# The AH Premium is NOT A Puzzle: Evidence from A Quasi-experiment*

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**Abstract**

China's persistent A-share price premium over H-shares, in contrast to the foreign share premium widely documented elsewhere in the dual-class shares literature, is not a puzzle: it is a direct consequence of capital outflow controls, which depress domestic investors' demand for H-shares and inflate A-share relative valuations. We formalize this mechanism in an international CAPM framework where capital outflow controls enter as additional transaction costs, generating an AH premium that increases monotonically with the tightness of controls. To identify the causal effect empirically, we exploit the 2014 Shanghai–Hong Kong Stock Connect as a quasi-experiment, leveraging firms' time-varying inclusion in and exclusion from the program to construct a credible control group. The partial capital account liberalization reduces the AH premium by 24.8%-47.9%, operating through increased H-share trading volume.

**Keywords:** Capital Outflow Controls, AH Price Premium, Shanghai-Hong Kong Stock Connect, Global Depositary Receipts, Market Segmentation

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# 1 Introduction

Hong Kong's IPO market rebounded sharply in 2025 to reclaim its position as the world's leading venue by IPO funds raised, with total proceeds reaching nearly 243.3 billion Hong Kong Dollars (HKD). A significant share of this activity came from AH dual listings, under which Chinese firms issue A-shares on the Shanghai Stock Exchange (SSE) or Shenzhen Stock Exchange (SZSE) and H-shares on the Hong Kong Stock Exchange (HKEX). The number of companies completing H-share IPOs on the Main Board rose from 31 in 2024 to 76 in 2025, including 19 firms that were already A-share listed in mainland China, among them Contemporary Amperex Technology (CATL), the world's largest electric vehicle and energy storage battery manufacturer, whose H-share IPO was the largest globally in 2025. The expansion continued into 2026, with 15 further H-share IPOs by A-share-listed firms by March 31, 2026.[1]

The prominence of AH dual listings makes the long-standing AH price premium puzzle more consequential. The A-shares and H-shares issue by the same firm have same entitlement to dividends and voting rights, yet they have been persistently traded at dramatically different prices. The solid line in Figure 1 plots the average AH premium, defined as the A-share price divided by the H-share price minus one, from 2009 to 2018. It exceeds 50% in most periods, with a sample mean of 78%.[2] This systematic and persistent mispricing has attracted sustained attention in the literature.

[Figure 1 here]

What makes this premium puzzling is its *direction*. In other segmented markets, e.g., Finland, Mexico, Thailand, the Philippines, Switzerland, Singapore, and Malaysia, it is the foreign share that trades at a premium over the domestic share, reflecting excess demand from investors who are restricted from accessing domestic markets (Bailey and

[1] Data source: Hong Kong Market Statistics 2025 and KPMG's Chinese Mainland and Hong Kong IPO Markets 2026 Q1 Review.

[2] Our average AH premium reported here gives equal weights to firms in the sample. It is different from The Hang Seng Stock Connect China AH Premium (HSAHP) Index, which tracks the *weighted* average price premium of eligible dual-listed AH shares. Only A- or H-shares with an average daily turnover exceeding CNY/HKD 20 million in the past six months are included in the HSAHP Index. In addition, our AH premium is defined as the A-price/ H-price minus 1, implying a positive value for a premium and a negative value for a discount. While, a HSAHP index larger than 100% suggests that the A-share is trading at a premium versus the H-share, and vice versa. The trend of the HSAHP index is shown in Figure A1 of Appendix.

Jagtiani, 1994; Stulz and Wasserfallen, 1995; Hietala, 1989). China's AH market runs exactly opposite: H-shares, which are accessible to international investors and thus closer in nature to the "foreign" share in the dual-class literature, are traded at a persistent *discount* relative to A-shares. The prior literature has proposed a range of explanations, including information asymmetry, liquidity differences, investor sentiment, speculative motives, short-selling constraints, and differential demand, but none has offered a unified account of why the premium is so large, so persistent, and pointed in the contrary direction.

This paper argues that the answer lies in an institutional feature that has been underweighted in the prior literature: China's stringent capital outflow controls. By restricting domestic investors' access to overseas markets, these controls disproportionately depress the demand for H-shares among the largest and most active investor group in mainland China, predominantly retail investors who cannot freely allocate capital abroad. The result is a structurally depressed H-share price, an inflated A-share relative valuation, and a persistent premium that mainly reflects not irrationality or information asymmetry but a straightforward consequence of the regulatory environment. From this perspective, the AH premium is not a puzzle at all: it is the mirror image of the foreign share premium documented elsewhere, with capital *outflow* controls playing the same role that "foreign ownership restrictions" as capital *inflow* controls play in other dual-class markets.

We formalize this intuition in an international CAPM framework, extending Eun and Janakiramanan (1986) and Bergström et al. (1993) to the AH dual-listing setting. Capital outflow controls enter the model as additional transaction costs borne by domestic investors when purchasing H-shares. The model delivers sharp predictions. First, the AH premium increases monotonically with the tightness of outflow controls, scaled by a multiplicative factor that amplifies the underlying valuation difference between the two markets. Second, relaxing controls raises domestic investors' equilibrium holdings of H-shares and reduces their A-share holdings, increasing H-share trading volume.

To test these predictions empirically, we exploit the Shanghai-Hong Kong Stock Connect (SH-HK SC, hereafter) scheme, announced on April 10, 2014 and launched on November 17, 2014, as a quasi-experiment. The SH-HK SC partially liberalized cross-border capital flows by allowing qualified mainland investors with a minimum account balance of CNY 500,000 to purchase eligible H-shares through their domestic brokers. Crucially, this

liberalization was partial and asymmetric: it lowered investment barriers without eliminating them, and it did not permit direct share conversion between the A- and H-share markets. As shown in Figure 1, after the announcement of the SH-HK SC scheme in 2014, the average AH premium experienced a significant decline. To control for differences in market sentiment during the same period, we normalize the average AH premium using the China Securities Index 300 (CSI300) and the Hang Seng Index (HSI). The dashed line plots the normalized average AH premium. A more pronounced decline in the average AH premium emerges after the announcement of the SH-HK SC scheme.

Our identification strategy goes beyond simply comparing pre- and post-announcement periods. We exploit a novel and underutilized source of variation: firms' time-varying inclusion in and exclusion from the Stock Connect program. The composition of eligible firms changed continuously over our 2009-2018 sample period, as firms entered and exited based on market capitalization thresholds, trading volume requirements, and special treatment (ST) designations. This within-sample variation allows us to construct a time-varying treatment and control group that absorbs confounding market-wide shocks more effectively than a simple before-after comparison. Among the 107 AH dual-listed firms in our sample, 28 experienced at least one change in their Stock Connect eligibility status, providing a credible source of quasi-random variation in exposure to capital account liberalization.

The results strongly support our model predictions. The SH-HK SC reduces the AH price premium by 24.8%-47.9%, with the effect concentrated among firms where capital outflow controls bind most tightly. Consistent with the volume mechanism predicted by the model, H-share turnover rates increase by 20%-23% following the Stock Connect launch. Heterogeneity analysis confirms that non-SOEs, politically unconnected firms, and firms with low overseas revenue experience the largest reductions, precisely because these firms have the fewest alternative channels through which domestic investors can gain offshore exposure.

A particularly compelling piece of corroborating evidence comes from the Shanghai-London Stock Connect (SH-L SC), launched in June 2019. Unlike the SH-HK SC, the SH-L SC permits full two-way convertibility between GDRs listed in London and the underlying A-shares, after a 120-day lock-up period. This convertibility creates a direct arbitrage mechanism that the SH-HK SC lacks. The case of Huatai Securities, the first

Chinese GDR listed on the London Stock Exchange, illustrates the point sharply: its A-share premium over the GDR-implied price narrowed steadily as the conversion date approached, and collapsed almost entirely once converted shares became available for trading. This natural experiment of near-complete liberalization provides a counterfactual benchmark that strongly supports our interpretation: when capital controls are effectively removed through convertibility, the premium disappears. When they are only partially relaxed, as under the SH-HK SC, the premium persists but shrinks.

Chinese AH dual-listed firms offer an ideal setting for identifying the pricing effects of capital controls for two reasons. First, the A-share market and the Hong Kong stock market are not fully connected due to capital controls. These regulatory barriers create a pronounced market segmentation, effectively isolating mainland stock markets from global ones through two channels: (i) restricting domestic investors' foreign market access, and (ii) exacerbating information asymmetries by preventing full price incorporation of domestic investors' informational advantages in H-shares. As an exogenous policy shock, the SH-HK SC partially liberalized these cross-border investment restrictions between mainland China and Hong Kong.

Second, as existing A-share issuers, these dual-listed firms are free from the concern of self-selection of listing location and are exempt from the IPO regulation in mainland China. Their additional listings of H-shares in Hong Kong diversify entrepreneurs' risks of wealth expropriation under capital controls. According to Feng et al. (2025), after controlling for the first two effects, the price disparity of dual-listed AH shares primarily reflects the effects of capital controls and market-specific differences. They document a substantial and persistent valuation discount of up to 60% for Chinese firms listed overseas compared with their domestic counterparts. Among overseas listed Chinese firms, these AH dual listed firms constitute a distinct subsample.

Our paper contributes to several strands of literature. First, we contribute to the literature on dual-class share premia by providing a unified explanation for the AH premium puzzle. A large literature has studied the price discrepancies between A-shares and B-shares or between A-shares and H-shares and proposed partial explanations, including market segmentation, information asymmetry, speculative motive, market sentiment, liquidity preference, short-selling constraints, differential demand, and subjective expectations (Silber, 1991; Chakravarty et al., 1998; Froot and Dabora, 1999; Sun and Tong,

2000; Hau, 2001; Choe et al., 2001; Fernald and Rogers, 2002; Chan et al., 2003; Wang and Jiang, 2004; Dvořák, 2005; Li et al., 2006; Chan et al., 2008; Arquette et al., 2008; Mei et al., 2009; Bekaert et al., 2011; Pan et al., 2016; Ding and Feng, 2019; Huang et al., 2019; Cheng et al., 2020; Bekaert et al., 2024; Zhang and Zhang, 2025). Arquette et al. (2008) examine the price differences of Chinese stocks between their Shanghai listings and their offshore listings in New York and Hong Kong, and argue that the expected exchange rate change and differences in investor sentiment at both the market and firm levels are the key drivers. More recently, Bekaert et al. (2024) study cross-listed shares and show that the same firm exhibits systematically different betas across listing venues, reflecting persistent market segmentation rather than differences in fundamentals. Cheng et al. (2020) show that the turnover of city-level local leaders in mainland China significantly reduces the AH premium. Different from the prior work, we exploit the quasi-experimental variation available from the SH-HK SC program to isolate the causal role of capital controls. We show that the AH premium is the natural counterpart of foreign share premia in other markets, and both reflect the same underlying mechanism: investment barriers that depress the demand of the restricted investor group, operating in opposite directions depending on whether controls restrict inflows or outflows.

