifts in market behavior during extreme events (Bekaert, Engstrom, and Xu, 2022). The consistent results across samples suggest that my modeling framework adequately captures the persistent components of the sentiment-premium relationship while properly accounting for time-varying market conditions. This finding has important implications for asset pricing models in segmented markets, as it demonstrates that behavioral factors maintain their explanatory power even after controlling for extraordinary market shocks.

The analysis further investigates temporal patterns by examining monthly variations in the relationship between sentiment differentials and pricing disparities. The consistently positive and statistically significant sentiment coefficients across all months ($p < 0.01$) confirm the robustness of the baseline relationship, while the observed seasonal fluctuations offer compelling evidence of systematic variations in market efficiency. Specifically, April and June exhibit significantly lower AH premiums, which likely reflects increased market efficiency during these periods of enhanced information disclosure. In April, when most firms release their annual financial statements, and in June, when banks conduct mid-year reviews, the additional information flow appears to mitigate pricing discrepancies between the dual-listed shares. Conversely, October and November show markedly higher AH premiums. The observed October effect may stem from behavioral factors surrounding China's week-long National Day holiday, when increased consumer activity and optimistic sentiment could inflate A-share valuations. The November premium surge potentially reflects year-end performance pressures, as this period represents firms' final opportunity to meet annual targets, potentially amplifying emotional trading behavior. The systematic monthly variations demonstrate that information availability and institutional factors can significantly moderate sentiment effects. This suggests that pricing discrepancies between dual-listed shares are not random, but follow predictable patterns tied to the financial calendar and cultural events. For market participants, these results highlight windows of relative efficiency (during reporting seasons) and periods of heightened sentiment sensitivity (year-end months) that should inform cross-market investment strategies.

Table 5 Seasonal Effect of investor sentiment on AH premium

The analysis presented in this table follows a two-stage approach to examine the robustness and seasonal patterns of our findings. The key explanatory variable, the sentiment index difference, is constructed by applying principal component analysis to four market-based proxies separately for each market and then taking the difference between the A-share and H-share sentiment indices. The analysis incorporates several important control variables to account for fundamental firm characteristics: return on equity (ROE) measures profitability, the liability ratio captures financial leverage, while the book-to-market ratio (BM) reflects valuation differences. Additional controls include the annual asset growth rate (Investment) to measure expansion, the proportion of tradable shares (Tradable) to account for market float, the Amihud (2002) illiquidity measure, and 20-day return volatility to control for risk factors. All explanatory variables enter the regression in their first lag to properly capture the temporal dynamics of market effects. The month dummy variables equal 1 for April, June, October, and November respectively, and 0 otherwise. Year

and Firm effect are controlled. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively. Reported in parentheses are robust standard error clustered by firms.

	(1)Exclude COVID-19	(2)April	(3)June	(4) Oct	(5) Nov
Index 1	3.6270*** (0.8602)	3.9400*** (0.7829)	3.9945*** (0.7861)	3.9387*** (0.7812)	3.9531*** (0.7829)
ROE	0.0048 (0.0156)	-0.0077 (0.0143)	-0.0074 (0.0143)	-0.0072 (0.0143)	-0.0073 (0.0143)
Leverage	0.3594 (0.4269)	0.4019 (0.4006)	0.3982 (0.3992)	0.4049 (0.4010)	0.4042 (0.4008)
BM ratio	-9.4111 (7.9295)	-12.1109* (6.1914)	-11.8336* (4.9754)	-12.1811** (6.1819)	-12.1308* (6.1843)
Investment	-13.9912*** (4.5148)	-13.6834*** (4.9422)	-13.9492*** (4.9754)	-13.7828*** (4.9674)	-13.8936*** (4.9706)
Tradable ratio	-5.1143* (3.0158)	-4.9435* (2.6502)	-4.6101* (2.6998)	-5.0620* (2.6284)	-4.9780* (2.6435)
Amihud	0.0037*** (0.0013)	0.0028* (0.0015)	0.0028* (0.0015)	0.0027* (0.0015)	0.0027* (0.0015)
illiquidity	3.9112* (2.3664)	3.4781 (2.7757)	3.4749 (2.7906)	3.4705 (2.7762)	3.4763 (2.7808)
Volatility					
Month		-3.3371*** (0.7236)	-1.5075** (0.6883)	1.2068* (0.6495)	1.0519** (0.4903)
Year Effect	YES	YES	YES	YES	YES
Firm Effect	YES	YES	YES	YES	YES
No. Obs	12765	17070	17070	17070	17070
R-square	0.0017	0.0006	0.0004	0.0007	0.0007

The analysis further examines how broader market conditions affect the AH premium by incorporating market index differentials between the A-share and H-share markets. For A-shares, I use either the Shanghai Composite Index or Shenzhen Composite Index depending on the listing board, while the Hang Seng Index (HSI) serves as the benchmark for H-shares. The market differential is measured as the ratio between the relevant A-share index and HSI. As shown in Column (1) of Table 6, the results reveal several important insights. While the firm-level sentiment effect remains significantly positive, the AH market index ratio shows a significantly negative coefficient, indicating that when the A-share market outperforms the H-share market, the AH premium tends to decrease. Conversely, when the A-share market underperforms, investors appear to exhibit greater emotional instability, leading to wider pricing disparities between the dual-listed shares. These findings confirm that investors exhibit greater irrationality during market downturns. The analysis also considers recent market momentum by examining two-month changes in both markets (Delta_A index and Delta_H index). The significantly negative coefficient for Delta_A index suggests that deteriorating market performance in the A-share market exacerbates the AH premium, as investors become more sentiment-driven during market downturns. This finding aligns with behavioral finance theories that investors tend to react more emotionally to negative market movements. A parallel effect emerges for the H-share market, where negative momentum similarly amplifies pricing discrepancies. These results collectively demonstrate that while firm-specific sentiment drives pricing differences, broader market conditions and recent performance trends significantly modify this relationship, particularly during periods of market stress when investor behavior becomes more irrational. The findings underscore the importance of considering both micro-level sentiment and macro-level market dynamics in understanding cross-market pricing disparities.

