

Determinants of the A-H Share Premium: A Multi-Factor Empirical Study of China's Segregated Capital Market

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Abstract. This paper investigates the driving forces behind the premium of A-shares and H-shares for dual-listed companies in China, establishes a complete empirical framework with several explanatory dimensions, and reviews related research on market division, liquidity, investor characteristics, foreign exchange risk, and institutional constraints to identify reasons for differences in the valuations of economically similar shares in the A-share and H-share markets in China. By means of panel data analysis and a multi-factor regression model, it examines how firm characteristics, capital flows, market style indicators, and institutional factors jointly affect the A-H premium (hereafter referred to as AHP). The results show that the AHP is not solely due to the aforementioned reasons but is also affected by trading environment, capital mobility and the institutional system; thus, by incorporating all these factors into the analytical system, this paper offers a more comprehensive explanation for the cross-market price difference and provides references for investors, listed companies and policymakers.

Keywords: A-H share premium, market segmentation, liquidity, cross-border capital flows, institutional reform

1. Introduction

In a unified capital market, based on the principle of one-price law, identical financial assets are anticipated to be traded at the same price. However, because of institutional frictions and market fragmentation, this theoretical prediction frequently does not hold in reality [1]. A notable instance is dual-listed firms in China. In this case, the stocks of the same enterprise are traded in China's domestic stock market and Hong Kong's stock market. Even though they stand for the same equity, these shares frequently have notably different trading prices, a situation generally called the AHP.

The ongoing presence of this premium shows the structural features of China's financial system, especially the limitations on cross-border capital movements. When capital fails to flow freely across markets, arbitrage possibilities cannot be fully exploited, and price disparities will endure for a long period [2]. Although channels for market access (like the Stock Connect initiatives connecting Shanghai, Shenzhen, and Hong Kong) have enhanced connectivity via north-south capital flows, these channels remain under regulation and cannot remove price differences [3]. Recent data additionally indicates that cross-border stock flows and information dissemination have a

dynamic function in forming valuation disparities between the mainland and Hong Kong markets [4].

Apart from regulatory limitations, the AHP is also influenced by disparities in investor composition, liquidity, market patterns, exchange-rate risk exposure, and trading systems. Earlier research has indicated that information imbalance, trading mainly by retail investors, investor mood, and exchange-rate risk can all result in long-standing valuation disparities [5, 6]. Meanwhile, disparities in market micro-structure and trading mechanisms also influence the pace of price adjustments in the two markets [7]. However, the majority of existing academic works analyze these factors separately, lacking a comprehensive understanding of how they jointly impact cross-market pricing. More crucially, the investment importance of the AHP, especially its function in arbitrage evaluation and stock picking, is still inadequately researched.

To address the research gap mentioned above, this paper builds a comprehensive multi-factor model that includes basic attributes of the company, liquidity indicators, changes in capital allocation, foreign exchange fluctuations, market style differences and institutional constraints, etc., to offer more in-depth explanations for the application of the AHP in investment decisions.

The purpose of the above results is to provide a deeper understanding of the pricing system in the divided market and offer some reference points for investors and government.

2. Empirical design

2.1. Definition of the dependent variable

This research uses the AHP as the dependent variable, which gauges the relative pricing disparity between a company's A-share and H-share after considering the exchange rate. A typical form is:

$$\text{AHPPremium}_{i,t} = \frac{P_{i,t}^A - P_{i,t}^H \times \text{ER}_t}{P_{i,t}^H \times \text{ER}_t} \quad (1)$$

where:

$P_{i,t}^A$ is the closing price of A-shares for firm A in period t.

$P_{i,t}^H$ is the closing price of the H-shares of firm i in period t.

ER_t is the HKD/RMB exchange rate used to convert H-share prices into Renminbi.