Second, we contribute to the growing literature on the effects of the SH-HK SC. Existing studies have documented short-run reductions in the AH premium (Fan and Wang, 2017; Chan and Kwok, 2018) and broader effects on firm valuation, volatility, and investment (Liu et al., 2021; Ma et al., 2019; Lundblad et al., 2026). Lundblad et al. (2026) use proprietary trade-level data to document that foreign order flows facilitated by the Stock Connect have measurable effects on firm-level pricing in the Chinese stock market. Fan and Wang (2017) use daily data to show that the SH-HK SC significantly reduced the AH price premium in the short run, partly through improved corporate governance. Chan and Kwok (2018) document a modest but significant long-term reduction of 1.6%-2.1% in the AH price premium, using a control group design with dual-listed firms. We extend this literature in two ways: by quantifying the long-run reduction in the AH premium using a more credible identification strategy based on time-varying program eligibility, and by tracing the mechanism through which liberalization operates, namely, increased H-share demand and trading volume by domestic investors.

Third, our study is related to the literature on capital controls in emerging economies.

A large body of work documents the macroeconomic effects of capital controls (Forbes, 2007; Johnson and Mitton, 2003; Harrison et al., 2004). At the market level, equity market liberalization has been shown to reduce the cost of capital and raise valuations (Bekaert and Harvey, 2000; Bekaert et al., 2005), but micro-level evidence on the asset pricing consequences of capital controls remains sparse. Our paper provides a clean micro-foundation linking the tightness of outflow controls to the cross-sectional and time-series variation in dual-listed share premia, with implications for how capital market distortions are capitalized into asset prices more broadly.

The rest of the paper is organized as follows. Section 2 provides the institutional background of capital controls and stock connect schemes. In Section 3, we use the SH-L SC scheme launched in 2019 as an illustrative experiment to link the cross-market price difference to capital controls. Section 4 presents a theoretical model and its main predictions. Guided by our model predictions, our empirical exercises and results are shown in Section 5. Section 6 provides further discussions to support our main findings. Section 7 concludes.

# 2 Institutional Background

## 2.1 Capital Controls

Capital flows offer potential benefits to emerging economies, including enhanced efficiency, productive investment, and greater competitiveness (IMF, 2012), but they also carry significant risks.[3] Sudden and indiscriminate capital account liberalization can lead to currency crises, capital flight, and rising inequality, resulting in social instability and macroeconomic volatility, particularly in countries with underdeveloped financial systems (IMF, 2012; Miao and Deng, 2019). In response, many emerging economies employ capital controls to safeguard domestic economic growth and stability.

Capital controls cover a wide range of measures, including restrictions on cross-border holdings or transactions in financial assets and liabilities, and controls over financial instruments that affect capital flows and exchange rates. The former can be further classified into inflow controls and outflow controls (Ma, 1996). To ensure economic stability, coun-

[3]International Monetary Fund. (2012). The Liberalization and Management of Capital Flows: An Institutional View. `https://www.imf.org/external/np/pp/eng/2012/111412.pdf`.

tries such as Mexico, Sweden, and Finland have imposed inflow controls that limit foreign investors' ownership of domestic firms, especially firms regarded as strategically important for national interests, such as petroleum and telecommunications firms (Bailey and Jagtiani, 1994; Domowitz et al., 1997). Under outflow controls, domestic investors are restricted from freely accessing overseas markets. In countries like Argentina, Malaysia, and India, these capital controls have often been imposed temporarily, for example, during financial crises.

China's capital controls include foreign investment restrictions, currency exchange limits, and other regulations to maintain financial stability and insulate the economy from volatile cross-border capital flows. By creating segmented capital markets, China's capital controls restrict direct cross-border investment between domestic and foreign investors. China began to liberalize its capital account gradually after the late 1970s. After fully granting the Chinese Yuan (CNY, hereafter) convertibility on current accounts in 1996, the process of capital account liberalization became turbulent.

The Qualified Foreign Institutional Investor (QFII) and Qualified Domestic Institutional Investor (QDII) programs represent important institutional arrangements for regulated capital account convertibility. The QFII program, established in 2002, allows approved foreign institutional investors to access mainland markets under quota restrictions, while the QDII program, launched in 2006, permits domestic institutional investors to access 11 overseas financial markets under regulated quotas (Miao and Deng, 2019).[4] However, the QDII scheme covers only qualified institutional investors and does not provide broad access to overseas markets for domestic households. This restriction is important because investor composition differs markedly between the mainland and Hong Kong markets. The A-share market contains a relatively high proportion of individual investors, whereas the Hong Kong stock market is dominated by institutional investors (Carpenter et al., 2020; Huang et al., 2025). Although the QDII scheme permits domestic institutions to invest in H-shares, most individual A-share investors remain unable to participate in cross-border investments.

In addition, to further circumvent the cross-border investment barriers, Chinese firms

[4]Domestic institutional investors can enter 11 overseas financial markets, including the markets of the United States, United Kingdom, Japan, Korea, Singapore, Australia, Luxembourg, Germany, Canada, Malaysia, and Hong Kong.

adopt a dual-listing or cross-listing strategy, issuing separate classes of shares in different markets worldwide, such as A-shares on the SSE or SZSE, H-shares on the HKEX, N-shares on the New York Stock Exchange (NYSE), and GDRs on the London Stock Exchange (LSE) and SIX Swiss Exchange (SIX).

## 2.2 Stock Connect Schemes

Like special economic zones during China's transition from a planning economy to a market-based economy in the 1980s and 1990s, the Shanghai (or Shenzhen) -Hong Kong Stock Connect schemes provide retail investors with a direct and convenient channel for cross-border investment without dismantling the existing capital control arrangements. The SH-HK SC scheme, announced on 10 April 2014 and launched on 17 November 2014, represents a landmark initiative in China's cross-border capital market liberalization. This pilot program creates a two-way investment channel between the mainland and Hong Kong markets. The *southbound* channel allows both qualified retail and institutional investors in mainland China with a minimum account balance of CNY 500,000 to trade eligible Hong Kong-listed securities, including dual-listed H-shares, while the *northbound* channel enables qualified foreign investors to access designated A-shares without the same account-balance requirement.[5] This asymmetry reflects the fact that capital outflow controls remain more stringent than inflow controls in mainland China.

A similar stock connect program, the Shenzhen-Hong Kong Stock Connect (SZ-HK SC, hereafter) was announced on 16 August 2016 and launched on 5 December 2016. It allows qualified investors in Hong Kong (or Shenzhen) to trade eligible Shenzhen-listed A-shares (or Hong Kong-listed shares) through their local brokers. These stock connect schemes implement an asymmetric quota system, with a northbound daily investment quota of CNY 52 billion for each of the Shanghai or Shenzhen exchange, and a southbound daily quota of CNY 42 billion for the Hong Kong market.[6]

Figure A2 in the Appendix shows the trading procedure under the SH-HK or SZ-HK

[5] The eligible stocks in the Hong Kong stock markets include constituent stocks in the Hang Seng Composite Large-Cap index, Hang Seng Composite Mid-Cap index, dual-listed H-shares, and constituent stocks of the Hang Seng Composite Small-Cap index with an average monthly market value of not less than 5 billion Hong Kong dollars. The eligible A-shares include constituent stocks of the SSE 180 index, the SSE 380 index, and dual-listed A-shares.

[6] Before 1 May 2018, the northbound transaction quota was CNY 13 billion for each of the SSE or SZSE, while the southbound transaction quota was CNY 10.5 billion.

SC. Mainland investors submit buy orders in CNY through local brokers to purchase H-shares on the HKEX, while Hong Kong and overseas investors place northbound orders through their local brokers to trade eligible A-shares. The local brokers then convert CNY (or HKD) via the designated depositary and clearing company to facilitate cross-border settlement. The same process applies in reverse for sell orders, with all currency conversions centrally processed through the clearing system. This structure that combines qualified investor access, quota controls, and centralized foreign exchange clearing reflects a carefully designed and controlled liberalization of the capital account. The "southbound" (mainland investors buying Hong Kong listed shares) and "northbound" (Hong Kong and overseas investors buying A-shares) schemes operate under asymmetric rules, with the southbound channel indeed imposing *more* restrictions in areas such as investor eligibility thresholds and investment scope. Unlike explicit capital controls that prohibit capital outflows outright, these implicit controls permit cross-border capital flows while imposing additional transaction costs.

# 3 The Shanghai-London SC: An Experiment?

The SH-L SC officially started on June 17, 2019 to further connect China's capital market with global markets. It is a cross-border mechanism that provides eligible issuers and investors in China and the United Kingdom with greater access to each other's markets. Eligible Chinese firms listed in Shanghai can issue GDRs for listing on the LSE, and qualified firms listed in London can issue CDRs in Shanghai.[7] On December 17, 2021, the SH-L SC scheme was further broadened to include Chinese firms listed on the SZSE and overseas capital markets in Germany and Switzerland. By the end of 2023, 23 Chinese firms had issued GDRs, including 6 on the LSE and 17 on the SIX. These GDRs, representing ownership in the underlying Chinese shares but traded overseas, allow Chinese firms to raise foreign capital and enable international investors to gain exposure to Chinese equities without directly participating in the SSE or SZSE.