Table 6 Market effect

This table reports the effect of index on the AH overpricing when incorporating broader market indices into the specification. The key explanatory variable, the sentiment index difference, is constructed by applying principal component analysis to four market-based proxies separately for each market and then taking the difference between the A-share and H-share sentiment indices. The analysis incorporates several important control variables to account for fundamental firm characteristics: return on equity (ROE) measures profitability, the liability ratio captures financial leverage, while the book-to-market ratio (BM) reflects valuation differences. Additional controls include the annual asset growth rate (Investment) to measure expansion, the proportion of tradable shares (Tradable) to account for market float, the Amihud (2002) illiquidity measure, and 20-day return volatility to control for risk factors. All explanatory variables enter the regression in their first lag to properly capture the temporal dynamics of market effects. The AH market index represents the ratio of A-share to H-share market indices, while Delta_A and Delta_H indices measure the monthly changes in respective market indices (current value minus one-month lag). Year and Firm effect are controlled. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively. Reported in parentheses are robust standard error clustered by firms.

	(1)	(2)	(3)
Index 1	4.0322*** (0.7811)	4.0673*** (0.8058)	4.1002*** (0.8115)
ROE	-0.0070 (0.0143)	-0.0072 (0.0143)	-0.0072 (0.0143)
Leverage	0.4070 (0.4021)	0.4058 (0.4012)	0.4064 (0.4014)
BM ratio	-12.1202* (6.1910)	-12.1984** (6.1809)	-12.2488** (6.1742)
Investment	-14.3614*** (4.9448)	-13.8500*** (4.9702)	-13.8499*** (4.9705)
Tradable ratio	-5.0835* (2.6186)	-5.0503* (2.6285)	-5.0972* (2.6193)
Amihud illiquidity	0.0027* (0.0015)	0.0027* (0.0015)	0.0027* (0.0015)
Volatility	3.5550 (2.7526)	3.4868 (2.7779)	3.4728 (2.7750)
AH market index	-0.1662*** (0.0140)		
Delta_A index		-0.0549** (0.0216)	
Delta_H index			-0.0579*** (0.0177)
Year Effect	YES	YES	YES
Firm Effect	YES	YES	YES
No. Obs	17070	17070	17070
R-square	0.0005	0.0007	0.0007

5. CONCLUSION

This study provides compelling empirical evidence that investor sentiment serves as a fundamental driver of persistent pricing disparities between dual-listed A-shares and H-shares, challenging conventional asset pricing theories that assume price convergence for identical securities across markets. Through the development of novel firm-level sentiment indices constructed via principal component analysis of four well-established behavioral proxies (PSY, RSI, adjusted turnover, and trading volume), I precisely

quantify sentiment differentials between markets for identical firms, extending the methodological framework of Kim, Ryu, and Yang (2021). The comprehensive analysis reveals several key findings that significantly advance understanding of cross-market pricing anomalies.

The core results demonstrate a robust positive relationship ($\beta = 3.9522$, $p < 0.01$) between sentiment gaps and AH premiums, indicating that wider sentiment differentials correspond to larger pricing disparities. This effect persists across various model specifications and remains economically significant after controlling for fundamental factors including liquidity differentials and corporate governance variations. The findings reveal important asymmetries in the sentiment-premium relationship, with effects being more pronounced when H-share sentiment exceeds A-share levels, suggesting differential sensitivity to sentiment across market structures dominated by institutional versus retail investors.

Temporal analysis uncovers nuanced dynamics in how sentiment affects pricing disparities. The significant coefficients for both first ($\beta_1 = 0.026$) and second ($\beta_2 = 0.020$) lags of sentiment differentials demonstrate short-term persistence of sentiment effects, though these dissipate by the third lag ($\beta_3 = 0.012$), indicating gradual correction of mispricing.

The study further identifies systematic seasonal patterns in the sentiment-premium relationship. April and June exhibit significantly lower premiums ($\beta = -3.3371$ and -1.5075 respectively), coinciding with enhanced information disclosure during financial reporting seasons, while October ($\beta = 1.2068$) and November ($\beta = 1.0519$) show markedly higher premiums, reflecting behavioral factors associated with China's National Day holiday and year-end performance pressures. These patterns persist even after excluding the anomalous COVID-19 period, confirming that the sentiment-premium relationship represents a fundamental feature of segmented markets rather than an artifact of crisis-period distortions.

At the market level, I find that relative performance between A-share and H-share markets significantly modifies the sentiment-premium relationship. A-share market underperformance exacerbates pricing disparities, suggesting heightened investor irrationality during downturns, while outperformance correlates with smaller premiums. This interaction between firm-specific sentiment and broader market conditions provides a more complete explanation of cross-market pricing dynamics.

Collectively, these findings make several important contributions to the literature. First, they demonstrate that investor psychology interacts with market condition to sustain violations of the law of one price. Second, they reveal how information environments and seasonal factors systematically moderate sentiment effects. Third, they provide empirical support for behavioral theories of limited arbitrage in segmented markets. The results have significant implications for asset pricing models, suggesting the need to incorporate both behavioral factors and market structure considerations when analyzing cross-listed securities, and for investment practice, highlighting sentiment indicators as potential predictors of relative valuation movements between dual-listed shares.

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