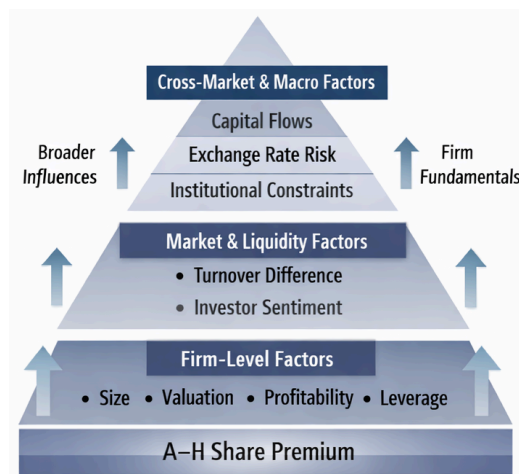


Figure 1. AHP model structure

As shown in Figure 1, a positive value indicates that A-shares are priced higher than their corresponding H-shares; thus, there is an A-share premium. A negative figure shows that H-share prices are relatively higher. To improve the comparability of companies with different price levels and capital structures, one can use a relative premium metric instead of the absolute difference in prices.

To reduce the impact of high-frequency noise, empirical analysis can be conducted with weekly or monthly data instead of daily data; monthly data is relatively smooth and shows larger-scale changes in macroeconomics and institutions, such as capital flows and exchange rate fluctuations, so it is more suitable for this purpose.

2.2. Construction of the multi-factor model

2.2.1. Basic idea of the model

Therefore, this paper will construct a combined empirical model to investigate how firm attributes, capital flows, market type and institutional environment jointly influence AHP.

$$AHPremium_{i,t} = \alpha + \beta_1 Firm_{i,t} + \beta_2 Liquidity_{i,t} + \beta_3 Flow_t + \beta_4 Style_t + \beta_5 Institution_t + \mu_i + \lambda_t + \varepsilon_{i,t} \quad (2)$$

where μ_i accounts for unobserved firm-specific impacts, λ_t regulates time-specific influences, and $\varepsilon_{i,t}$ stands for the random error element.

This arrangement presents two benefits. Initially, the fixed effects are capable of controlling for unobservable, time-constant firm heterogeneity. Secondly, through the introduction of time-fixed effects, the model is able to decrease the bias resulting from common macro-economic shocks.

2.2.2. Variable selection and economic meaning

To render the model more interpretable, the explanatory variables are classified into several factor categories.

Table 1. Variable design of the multi-factor model

Variable type	Variable name	Symbol	Measurement	Expected effect on A-H premium
Dependent variable	A-H premium	—	Price difference or premium between A-shares and H-shares	—
Firm factor	Firm size	Size	Log of total market capitalization	Ambiguous
Firm factor	Profitability	ROE	Net profit / equity	Positive
Firm factor	Leverage	Lev	Total liabilities / total assets	Negative
Liquidity factor	Turnover difference	TurnDiff	A-share turnover? H-share turnover	Positive

Table 1. (continued)

Liquidity factor	Illiquidity proxy	Illiq	Price impact or spread proxy	Negative
Capital flow factor	Cross-border flow	Flow	Net southbound/northbound flow	Usually negative
Market style factor	Style spread	Style	Growth–value or small–large return spread	Positive
Institutional factor	Policy openness	Institution	Dummy for Stock Connect / reform stage	Negative

As shown in Table 1, the features of the company can be used to study how the fundamentals of the company affect the premium on A-shares over H-shares. The logarithm of total market capitalization is taken as a proxy for the size of a company, and generally speaking, larger market-capitalized companies receive more attention from institutional investors. They are more transparent in terms of information and less ambiguous in valuation, and may therefore be less expensive. However, the exact extent of this reduction in the premium due to firm size is unknown. Some large state-owned enterprises or leading companies may have stronger investor demand in the A-share market and thus achieve higher valuations; Return on equity serves to indicate the profitability of a company, and those with good profitability are more likely to attract significant investment in both A-share and H-share markets. However, if the mainland investors were to respond more strongly to the earnings indicators, the A-share premium would likely increase further, and this debt-to-asset ratio has also been included. A higher level of debt generally poses a greater financial risk and may thus be affected differently by the discount rates of the A-share and H-share markets [8]. Liquidity is also one of the reasons for the differences in premium between A-shares and H-shares; thus, the turnover disparity (A-share turnover rate minus H-share turnover rate) is used to assess the relative liquidity of these two markets [9]. When the liquidity of A-shares is significantly higher than that of H-shares, investors are likely to require a liquidity premium and will drive up the valuation of A-shares [10]. If the data are available, the Amihud liquidity index or a bid-ask spread proxy variable can be added to measure how trading activities directly affect stock prices. In general, higher liquidity in A-shares is associated with a higher A-share premium, especially during periods of high trading activity in mainland China [11].