As shown in Figure A3 in the Appendix, the SH-L SC differs fundamentally from the SH-HK or SZ-HK SC schemes. It permits qualified investors on the LSE to purchase GDRs directly using market trading currency. More importantly, it establishes a convertible

[7] A depositary receipt is a certificate issued by a depositary bank, which represents underlying shares in a foreign firm but is traded on a local stock exchange.

mechanism that allows two-way conversion between GDRs and A-shares after a lock-up period of 120 days, effectively circumventing capital controls and mitigating market segmentation. Although the SH-L SC does not imply full capital account liberalization, GDRs and A-shares are fully convertible and equivalent for qualified investors under the quantity limit set by the number of GDRs or corresponding A-shares. Thus, the SH-L SC scheme creates an arbitrage mechanism that enhances price convergence, which is the key feature absent from the SH-HK (or SZ-HK) SC scheme.

We consider Huatai Securities, the first Chinese GDR listed on the LSE under the SH-L SC scheme, as an illustration of price convergence. Huatai Securities, an A-share listed securities company on the SSE since 2010, successfully issued GDRs at a price of USD 20.5 per GDR on June 17, 2019. The offering raised USD 1.692 billion, making it the largest IPO in the UK market since 2017. As one GDR of Huatai Securities corresponds to 10 underlying A-shares, the issue price of USD 20.5 means that the implied price of the underlying A-shares was approximately CNY 14 per share on the same day using the contemporaneous nominal exchange rate. This suggests a discount of 25% compared with its A-share trading price on the SSE on the same day. To protect its A-share investors, a 120-day lock-up period was applied before redemption. That is, the GDRs of Huatai Securities could be converted into the underlying A-shares only from October 18, 2019.

Figure 2 illustrates the price dynamics of Huatai Securities' A-shares and GDRs from June 17, 2019 (the GDR listing date) to February 14, 2020 (240 calendar days after listing). The solid and dashed lines represent A-share and GDR prices, respectively. The price spread narrowed as the conversion date approached. As of Friday Oct 18, 2019 (the vertical dashed line), the arbitrage opportunity still existed as the A-share price was higher than the GDR-implied A-share price by 8.1%. As a result, investors had incentives to convert their GDRs into A-shares to capture spread profits. When these converted A-shares became available for trading in the domestic market on Monday Oct 21, 2019 (the vertical solid line), we saw a sharp drop in A-share prices and a convergence of A-share and GDR prices. Thereafter, the spread between the A-shares and GDRs of Huatai Securities remained close to zero, and the arbitrage opportunity was largely eliminated.

[Figure 2 here]

Although the SH-L SC does not represent full capital account liberalization, it enables

qualified investors to use foreign currency to purchase and convert low-priced overseas-listed GDRs into corresponding high-priced A-shares for profit. This convertibility feature weakens the segmentation between the CNY and foreign currencies under the quantity limit set by the number of GDRs. Accordingly, we treat the SH-L SC scheme as an illustrative experiment of liberalizing capital controls, which effectively eliminates the valuation premium of A-shares over GDRs.

By contrast, cross-border share conversion is not allowed in the SH-HK SC scheme, thus, the AH premium persists after the SH-HK SC scheme. From this perspective, we argue that the AH premium is largely due to market segmentation created by capital controls on currency conversion. Therefore, when the SH-HK SC scheme relaxes capital controls, the AH premium is expected to drop significantly. In the following section, we explicitly model the effect of capital controls on the AH price premium in an international CAPM framework.

# 4 An Asset Pricing Model

By extending the international CAPM framework of Eun and Janakiramanan (1986) and Bergström et al. (1993) to the AH dual-listing setting, we link China's capital controls to the AH premium. In the model, the AH premium is amplified by a scale factor as an increasing function of a parameter measuring capital controls.[8] Specifically, capital outflow controls are modelled as additional transaction costs that domestic investors face when buying H-shares. The introduction of the SH-HK SC scheme significantly reduces these transaction costs, leading to a reduction in the AH premium. This model yields three important predictions that guide our empirical exercises in the following sections.

## 4.1 Setup

For simplicity, we assume that there are two risky assets (A-shares and H-shares), and two investors (the domestic and foreign investors). Both investors have identical preferences

[8]Existing literature has adopted two primary modeling approaches: (i) complete exclusion of certain investors from international assets, or (ii) partial constraints on foreign ownership. Following the QFII/QDII reforms and the SH-HK SC, our framework takes into account China's unique institutional environment, in which qualified domestic and foreign investors can access both A-shares and H-shares subject to regulatory restrictions.

and allocate their portfolios across risky and risk-free assets $B$ based on the mean-variance optimization of terminal wealth. An investor $i$ has the following utility function $U(w_{1i})$:

$$U(w_{1i}) = E(w_{1i}) - \frac{\delta}{2} Var(w_{1i}), \tag{1}$$

where $w_{1i}$ represents the end-of-period wealth, $i = d$ or $f$ for domestic and foreign investors, respectively. $\delta$ denotes the risk aversion coefficient.

This is an intertemporal model in which investors are price takers. At date 0, investors allocate their initial wealth between risky assets and a riskless asset, such as bonds. Their objective is to maximize wealth at date 1. Due to the capital outflow controls, the budget constraint differs between domestic investors and foreign investors. For an individual $i = d$ or $f$ , the wealth constraints are given by:

$$w_{0i} = B_i + p_a A_i + p_h(1+\tau_i)H_i, \tag{2}$$

$$w_{1i} = (1+r)B_i + (p_a + c_a)A_i + (p_h + c_h)H_i, \tag{3}$$

where $p_a$ and $p_h$ denote the A-share and H-share prices in HKD, respectively, and $A_i$ and $H_i$ are the number of shares that the investor $i$ invests in A-shares and H-shares, respectively. $r$ is the risk-free rate. $c_a$ and $c_h$ represent the capital gains and dividends of the unit A-share and the H-share at the end of period when investor $i$ sells the shares. Assume that the random variables $(c_a,\, c_h)'$ follow a joint distribution of $\left( \binom{\mu_a}{\mu_h}, \begin{pmatrix} \sigma_a^2 & \sigma_{ah} \\ \sigma_{ah} & \sigma_h^2 \end{pmatrix} \right)$.

Due to China's capital outflow controls, we assume that the domestic investor $d$ faces an additional investment barrier $\tau_d > 0$ when purchasing H-shares, and that the SH-HK SC scheme leads to a big drop in $\tau_d$. $\tau_d$ includes direct costs (e.g., taxes and administrative fees) or indirect constraints (e.g., currency conversion limit) under capital controls. In contrast, we assume that $\tau_f = 0$, for simplicity.[9]

For $i = d$ or $f$ , the expected end-of-period wealth and its variance are, respectively, given by

$$E(w_{1i}) = (1+r)w_{0i} + (\mu_a - p_a r)A_i + \{\mu_h - p_h[r + (1+r)\tau_i]\}H_i, \tag{4}$$

$$Var(w_{1i}) = \sigma_a^2 A_i^2 + \sigma_h^2 H_i^2 + 2\sigma_{ah} A_i H_i. \tag{5}$$

[9] After the launch of the SH-HK SC scheme, overseas investors still face certain restrictions when investing in A-shares. However, domestic investors are subject to additional constraints, such as account balance limits and more stringent quota controls. Therefore, $\tau_d$ captures the additional layer of regulatory constraints faced by domestic investors relative to their overseas counterparts.

As $p_a$ and $p_h$ are determined by the market equilibrium, the investors only determine their allocation between A-shares, H-shares, and risk-free bonds. Substituting equations (4) and (5) into equation (1), we obtain the following first-order conditions: $i = d$ or $f$ ,

$$\mu_a - p_a r - \delta(\sigma_a^2 A_i + \sigma_{ah} H_i) = 0, \tag{6}$$

$$\mu_h - p_h[r + (1+r)\tau_i] - \delta(\sigma_{ah} A_i + \sigma_h^2 H_i) = 0. \tag{7}$$

## 4.2 Equilibrium Results

Equilibrium asset prices are derived by aggregating demand across both markets and applying market-clearing conditions. Market-clearing conditions require that the total demand for A-shares (H-shares) should equal the supply of A- and H-shares, i.e., $A_d + A_f = S_A$ and $H_d + H_f = S_H$. $S_A$ and $S_H$ are the total number of shares that investors can invest in A-shares and H-shares, respectively. $p_a$ and $p_h$ are jointly determined by domestic and foreign investors in partially segmented markets due to the absence of direct share convertibility:

$$p_a = \frac{1}{r}[\mu_a - \delta(\sigma_a^2 S_A + \sigma_{ah} S_H)/2] > 0, \tag{8}$$

$$p_h = p_h(\tau_d) = \frac{1}{r + (1+r)\tau_d/2}[\mu_h - \delta(\sigma_{ah} S_A + \sigma_h^2 S_H)/2] > 0. \tag{9}$$

Define $p_h^* = \frac{1}{r}[\mu_h - \delta(\sigma_{ah} S_A + \sigma_h^2 S_H)/2]$ when $\tau_d = 0$. Equation (9) above suggests that $p_h(\tau_d) < p_h^*$ , implying that the price of H-shares is depressed due to the reduced demand for H-shares from the domestic investor imposed by an additional cost under capital outflow controls. This effect is similar to that of foreign ownership constraint derived by Eun and Janakiramanan (1986). In addition, $\partial p_h(\tau_d)/\partial \tau_d < 0$ indicates a lower $p_h$ due to a larger degree of capital controls. By contrast, under our assumptions, the price of A-shares is not affected by capital outflow controls. We denote $p_a^* = p_a$.

Thus, the AH price premium can be written as:

$$\frac{p_a}{p_h} = [1 + \frac{(1+r)}{2r}\tau_d]\frac{\mu_a - \delta(\sigma_a^2 S_A + \sigma_{ah} S_H)/2}{\mu_h - \delta(\sigma_{ah} S_A + \sigma_h^2 S_H)/2} = [1 + \frac{(1+r)}{2r}\tau_d]\frac{p_a^*}{p_h^*}. \tag{10}$$

There are two important results that we can draw from the equation (10) above. First, the effect of capital controls on the AH premium can be singled out by the scale factor $1 + \frac{(1+r)}{2r}\tau_d$. The stricter controls are, the bigger AH premium. This is in line with Feng

et al. (2025) who claim that the big valuation discount of Chinese overseas listed firms can be explained by entrepreneurs' willingness-to-pay to bypass China's IPO regulations, capital outflow controls and potential state expropriation risk. Second, the AH premium also depends on the second term $p_a^*/p_h^*$, which is associated with the different returns and risks in mainland and Hong Kong markets (Arquette et al., 2008).