Capital movement factors mirror the extent of adjustment of cross-market price disparities. Net south-bound and net north-bound capital movements are employed to gauge the intensity and orientation of cross-border capital flows under the Shanghai-Hong Kong Stock Connect and relevant market access arrangements. An upsurge in south-flowing capital could heighten the demand for H-shares, thus reducing the premium gap between A-shares and H-shares; whereas a more robust north-flowing capital sentiment or the continuous focus of mainland capital in the mainland market might widen the premium. Even though the overall impact relies on the direction of capital movements, it is commonly thought that enhancing cross-border linkages aids in lessening long-standing price differences [6].

Given that the A-share and H-share markets vary notably in aspects of investor preferences and valuation rationale, market style elements must be taken into account. The domestic mainland market generally shows more pronounced speculative features and greater growth possibilities,

whereas the Hong Kong market places more emphasis on cash-flow steadiness and fundamental value assessment. Style factors can be derived from the dispersion of returns of growth and value stock indices, as well as the different performances of small-cap and large-cap investment portfolios. If growth or small-cap stocks outperform in the mainland market, the A-share premium may be expanded; this effect is particularly pronounced for companies with similar characteristics [9]. Institutional factors refer to how changes in market accessibility and policy adjustments affect the fragmentation of markets. Dummy variables are added for periods when policies have been introduced to promote the construction of cross-market trading connections among Shanghai, Shenzhen and Hong Kong; for the expansion of mutual market access; and for other significant regulatory changes, and their impact on whether institutional integration reduces the premium between A-shares and H-shares is examined through increased capital liquidity, improved arbitrage efficiency, and price convergence in both markets.

2.3. Empirical analysis

Table 2. Descriptive statistical analysis of variables

Variable	Obs	Mean	SD	Min	Median	Max
premium	1185	-0.016	0.595	-0.739	-0.161	4.950
roe	1185	0.073	0.049	-0.016	0.064	0.294
capital	1185	19.171	1.218	16.732	19.087	21.506
leverage	1185	0.576	0.253	0.145	0.522	0.941
flow	1185	5.382	0.900	3.061	5.235	7.203
style	1185	5.109	0.991	4.000	6.000	6.000
institution	1185	0.371	0.483	0.000	0.000	1.000

Table 2 presents a summary of the descriptive statistics for the variables employed in the empirical analysis. These variables encompass the dependent variable AHP (premium), along with explanatory variables like return on equity (ROE), total market capitalization (capital), leverage ratio (leverage), net inflow of southbound capital (flow), style factor (style), and policy variable (institution).

As presented in the descriptive statistics of every variable in Table 2, the valid sample size for all the variables is 1,185. Using AHP as an illustration, its lowest value is -0.739 and highest value is 4.95, without notable outliers. Meanwhile, Table 2 also shows the average, lowest and highest values of the remaining explanatory variables. The minimum and maximum values of all variables are within a reasonable scope, which shows that the subsequent research in this paper would not be influenced by outliers.

Table 3. Correlation coefficient matrix

Variable	premium	roe	capital	leverage	flow	style	institution
premium	1						
roe	0.166***	1					
capital	-0.220***	-0.073**	1				
leverage	-0.193***	-0.059**	0.234***	1			
flow	-0.387***	-0.071**	0.866***	0.088***	1		

Table 3. (continued)

style	-0.383***	-0.050*	0.676***	-0.195***	0.775***	1	
institution	0.135***	0.017	0.130***	-0.015	0.141***	0.000	1

Table 3 is a table of all variables' correlation coefficients, and it shows that the correlation coefficient between return on equity (ROE) and AHP is 0.166; this is a positive value at the 1% significance level, indicating that an increase in return on equity is positively associated with an increase in AHP. The correlation coefficient of total market capitalisation and AHP is -0.22; at the 1% level of significance, it can be seen that a lower total market capitalisation will lead to a decrease in AHP. The correlation coefficient between leverage ratio and AHP is -0.193; it is significantly negative at the 1% level, and at first appeared that a higher leverage ratio might reduce AHP. The correlation coefficients of the net inflow of southbound capital and the style factor with AHP are -0.387 and -0.383, respectively; both are significantly negative at the 1% level, and initially, it can be assumed that a rise in either net inflow of southbound capital or style factor will lead to an increase in AHP. There is a small positive correlation of 0.135 between the policy variable and AHP; although the researcher expected the policy to increase AHP significantly, it did not.

However, the above analysis only presents the first results of the correlation test; therefore, to study the reasons behind this phenomenon more precisely, econometric models will be built in the following sections for subsequent analysis and verification.

To explore the influence of each variable on AHP in more detail, multiple linear regression models are used to examine how return on equity (ROE), total market capitalization (capital), leverage ratio (leverage), net inflow of southbound capital (flow), style factor (style) and policy (institution) affect AHP, and the specific model specifications are as follows:

$$AHP_{it} = \alpha + \beta_1 Roe_{it} + \beta_2 Capital_{it} + \beta_3 Leverage_{it} + \beta_4 flow_{it} + \beta_5 Style_{it} + \beta_6 Institution_{it} + \lambda_t + \varepsilon_{it} \quad (3)$$

Here, AHP_{it} shows the AHPs of the dependent variables in the representative models here. α is the intercept of the model. Roe_{it} , $Capital_{it}$, $Leverage_{it}$, $flow_{it}$, $Style_{it}$, $Institution_{it}$ are variables for return on equity, total market capitalization, leverage ratio, net inflow of southbound capital, style factor and policy factors, respectively. β_1 , β_2 , β_3 , β_4 , β_5 , β_6 are the estimated coefficients of these variables, and λ_t denotes the time effect. ε_{it} is the random error term that varies by firm and time.

Table 4. Regression results

Variable	(1)
	AHPremium
roe	1.461*** (5.337)
capital	0.272*** (10.752)
leverage	-0.883*** (-13.913)
flow	-0.280*** (-6.560)

Table 4. (continued)

style	-0.299*** (-11.249)
institution	-0.114* (-1.654)
Year effect	YES
Constant	-1.475*** (-4.367)
N	1185
R2	0.420

Table 4 presents the estimation outcomes of the impacts of each variable on AHP. Based on it, the estimated coefficients of return on equity (ROE) and total assets for AHP are 1.461 and 0.272 respectively. Both are significantly positive at the 1% significance level, which shows that return on equity and total assets might significantly enhance a firms AHP.

The estimated coefficients of the leverage ratio, the net inflow of south-bound capital, the style factor, and the policy on AHP are -0.883, -0.28, -0.299, and -0.114 respectively. These coefficients are significantly negative at the 1%, 1%, 1%, and 10% significance levels successively. This shows that the leverage ratio, the net inflow of south-bound capital, the style factor, and policies will notably lower a firms AHP.

3. Discussion of empirical findings

The outcomes of the regression imply that the AHP is formed by both characteristics at the firm level and segmentation factors at the market level. Profitability and the scale of a firm have a positive correlation with the premium, which suggests that investors from the mainland might assign a higher valuation to firms that have better fundamentals or higher market visibility. In comparison, gearing, south-bound capital movements, market patterns, and institutional openness are inversely related to the premium. This indicates that financial risks, cross-border capital flows, and market integration are capable of lessening valuation disparities. Overall, the results back up the idea that the AHP is not simply a completely fundamental pricing disparity, but a combined result of corporate features and segmented market circumstances.

4. Conclusion

This research examines the establishment of the AHP via a multi-factor empirical structure. The research results indicate that solely relying on firm-level fundamentals is not enough to completely explain the pricing disparity between A-shares and H-shares. While profit-making ability, firm size, and gearing ratios have an impact on the premium, cross-market pricing disparities are also tightly associated with capital movements, market patterns, liquidity situations, and institutional set-ups. As shown above, AHP can be used to assess the value of a company and also illustrates the distribution structure of capital markets in China.

The first content of this paper is to establish a unified empirical system that incorporates firm-level attributes and market-level conditions. As a result, more reasons for different valuations of the same company in the A-share and H-share markets have been discovered. Regression results show that both the return on equity and the size of the company are positively correlated with the AHP.

Leverage ratios, South-bound capital flows, market-style factors and institutional variables will likely reduce the premium; therefore, cross-border capital flows and institutional openness may increase pricing efficiency and promote the convergence of valuations in the two areas.