To further explore the mechanism how the AH premium is affected by the capital controls through demand for H-shares, we obtain the following demand function by rewriting equations (6) and (7): for $i = d$ or $f$ ,

$$\delta \begin{pmatrix} \sigma_a^2 & \sigma_{ah} \\ \sigma_{ah} & \sigma_h^2 \end{pmatrix} \cdot \begin{pmatrix} A_i \\ H_i \end{pmatrix} = \begin{pmatrix} \mu_a - p_a r \\ \mu_h - p_h[r + (1+r)\tau_i] \end{pmatrix}.$$

Thus,

$$\begin{pmatrix} A_i \\ H_i \end{pmatrix} = \begin{pmatrix} \sigma_h^2(\mu_a - p_a r) - \sigma_{ah}(\mu_h - p_h r) + \sigma_{ah} p_h (1+r)\tau_d \\ -\sigma_{ah}(\mu_a - p_a r) + \sigma_a^2(\mu_h - p_h r) - \sigma_a^2 p_h (1+r)\tau_d \end{pmatrix} \Delta$$

where $\Delta = 1/[\delta(\sigma_a^2\sigma_h^2 - (\sigma_{ah})^2)] > 0$. Hence,

$$\begin{aligned} \begin{pmatrix} A_d \\ H_d \end{pmatrix} &= \frac{1}{2}\begin{pmatrix} S_A \\ S_H \end{pmatrix} + \begin{pmatrix} \sigma_{ah} \\ -\sigma_a^2 \end{pmatrix} \frac{p_h(1+r)\tau_d \Delta}{2}, \\ \begin{pmatrix} A_f \\ H_f \end{pmatrix} &= \frac{1}{2}\begin{pmatrix} S_A \\ S_H \end{pmatrix} - \begin{pmatrix} \sigma_{ah} \\ -\sigma_a^2 \end{pmatrix} \frac{p_h(1+r)\tau_d \Delta}{2}. \end{aligned}$$

By substituting the equilibrium prices $(p_a, p_h)$ in equations (8) and (9) to the demand function above, we can obtain the equilibrium portfolios the domestic investor holds:

$$\begin{bmatrix} A_d \\ H_d \end{bmatrix} = \frac{1}{2}\begin{pmatrix} S_A \\ S_H \end{pmatrix} + \begin{pmatrix} \sigma_{ah} \\ -\sigma_a^2 \end{pmatrix} \Pi k(\tau_d) \tag{11}$$

where $k(\tau_d) = \frac{(r+1)\tau_d}{2r+(1+r)\tau_d}$ and $\partial k(\tau_d)/\partial \tau_d > 0$ . $\Pi = \frac{\mu_h - \delta(\sigma_{ah}S_A + \sigma_h^2 S_H)/2}{\delta[\sigma_a^2\sigma_h^2 - (\sigma_{ah})^2]} > 0$. Similarly, the equilibrium portfolios the foreign investor holds are the mirror image of the domestic investor's holding in this simple setup.

Equation (11) indicates that $H_d < H_d^* = \frac{1}{2}S_H$ when $\tau_d = 0$, suggesting that the demand for H-shares by the domestic investor is depressed by the extra costs measuring China's capital outflow controls. This leads to a reduced price of H-shares $p_h(\tau_d) < p_h^*$ at equilibrium.

## 4.3 Empirical Predictions of the SH-HK SC Effects

We summarize three important predictions by this model. First, this model shows that an additional cost due to China's capital outflow controls depresses the domestic investor's

demand for H-shares, thus leads to a lower equilibrium H-share price $p_h$. Therefore, equation (10) above suggests that the AH premium is inflated by capital outflow controls in the scale factor $1 + \frac{(1+r)}{2r}\tau_d$. This model predicts that relaxing capital controls (or reducing investment barriers $\tau_d$), such as the SH-HK SC as a partial market liberalization, leads to a decline of AH premium.

Second, as implied in Equation (11) above, in the presence of investment barriers, the domestic investor reduces her holding of H-shares by $\sigma_a^2 \Pi k(\tau_d)$, and replaces them with A-shares, $\Pi \sigma_{ah} k(\tau_d)$. Compared with the benchmark situation without capital outflow controls, her reduced H-shares depend on the degree of capital outflow controls $\tau_d$. When the investment barrier falls, $k(\tau_d)$ decreases, suggesting that the domestic investor tends to hold more H-shares by selling some of her A-shares. The response of the foreign investor is the opposite. Thus, another empirical prediction is that the trading volume of the H-shares would increase due to the SH-HK SC.

Third, the equation (10) also suggests that the reduction in the AH premium due to a policy shock of the introduction of the SH-HK SC can be heterogeneous, depending on different capital gains and dividends in the second term. Some AH dual-listed firms have more channels than others to bypass capital outflow controls, e.g., financial firms with branches overseas, or those with relatively higher overseas revenue and political connection. In this case, we expect that the impact of the SH-HK SC on the AH premium for these types of firms will be smaller.

## 4.4 General Case

In the model above we consider a simplified case with only one domestic investor and one foreign investor, and $\tau_f = 0$. In the general case, we assume that there are $n_d$ domestic investors and $n_f$ foreign investors. In addition, $\tau_f > 0$ is allowed to model capital inflow controls. In this general case, we follow the same steps as above to derive the equilibrium prices $p_a$ and $p_h$ as in equation (8) and (9) above:

$$p_a = \frac{1}{r + (1+r)\frac{n_f}{n_d+n_f}\tau_f}[\mu_a - \delta(\sigma_a^2 S_A + \sigma_{ah} S_H)/(n_d + n_f)] > 0, \tag{12}$$

$$p_h = \frac{1}{r + (1+r)\frac{n_d}{n_d+n_f}\tau_d}[\mu_h - \delta(\sigma_{ah} S_A + \sigma_h^2 S_H)/(n_d + n_f)] > 0. \tag{13}$$

Thus, the AH price premium in this general case can be written as:

$$\frac{p_a}{p_h} = \frac{1+(1+1/r)\frac{n_d}{n_d+n_f}\tau_d}{1+(1+1/r)\frac{n_f}{n_d+n_f}\tau_f} \cdot \frac{\mu_a - \delta(\sigma_a^2 S_A + \sigma_{ah} S_H)/(n_d+n_f)}{\mu_h - \delta(\sigma_{ah} S_A + \sigma_h^2 S_H)/(n_d+n_f)}. \tag{14}$$

There are a few important points from this general case. First, equation (14) here includes the AH price ratio (10) in the previous subsection as a special case when $n_d = n_f = 1$ and $\tau_f = 0$. In addition, compared with the general case, the special case of $\tau_f = 0$ can be considered as an approximation of the situation $\tau_d \gg \tau_f$, in which capital *outflow* controls are much more stringent than capital *inflow* controls.

Second, the scale factor of the AH premium due to capital controls in this general case becomes

$$\frac{1+(1+1/r)\frac{n_d}{n_d+n_f}\tau_d}{1+(1+1/r)\frac{n_f}{n_d+n_f}\tau_f}. \tag{15}$$

Same as the scale factor $1+(1+1/r)\tau_d/2$ in the special case, the AH price ratio is also inflated by capital outflow controls measured by $\tau_d$. In addition, capital *inflow* controls measured by $\tau_f$ also affect the AH premium through depressing foreign investors' demand for A-shares and thus decreasing the A-share price $p_a$ in equation (12). Thus, the introduction of the SH-HK SC reduces both $\tau_d$ and $\tau_f$ and increases both A-share and H-share prices.

Third, however, when there are much more domestic investors than foreign investors in mainland China and Hong Kong markets, i.e., $n_d \gg n_f$, the scale factor (15) $\simeq 1 + (1+1/r)\tau_d > 1$. This is actually the case when comparing the number of investors in mainland China and Hong Kong. Thus, the predictions made by the simplified case still hold in the general case under this condition. In addition, quantitatively, the magnitude of the effect of capital outflow controls on the AH premium is even larger in this situation, i.e., $\tau_d > \tau_d/2$.

Finally, different from the AH premium in China's case, the scale factor can be smaller than 1 in a general case. This could happen when the investment barriers for foreign investors to invest in domestic shares are much bigger than those for domestic investors going out, i.e., $\tau_d \ll \tau_f$, with the scale factor (15) $\simeq 1/[1+(1+1/r)\frac{n_f}{n_d+n_f}\tau_f] < 1$. In this case, the demand for domestic shares is relatively depressed either by an extra cost due to higher barriers or quantitative restrictions, leading to a relatively lower price. This is

also equivalent to strict capital *inflow* controls, e.g., restrictions of foreign ownership on domestic assets.

Alternatively, in a small open economy, when the size of domestic investors is relatively small, compared with foreign investors, i.e., $n_d \ll n_f$, $\frac{n_d}{n_d+n_f} \simeq 0$ and the scale factor becomes $1/[1 + (1 + 1/r)\tau_f] < 1$. In both cases, a premium traded for foreign shares (unrestricted) or a discount of domestic shares (restricted shares) would be observed in dual-class shares, as seen in the literature, e.g., Alien Board price premium in Thai market (Bailey and Jagtiani, 1994), in Finnish market (Hietala, 1989), in Mexico (Domowitz et al., 1997), to name a few.

From this perspective, China's capital *outflow* controls can be considered as restriction on domestic investors' ownership of H-shares, the opposite case of "foreign ownership restrictions", as capital *inflow* controls, discussed in the literature on dual-class shares. Thus, A-shares can be approximately viewed as the "unrestricted" shares defined by the literature, and are traded at a premium. Therefore, this general model includes the two opposite scenarios of the AH premium in China and the foreign share premium documented in other markets as special cases.

# 5 Empirical Results

## 5.1 Data and Model Specifications

We use the SH-HK SC scheme as a quasi-experiment to estimate the effect of relaxing capital outflow controls on the price premium of the dual-listed AH shares from January 2009 to December 2018. Specifically, three empirical predictions derived from the model above will be tested.

Our sample begins in 2009 to avoid the enormous uncertainty of capital markets due to the financial crisis, and ends in 2018 to avoid the effects of later HKEX reforms and the COVID-19 pandemic. Our data are mainly sourced from the Wind Financial database, CEIC, China Stock Market & Accounting Research Database (CSMAR), and investing.com. After dropping the observations with missing values, the sample consists of 107 AH dual-listed firms, including 87 firms listed on the SSE, and 20 the SZSE. The final sample contains 3,085 firm-quarter observations.[10]

[10]For financial indicators with semi-annual reporting, we impute quarterly values by taking the arith-

First, to examine the impact of capital liberalization on the AH premium, we set the regression model as follows:

$$AHP_{it} = \beta_0 + \beta_1 SHHK_t + \gamma' x_{it} + \alpha_t + \mu_i + \alpha_s + \varepsilon_{it}, \tag{16}$$

where $AHP_{it}$ is the AH price premium for firm $i$ at time $t$. Slightly different from the definition in the model, the AH price premium here is calculated as the ratio of quarterly average of daily A-share to H-share prices minus 1. Thus, a positive value of $AHP$ indicates a premium. The average $AHP$ value of .776 in Table 1 suggests that the average trading price of A-shares is 77.6% higher than that of the corresponding H-shares. Compared with the HSAHP index, this unweighted average AH price premium is larger, implying that the price gap is larger among smaller firms. $SHHK$ is a dummy variable, equal to 1 from one quarter after the announcement of the SH-HK SC, i.e., the third quarter of 2014 onwards and 0 otherwise.

To measure the capital controls, existing literature primarily employs *de jure* indices, such as the Chinn-Ito index (Chinn and Ito, 2006) and the FKRSU index (Fernández et al., 2015). However, these two measures are yearly data with little variation for mainland China. Moreover, these *de jure* measures capture legal restrictions, but stringent on-paper controls may not translate to effective implementation (Kose et al., 2009).

Instead, we use two *de facto* measures that provide better information on actual capital account openness at the macro level. The first one is the quarterly growth of foreign reserves. When China's foreign exchange reserves decline, the government tends to implement stringent capital outflow controls to safeguard reserve accumulation and maintain macroeconomic stability. A slowdown in foreign exchange reserve growth therefore typically reflects tighter regulation of cross-border capital flow. The second measure is the quarterly growth of the QDII quota. As an initial attempt to liberalize the capital account, the QDII program allows qualified domestic investors to allocate capital to overseas markets within government-approved quotas. A rapid expansion in the QDII quota usually reflects a relaxation of capital outflow controls. These two variables capture changes in existing regime of capital outflow controls, while the SH-HK SC provides a new route of promoting the cross-border capital flows.

metic mean of adjacent reporting periods. We compute quarterly averages for daily-frequency data to align with our analysis period. Observations with missing data across all quarters are excluded from the sample.

Besides the growth rates of foreign reserves and QDII quota, $x_{it}$ also controls for a set of firm-level or market-level characteristics, including *NonSOE* and *Political Connection, Overseas Revenue ratio*, *Market Capitalization*, and *QFII Ratio*.[11] *NonSOE* is a dummy variable equal to 1 if a firm is not a State-Owned Enterprise (SOE). In addition, based on our theoretical model, we include *Beta(A)*, *Beta(A, HSI)*, *Beta(H)*, and *Beta(H, CSI300)* to measure the sensitivity of the securities to the movement of the A-share and the H-share markets. Following prior literature, we also include *Institutional Investor Ratio*, *Turnover Rate*, *Return Volatility*, and *Dividend* to control for speculative motives and liquidity preferences (Chen et al., 2001; Mei et al., 2009). Finally, as dual listings span different markets and currencies, we have *Outstanding Shares*, *Market Sentiment*, *Forward Exchange Rate*, and *Interest Rate* to control for cross-market risk exposures. Sector, quarter, year, and headquarters location, are also controlled for in the regressions. Table 1 provides details on the variables used in our regressions.

[Table 1 here]

## 5.2 Baseline Results

Columns (1) and (2) in Table 2 present the pooled OLS and fixed effect results for the full sample, respectively. As expected, the SH-HK SC, as a partial capital liberalization, significantly reduced the AH price premium. Using column (2) as a benchmark, on average, the SH-HK SC scheme reduces the AH price premium by 47.9% ($= -.372/.776$).[12] The AH price premium began to narrow in the quarter following the announcement of the SH-HK SC, before its actual implementation. This suggests that investors, anticipating the price appreciation of H-shares upon the program's launch, likely used existing chan-

[11] *Political Connection* is constructed by identifying the curriculum vitae of directors and senior executives using a keyword-matching algorithm. We assume that the board of directors, CEOs, and other senior executives who satisfy either of the two criteria are defined as having political connections: 1)a current or former official in government agencies, special committees, or sectors of the National People's Congress (NPC) and Chinese People's Political Consultative Conference (CPPCC), or in the people's court or people's procuratorate; 2)a current or former delegate to the NPC or CPPCC. Each politically connected executive and director is assigned a score based on the administrative level of the institution in which he or she served. We assigned a score of 4 for the central/national level, 3 for the provincial level, 2 for the city level, and 1 for working below the city level. We sum these scores at the firm level to construct *Political Connection*.

[12] Chan and Kwok (2018) find that the price disparity reduces immediately by 4.0% to 4.5% after the announcement of the SH-HK SC.

nels to reallocate their portfolios toward Hong Kong stocks in advance, thereby reducing the price gap between markets.

To more accurately identify the effect of SH-HK SC on the AH price premium, we restrict the sample to 2009-2015 in columns (3) and (4) of Table 2. The results show that the main findings remain unchanged. In addition, columns (5) to (8), which exclude firms listed on the SZSE, suggest that this partial capital account liberalization still leads to a significant reduction in the AH price premium.

As shown in Table 2, coefficients of *Foreign Reserve Ratio* and *QDII Ratio* are significantly negative, implying that easing capital outflow controls through existing channels would lead to a reduction in the AH price premium, *ceteris paribus*. We also find results consistent with the existing literature. From column (2), first, firms with severe information asymmetry (weaker political connections, smaller market capitalization, lower QFII ownership, and lower overseas sales revenue) tend to have a higher AH price premium. The price foreign investors are willing to pay for H-shares is much lower than the price mainland investors pay for A-shares under greater information asymmetry (Chakravarty et al., 1998; Chan et al., 2008). Second, the positive coefficient on *Beta(H)* is consistent with asset pricing theory (Carpenter et al., 2020). Third, the negative coefficients on *Institutional Ratio* and *Dividend*, together with the positive coefficient on *Return Volatility*, imply that speculative A-share trading widens the premium. Fourth, the positive value of *Turnover Ratio* confirms that liquidity differences amplify the premium (Chen et al., 2001; Pan et al., 2016). Fifth, the positive coefficient on *Market Sentiment* supports market sentiment and differential demand hypotheses (Li et al., 2006; Wang and Jiang, 2004). Finally, *Forward Exchange Rate* negatively correlates with the AH price premium, suggesting that investors shift toward H-shares when they anticipate CNY depreciation to hedge exchange rate risk.[13]

[Table 2 here]

The dummy $SHHK_t$ treats the AH dual-listed firms before the introduction of the SH-HK SC as a control group. To further explore the variation among these firms, we construct an alternative control group based on the fact that some AH dual-listed firms were not included in the SH-HK SC scheme. There are two possible reasons for exclusion.

[13]The Pooled-OLS estimators provide evidence similar to the fixed effects estimators.

First, a firm in our sample may not have been dual-listed when the SH-HK SC was implemented in 2014. Second, the composition of Stock Connect eligible firms changes over time. Firms can be excluded if they fail to meet predefined eligibility criteria.

Table 3 presents 28 firms in the control group that were excluded from the SH-HK or SZ-HK SC scheme for at least part of the 2009-2018 period. For example, the A-shares of Beijing Jingcheng Machinery Electric were excluded from the SH-HK SC before Mar 24, 2015. The primary reason for this exclusion was that its A-shares were under Special Treatment (ST) status. Its H-shares were also excluded as the firm did not meet the minimum market capitalization requirement when the SH-HK SC was implemented. The H-shares were not included in the Hong Kong Stock Connect until April 13, 2015. Thus, changes in firms' inclusion in or exclusion from the Stock Connect scheme over time allow us to construct time-varying treatment and control groups. The dummy $In\text{-}Out_{it}$ equals to 1 if firm $i$ is included in the Stock Connect program at time $t$, and 0 otherwise.

[Table 3 here]

Regression results replacing $SHHK_t$ with $In\text{-}Out_{it}$ are reported in Table 4. As expected, compared with firms outside the SC scheme, firms included experienced a greater decline in AH price premium by at least 24.8% ($= -.193/.776$, in column (5)) after the announcement of the SH-HK SC. Given a small number of firms in the control group, statistical significance is reduced in Table 4, especially for the FE results. However, the empirical results in Table 4 still support the prediction that the SC scheme leads to a reduction of the AH premium by relaxing the cross-border capital controls.

[Table 4 here]

## 5.3 Robustness Checks

To examine the robustness of our main findings, we conduct a set of robustness checks. First, we change the timing of the treatment dummy by defining $SHHK_t = 1$ immediately after the announcement of SH-HK SC, i.e., $SHHK_t = 1$ from 2014Q2 onward, instead of from 2014Q3. Columns (1) and (2) of Table 5 show that the estimated coefficients on $SHHK_t$ are still negative and statistically significant, but smaller in magnitude than our

baseline results in columns (1) and (2) of Table 2. In other words, investors need time to respond to this policy shock and rebalance their portfolios.

Alternatively, we consider the situation, in which the policy shock is defined based on the implementation date of the SH-HK SC, i.e., November 17, 2014, with $SHHK_t = 1$ beginning in 2014Q4. As shown in columns (3) and (4) of Table 5, the estimates are much smaller and insignificant, suggesting that the implementation of SH-HK SC does not have a significant impact on the AH premium. Investors may have adjusted their portfolios through existing channels, such as QFII and QDII, before the scheme was implemented. Thus, the policy effect had been absorbed before implementation. This finding reflects that the market may be a semi-strong efficient market, under which publicly released information is fully digested at the time of release (Fama, 1970).