The theoretical value of this paper is to provide support for the market segmentation interpretation of AHP. Even though A-shares and H-shares belong to the same company, there will still be differences in investor structure, trading mechanisms, liquidity, expectations of exchange rates and regulatory policies, etc., and thus the valuations of the two types of shares may be significantly different. Consequently, within partially integrated marketplaces, asset pricing ought to be regarded as an outcome of the combined impacts of firm fundamentals and more extensive market frictions.

This research also holds practical significances. For investors, the AHP can act as a reference for relative valuation, yet it should not be regarded as a straightforward arbitrage signal. The reason for the price difference may be changes in liquidity and capital flows, as well as changes in the institutional environment. Therefore, regulatory authorities can enhance market linkage, lower trading costs, and promote integration among cross-border capital markets to narrow the price disparity. Listed companies in both the domestic and foreign stock exchanges should learn why their stock prices are different and actively engage with investors in the formulation of capital market strategies.

However, this study is not without some limitations. Some of the variables, especially the structure of investors and high-frequency liquidity indicators, face data availability issues. Furthermore, the current linear regression model may fail to consider non-linear effects and sudden changes in policy at present. Future research will expand on this by introducing dynamic panel models, mechanism-shift models, or more granular trading-level data to uncover the underlying reasons for changes in AHP.

References

- [1] Sun, Q., & Tong, W.H.S. (2000). The Effect of Market Segmentation on Stock Prices: The China Syndrome. *Journal of Banking & Finance*, 24(12), 1875-1902. DOI: 10.1016/S0378-4266(99)00121-1.
- [2] Wang, Y., & He, E. (2021). Research on A-Share and H-Share Premium from the Perspective of Cross-Border Capital Flows. *The Chinese Certified Public Accountant*, (10), 52-57. DOI: 10.16292/j.cnki.issn1009-6345.2021.10.011.
- [3] Zhang, W., Li, H., & Cao, S. (2022). Does the Shanghai-Hong Kong Stock Connect Policy Reduce China's A-H Share Price Premium? *Applied Economics Letters*, 29(15), 1428-1433. DOI: 10.1080/13504851.2021.1937489.
- [4] Bian, J., Chan, K., Han, B., & Shi, D. (2023). Cross-Border Equity Flows and Information Transmission: Evidence from Chinese Stock Markets. *Journal of International Financial Markets, Institutions and Money*, 84, 101755. DOI: 10.1016/j.intfin.2023.101755.
- [5] Fernald, J.G., & Rogers, J.H. (2002). Puzzles in the Chinese Stock Market. *Review of Economics and Statistics*, 84(3), 416-432.
- [6] Chen, K., Wang, Y., & Zhu, X. (2024). The Value of Information in China's Connected Market. *Journal of Empirical Finance*, 78, 101526. DOI: 10.1016/j.jempfin.2024.101526.
- [7] Tan, L., Zhang, X., & Zhang, X. (2024). Retail and Institutional Investor Trading Behaviors: Evidence from China. *Annual Review of Financial Economics*, 16(1), 459-483. DOI: 10.1146/annurev-financial-082123-110132.
- [8] Chan, K., Menkveld, A.J., & Yang, Z. (2008). Information Asymmetry and Asset Prices: Evidence from the China Foreign Share Discount. *Journal of Finance*, 63(1), 159-196. DOI: 10.1111/j.1540-6261.2008.01313.x.
- [9] Han, C., & Shi, Y. (2022). Chinese Stock Anomalies and Investor Sentiment. *Pacific-Basin Finance Journal*, 73, 101739. DOI: 10.1016/j.pacfin.2022.101739.
- [10] He, Q., Wang, S., & Liu, E. (2024). Exchange Rate Risk Premium in China's Stock Market: Evidence from an Industry-Level Analysis. *Studies of International Finance*, (6), 75-86. DOI: 10.16475/j.cnki.1006-1029.2024.06.007.

- [11] Peng, Z., Xiong, K., & Yang, Y. (2024). Microstructure of the Chinese Stock Market: A Historical Review. *Pacific-Basin Finance Journal*, 88, 102551. DOI: 10.1016/j.pacfin.2024.102551.