[Table 5 here]

Second, we check the robustness of main result by including the SZ-HK SC scheme in the regressions. Similarly, we define dummy $SZHK_t = 1$ from one quarter after the announcement of the SZ-HK SC in August 2016 onward. As reported in columns (5) and (6) of Table 5, the effect of SH-HK SC remains unchanged. However, the estimated coefficient on $SZHK_t$ suggests that the impact of SZ-HK SC on the AH premium is statistically insignificant after controlling for the effect of SH-HK SC. This insignificant result comes from the fact that market participants had anticipated its launch following the implementation of SH-HK SC.[14]

Third, we examine whether the main result is affected by short-selling mechanism. Mainland China and the Hong Kong markets operate under different short-selling mechanisms and restrictions. Hong Kong established a short-selling mechanism in 1994 to improve market liquidity and efficiency within a well-defined regulatory framework.[15] In contrast, mainland China introduced margin trading and short-selling in 2010, where these activities remain relatively restricted due to stricter regulations, higher costs, limited stock

[14] In addition, the small number of Shenzhen-listed firms, only 20 in our sample, may also explain the statistical insignificance.

[15] After the Asian financial crisis in 1998, Hong Kong implemented stricter short-selling regulations, limiting the practice exclusively to qualified securities that meet specific eligibility criteria. To be designated as shortable, a stock must satisfy at least one of the following conditions: (i) is a constituent stock of an index; (ii) has underlying options or futures; (iii) has great market capitalization and maintain high liquidity. More details can be found on the HKEX.

eligibility, and potential policy intervention. Limited arbitrage may affect the dynamic asset pricing process under immature margin trading and securities lending mechanisms. The divergence in short-selling regulations between mainland China and the Hong Kong may therefore affect the AH price premium even after the SH-HK SC (Ding and Feng, 2019). To control the effect of short-selling constraints on the AH price premium, we include *Short-selling Ratio*, defined as the proportion of H-shares in short selling.[16] Following Chan et al. (2009), we also include an interaction term between market downturns and the short-selling ratio to capture the effect of short-selling constraints during declining markets.[17]

Table 6 reports the results after adding *Short-selling Ratio* to the baseline specification in columns (1) and (2) of Table 2. Columns (3) and (4) further include both *Short-selling Ratio* and *Short-selling Ratio*× *HSI Growth*. We find that the main results remain unchanged after controlling for these additional short-selling variables.

[Table 6 here]

# 6 Channels and Additional Results

In the previous section, we provide empirical evidence of the first model prediction that the AH price premium reflects restrictions on capital outflows in mainland China, and that the partial liberalization of capital outflow controls leads to a significant decline in the AH premium. In this section, we test the other two model predictions and provide additional empirical results.

## 6.1 Increased Trading Volume of H-shares

Our model also predicts that the domestic investor would demand more H-shares when cross-border investment barriers are reduced, and that the SH-HK SC would increase trading volume of H-shares. This prediction is confirmed in Figure 3. The solid line shows the trading volume of all listed shares in the Hong Kong market, the dashed line

[16] We obtain the daily data from the Wind Financial database and calculate the quarterly average. If shares cannot be sold short, we assign a value of 0.

[17] This interaction term is *Short-selling Ratio*× *HSI Growth*, where *Short-selling Ratio* follows the definition above, and *HSI Growth* is a dummy variable equal to 1 if the growth rate of the Hang Seng Index is negative, and 0 otherwise.

reports the trading volume of H-shares, and the dotted line indicates the trading volume of red chips for comparison.[18] After the implementation of the SH-HK SC (vertical solid line), we observe a significant increase in trading volume for shares in the Hong Kong market, particularly for those H-shares.

[Figure 3 here]

Table 7 reports the results of regressing the H-share turnover rates, i.e., trading volume normalized by the corresponding market capitalization, on the SH-HK SC dummy. The H-share turnover rate increases by 20%-23% after the SH-HK SC.

[Table 7 here]

Consistent with our model prediction, after the SH-HK SC, more domestic investors exploit arbitrage opportunities or diversify their portfolios across both markets, leading to higher trading activities. The increased participation of domestic investors in the Hong Kong market brings advanced information and facilitates more efficient price discovery. Therefore, the AH price premium declines along with the reduction of the firm's information asymmetry and market segmentation after this partial capital liberalization.

## 6.2 Heterogeneous Effects

As predicted by our model above, the reduction in the AH premium due to the SH-HK SC can be heterogeneous, depending on capital gains, dividends and market characteristics. In this subsection, we examine heterogeneity in the effect on the AH premium across 5 firm characteristics. They include ownership, political connection, overseas revenue ratio, firm size measured by market capitalization and QFII ownership ratio. Except for *NonSOE*, 4 other dummies are generated based on the median values in the sample. For example, the dummy of low political connection equals 1 for firms with their political connection scores below the sample medium. Table 8 presents the empirical results of regressions with interacting these 5 dummies with $SHHK_t$ using the DID strategy in spirit.

[Table 8 here]

[18] Red chips refer to shares issued by Chinese firms that are listed in the Hong Kong market but incorporated outside mainland China.

As shown in column (2), the AH price premium of non-SOEs drops 17.5% (=.136/.776) more than that of SOEs after the SH-HK SC. Similarly, we also find that firms with weaker political connections, a lower overseas sales revenue ratio, smaller market capitalization, and a low proportion of QFII holdings experience a bigger reduction in the AH premium by 14.9% (=.116/.776), 15.1% , 21.4% and 11.1%, respectively, in even columns of Table 8. These firms are more sensitive to the shock of the SH-HK SC.

Different from their SOE counterparts, or big firms, these firms are less politically connected, with lower overseas sales revenues or lower QFII ownership ratios. A possible explanation is that these firms have relatively severe information asymmetry among investors across markets and less room for bypassing capital controls. The introduction of the SH-HK SC increases cross-border capital flows and trading volume for these AH dual-listed firms. As a result, the reduction in information asymmetry is larger for these firms and more decline in their AH premium.

# 7 Conclusion

We aim to address the AH premium puzzle from the perspective of China's special institutional arrangement of stringent capital outflow controls, which essentially depress domestic investors' demand (and price) for H-shares. We model capital outflow controls as additional transaction costs that domestic investors need to pay for when purchasing H-shares in a partially segmented market. We argue that the AH price difference is inflated by the additional costs characterizing the capital *outflow* controls. Our model also reconciles the opposite case of foreign share premium documented in the dual-class literature when the foreign ownership restrictions, as capital *inflow* controls, become dominant.

Our model predicts that capital liberalization reduces investment barriers, and domestic investors tend to increase their holdings of H-shares and decrease their holdings of A-shares, leading to a decline in the AH premium. Using the SH-HK SC as a quasi-experiment, we find that the AH price premium is reduced by 24.8%-47.9% after the partial capital liberalization.

In the context of AH dual-listed firms, our findings show that H-share prices are depressed under China's capital outflow controls. This implies a reduction in the capital-raising capacity of A-share firms in the Hong Kong market. In addition, lowered demand

and transactions of H-shares also leads to information asymmetry between two markets, thus an efficiency loss of the markets. After the SH-HK SC, many domestic investors entered the Hong Kong market and traded H-shares. The increased participation of domestic investors in Hong Kong brings advanced information, reducing information asymmetry and narrowing the price gap between A-shares and H-shares.

Our analysis has several limitations that point to directions for future research. Our sample ends in 2018 to avoid confounding effects from subsequent HKEX reforms and the COVID-19 pandemic, but the continued expansion of Stock Connect programs after 2018, including higher quota limits and the broadening of eligible securities, offers additional variation that could be used to further test the capital controls mechanism. It also remains an open question whether the magnitude of the AH premium has evolved in response to these post-2018 policy changes, and whether the structural decline we document has continued or partially reversed. Additionally, while we focus on the pricing effects of capital outflow controls, a fuller welfare analysis would need to account for the distributional consequences for domestic retail investors who, constrained from diversifying internationally, remain overexposed to mainland market risk.

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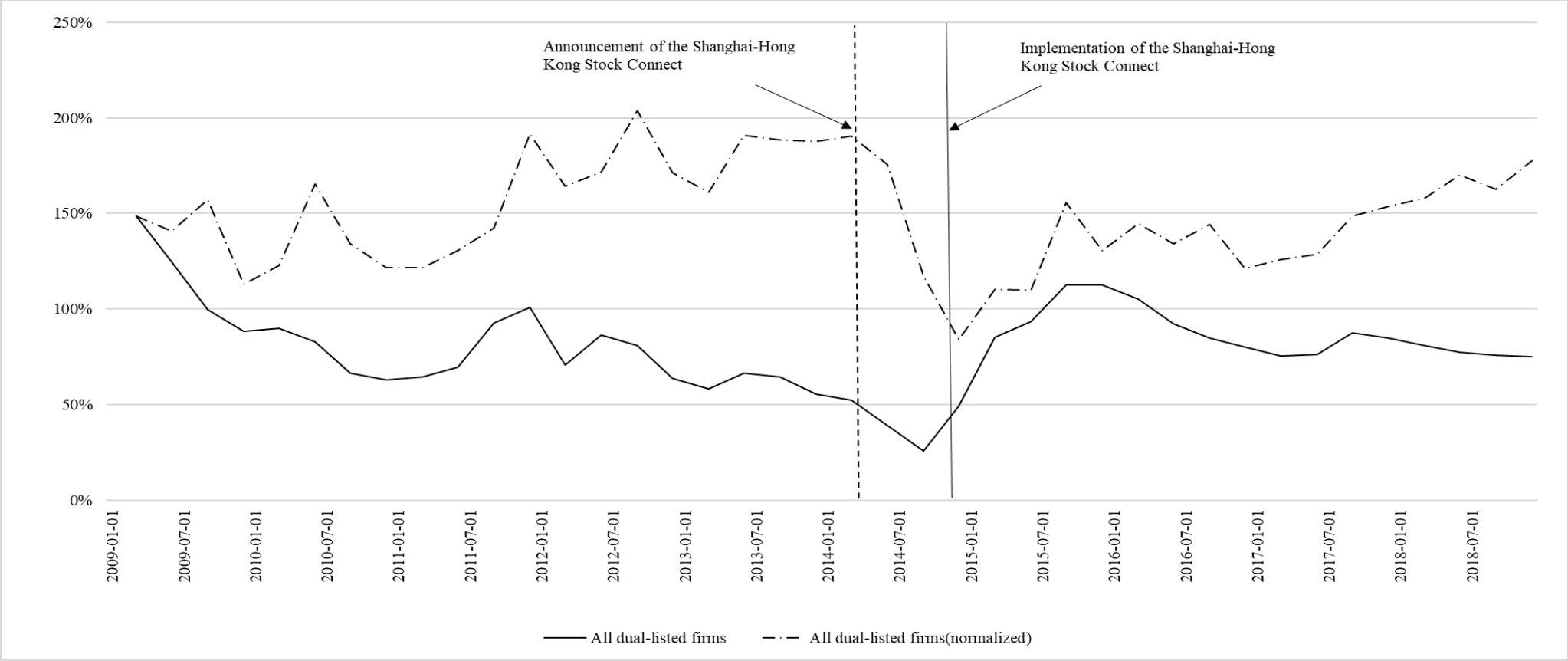


**Figure 1: The Average AH Premium Normalized by Market Index**

**Notes:**

1. Firm-level AH premium = price of A-shares / (price of H-shares× exchange rate) -1
2. The solid line reports the average of firm-level AH premium from 2009Q1 to 2018Q4.
3. All dual-listed firms (normailized) reports average AH premium that normalized by the CSI 300/HSI and benchmarked to the first quarter of 2009.

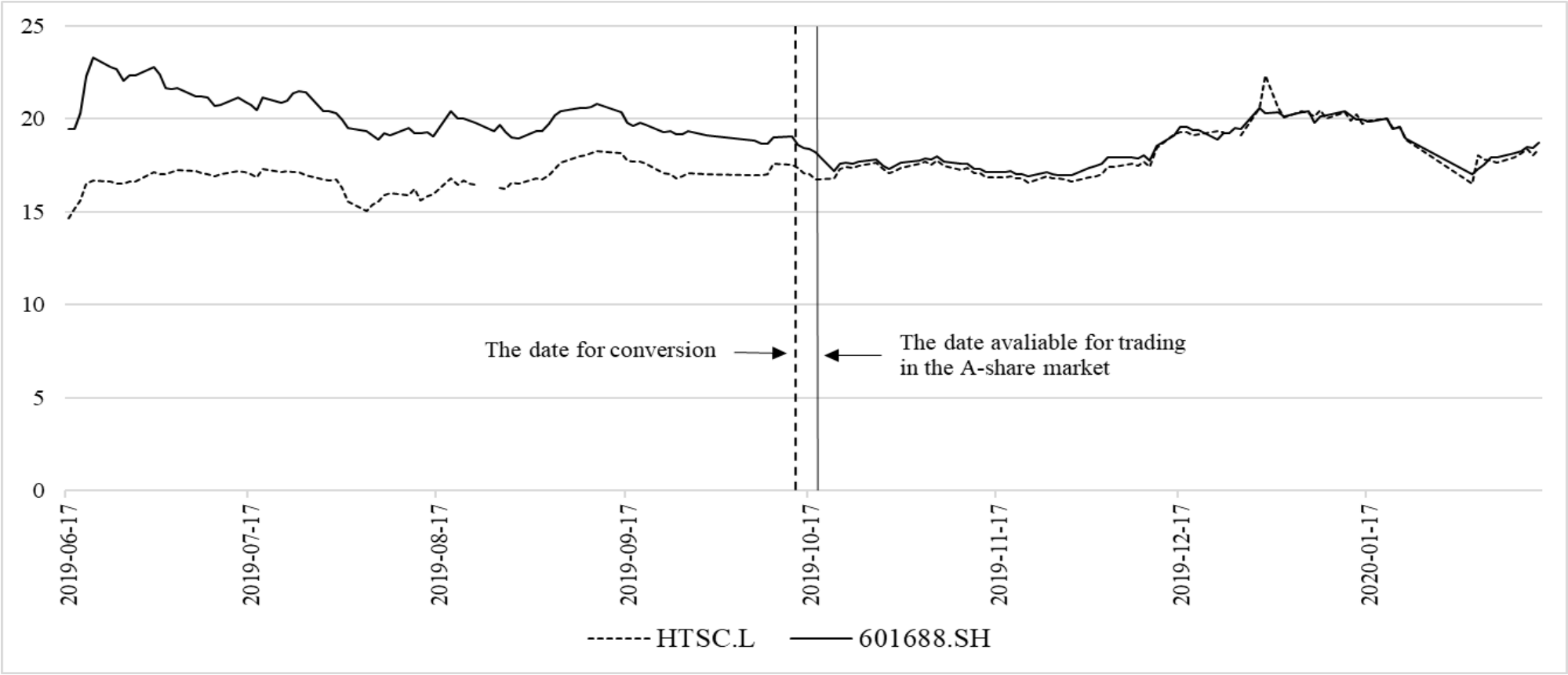


**Figure 2: The prices of the A-share and GDR equivalent of Huatai Securities (HTSC) in CNY**

**Notes:**

1. The solid line (601688.SH) represents the prices (CNY equivalent) of the Huatai Securities (HTSC) shares traded in Shanghai Stock Exchange.
2. The dashed line (HTSC.L) represents the prices of the HTSC GDRs traded in London Stock Exchange.

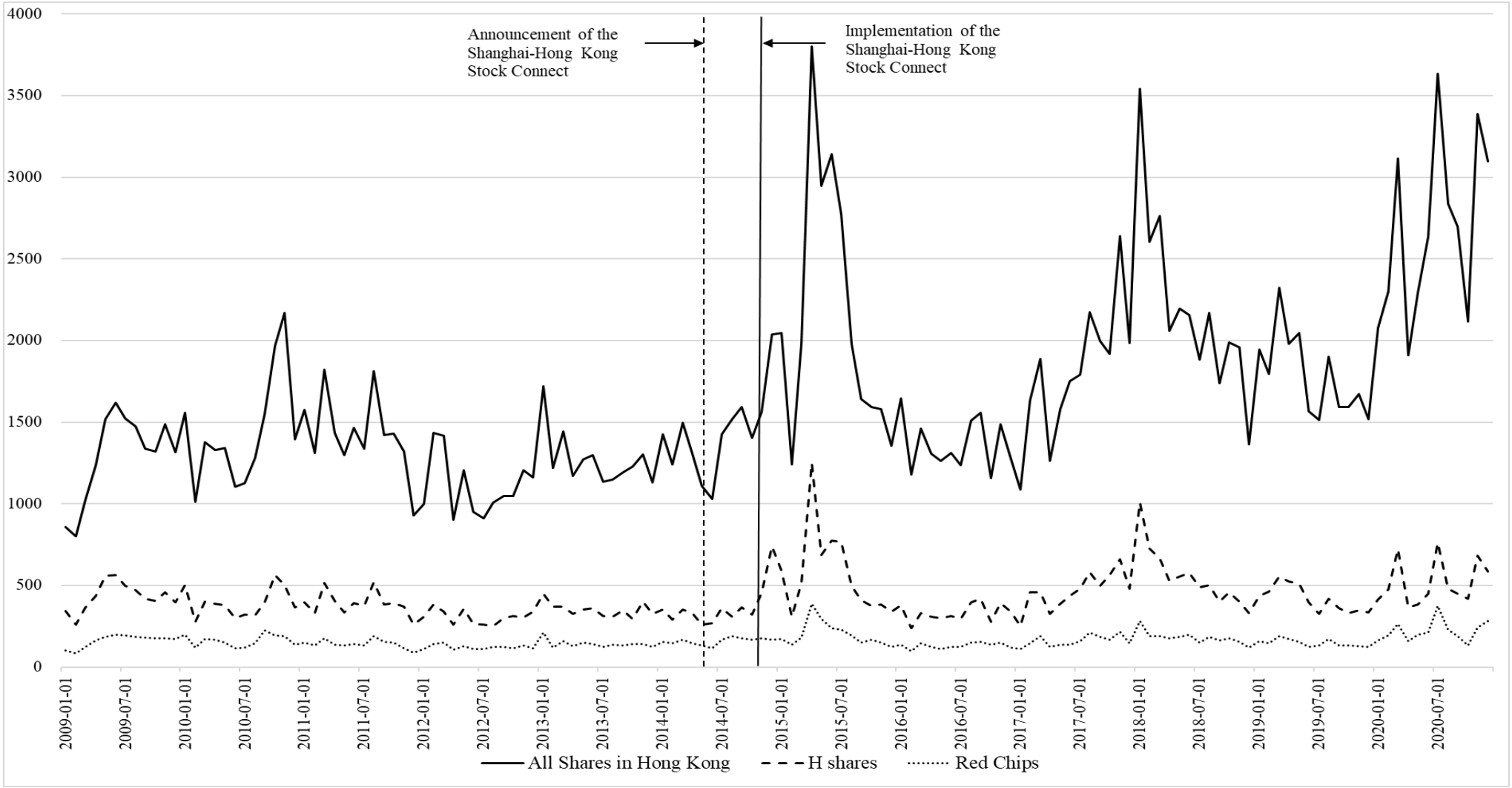


**Figure 3: The Trading Volume of Shares in the Hong Kong Market (billion HKD)**

**Table 1: Summary Statistics of Variables**

| Variables | Level | Definition | N | Mean | Std.D | Min | Max | Form in Regression | Source |
|---|---|---|---|---|---|---|---|---|---|
| AH P | Firm | price of A-shares / (price of H-shares × exchange rate) -1 | 3,085 | 0.78 | 0.93 | -0.32 | 7.08 | | Wind |
| $In\text{-}Out_{it}$ | Firm | dummy, equal to 1 if firm i is included in the Stock Connect at time t | 3,085 | 0.52 | 0.50 | 0 | 1 | 0 or 1 | |
| $SHHK_t$ | Market | dummy, equal to 1 in the following quarter after the Shanghai-Hong Kong Connect is announced | 3,085 | 0.53 | 0.50 | 0 | 1 | 0 or 1 | |
| $SZHK_t$ | Market | dummy, equal to 1 in the following quarter after the Shenzhen-Hong Kong Connect is announced | 3,085 | 0.28 | 0.45 | 0 | 1 | 0 or 1 | |
| Foreign Reserve Ratio | Firm | quarterly growth of foreign reserve | 3,085 | 0.88 | 3.32 | -6.30 | 8.29 | % | CEIC |
| QDII Ratio | Market | quarterly growth of QDII quota | 3,085 | 1.78 | 2.68 | 0 | 12.29 | % | CEIC |
| NonSOE | Firm | dummy, equal to 1 if firms are not SOEs | 3,085 | 0.26 | 0.44 | 0 | 1 | 0 or 1 | Wind |
| Political Connection | Firm | the score of each firm received considering political connection | 3,085 | 11.95 | 11.10 | 0 | 67 | | CSMAR |
| Overseas Revenue Ratio | Firm | sales revenue from overseas / total operating revenue | 3,085 | 11.96 | 17.16 | 0 | 87.03 | % | Wind |
| Capitalization | Firm | closing price × outstanding shares | 3,085 | 170.93 | 334.43 | 1.26 | 2,504.59 | log | Wind |
| QFII Ratio | Firm | QFII ownership of A-shares / tradable A-shares | 3,085 | 0.20 | 0.71 | 0 | 11.51 | % | Wind |
| Beta(A) | Firm | 52 weeks of beta coefficient of A-shares with CSI300 | 3,085 | 0.97 | 0.38 | 0.08 | 2.18 | | Wind |
| Beta(H) | Firm | 52 weeks of beta coefficient of H-shares with HSI | 3,085 | 1.14 | 0.47 | -0.08 | 2.38 | | Wind |
| Beta(A, HSI) | Firm | 52 weeks of beta coefficient of A-shares with HSI | 3,085 | 0.60 | 0.41 | -0.41 | 1.99 | | |
| Beta(H, CSI300) | Firm | 52 weeks of beta coefficient of H-shares with CSI300 | 3,085 | 0.77 | 0.40 | -0.14 | 1.90 | | |
| Institutional Investor Ratio | Firm | institutional ownership of A-shares / tradable A-shares | 3,085 | 10.01 | 15.07 | 0 | 95.22 | % | Wind |
| Turnover Rate | Firm | turnover rate of A-shares / turnover rate of H-shares | 3,085 | 2.67 | 3.98 | 0.02 | 26.42 | | Wind |
| Return Volatility | Firm | 52 weeks of annualised return volatility of A-shares / 52 weeks of annualised return volatility of H-shares | 3,085 | 0.98 | 0.36 | 0.38 | 2.46 | | Wind |
| Dividend | Firm | dividends per A-share / price per A-share | 3,085 | 2.00 | 1.67 | 0 | 14.90 | % | Wind |
| Outstanding Shares | Firm | outstanding A-shares / outstanding H-shares | 3,085 | 3.18 | 1.75 | 0.04 | 15.57 | | Wind |
| Market Sentiment | Market | CSI300 / HSI | 3,085 | 0.13 | 0.02 | 0.09 | 0.17 | log | Wind |
| Forward Exchange Rate | Market | 3-month RMB Forward Contract middle price in USD | 3,085 | 6.51 | 0.26 | 6.11 | 6.95 | | CEIC |
| Interest Rate | Market | 3-year treasury bond interest rate (Mainland China) / 3-year government bond interest rate (Hong Kong) | 3,085 | 2.18 | 0.72 | 0.41 | 3.7 | | CEIC/Investing.com |
| Short-selling Ratio | Firm | H-share in short selling / Total H-shares | 3,085 | 0.06 | 0.06 | 0 | 0.50 | | Wind |
| HSI Growth | Market | HSI Growth=1 if growth rate of HSI <0 | 3,085 | 0.39 | 0.49 | 0 | 1 | | Wind |

**Notes:**

1. The average of the two-nearest-neighbors is used to fill in the missing value as firms only provide mid-year and end-year value for Overseas Revenue.
2. Overseas Revenue and Turnover Ratio are winsorized at 1% and 99%, respectively.
3. We fill in the missing value with 0 for QFII ratio.
4. All Beta coefficients and Return Volatility are winsorised at 1% and 99%.
5. Market capitalization is in billion RMB.

**Table 2: Impact of Shanghai-Hong Kong Stock Connect on the AH Premium**

| Dependent | AH P | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | All listed firms | | | | Shanghai listed firms only | | | |
| | 2009-2018 | | 2009-2015 | | 2009-2018 | | 2009-2015 | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Method | OLS | FE | OLS | FE | OLS | FE | OLS | FE |
| $SHHK_t$ | -0.379*** | -0.372*** | -0.430*** | -0.379*** | -0.275*** | -0.251*** | -0.330*** | -0.238*** |
| | (0.087) | (0.066) | (0.100) | (0.072) | (0.085) | (0.067) | (0.099) | (0.072) |
| Foreign Reserve Ratio | -0.027*** | -0.032*** | -0.035*** | -0.045*** | -0.025*** | -0.030*** | -0.029*** | -0.043*** |
| | (0.007) | (0.005) | (0.010) | (0.007) | (0.008) | (0.005) | (0.010) | (0.007) |
| QDII Ratio | -0.009* | -0.013*** | -0.010 | -0.010* | -0.009* | -0.012*** | -0.007 | -0.009 |
| | (0.005) | (0.003) | (0.008) | (0.005) | (0.005) | (0.003) | (0.008) | (0.005) |
| NonSOE | 0.084*** | | 0.108** | | -0.107*** | | -0.119** | |
| | (0.032) | | (0.049) | | (0.032) | | (0.049) | |
| Political Connection | -0.007*** | -0.003* | -0.008*** | -0.004* | -0.002 | -0.001 | 0.000 | -0.001 |
| | (0.001) | (0.002) | (0.002) | (0.002) | (0.001) | (0.001) | (0.002) | (0.002) |
| Overseas Revenue Ratio | -0.002*** | -0.008*** | -0.002 | -0.005*** | -0.003*** | -0.012*** | -0.002 | -0.009*** |
| | (0.001) | (0.001) | (0.001) | (0.002) | (0.001) | (0.001) | (0.001) | (0.002) |
| Market Capitalization | -0.325*** | -0.144*** | -0.390*** | -0.218*** | -0.256*** | -0.080*** | -0.317*** | -0.163*** |
| | (0.011) | (0.024) | (0.015) | (0.033) | (0.014) | (0.025) | (0.021) | (0.033) |
| QFII Ratio | -0.075*** | -0.047*** | -0.054*** | -0.027* | -0.031** | -0.044*** | -0.014 | -0.016 |
| | (0.013) | (0.013) | (0.015) | (0.015) | (0.013) | (0.013) | (0.015) | (0.015) |
| Beta(A) | -0.321*** | -0.018 | -0.448*** | 0.006 | -0.262*** | -0.000 | -0.393*** | 0.052 |
| | (0.046) | (0.033) | (0.065) | (0.049) | (0.050) | (0.034) | (0.068) | (0.049) |
| Beta(A, HSI) | -0.089* | -0.033 | -0.049 | -0.001 | -0.154*** | -0.083*** | -0.137** | -0.084** |
| | (0.048) | (0.029) | (0.062) | (0.037) | (0.051) | (0.029) | (0.062) | (0.038) |
| Beta(H) | 0.104** | 0.080*** | 0.100** | 0.131*** | 0.175*** | 0.182*** | 0.145*** | 0.264*** |
| | (0.043) | (0.028) | (0.049) | (0.035) | (0.050) | (0.029) | (0.054) | (0.037) |
| Beta(H, CSI300) | 0.216*** | 0.023 | 0.256*** | 0.046 | 0.138*** | -0.025 | 0.135* | -0.077 |
| | (0.047) | (0.033) | (0.067) | (0.045) | (0.053) | (0.035) | (0.073) | (0.047) |
| Institutional Investor Ratio | -0.005*** | -0.008*** | -0.006*** | -0.007*** | -0.003*** | -0.006*** | -0.002** | -0.003** |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Turnover Rate | 0.012*** | 0.009*** | 0.013** | 0.007* | 0.011* | 0.002 | -0.000 | -0.002 |
| | (0.004) | (0.003) | (0.005) | (0.004) | (0.006) | (0.003) | (0.008) | (0.004) |
| Return Volatility | 0.470*** | 0.368*** | 0.499*** | 0.461*** | 0.422*** | 0.341*** | 0.331*** | 0.346*** |
| | (0.048) | (0.033) | (0.069) | (0.046) | (0.050) | (0.033) | (0.063) | (0.045) |
| Dividend | -0.068*** | -0.029*** | -0.076*** | -0.013 | -0.074*** | -0.040*** | -0.078*** | -0.027*** |
| | (0.007) | (0.007) | (0.009) | (0.009) | (0.007) | (0.007) | (0.010) | (0.010) |
| Outstanding Shares | -0.038*** | -0.092*** | -0.041*** | -0.092*** | -0.029*** | -0.093*** | -0.027*** | -0.089*** |
| | (0.007) | (0.011) | (0.010) | (0.019) | (0.007) | (0.010) | (0.011) | (0.018) |
| Market Sentiment | 0.696*** | 0.627*** | 0.731*** | 0.630*** | 0.547*** | 0.479*** | 0.621*** | 0.454*** |
| | (0.185) | (0.137) | (0.224) | (0.156) | (0.194) | (0.138) | (0.230) | (0.155) |
| Forward Exchange Rate | -0.395*** | -0.432*** | -0.634* | -0.731*** | -0.356*** | -0.365*** | -0.337 | -0.419* |
| | (0.124) | (0.089) | (0.349) | (0.226) | (0.133) | (0.090) | (0.361) | (0.226) |
| Interest Rate | -0.070 | -0.076** | -0.126 | -0.122** | -0.084 | -0.073** | -0.138 | -0.091 |
| | (0.049) | (0.035) | (0.084) | (0.058) | (0.051) | (0.036) | (0.085) | (0.058) |
| Industry | YES | YES | YES | YES | YES | YES | YES | YES |
| Province | YES | YES | YES | YES | YES | YES | YES | YES |
| Year | YES | YES | YES | YES | YES | YES | YES | YES |
| Quarter | YES | YES | YES | YES | YES | YES | YES | YES |
| Observations | 3,085 | 3,085 | 1,963 | 1,963 | 2,552 | 2,552 | 1,637 | 1,637 |
| R-squared | 0.661 | 0.304 | 0.696 | 0.363 | 0.643 | 0.362 | 0.685 | 0.402 |
| Number of firms | | 107 | | 86 | | 87 | | 69 |

**Note:**

1.Robust standard errors are reported in parenthesis. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

**Table 3: In-Out Firms of Shanghai/Shenzhen-Hong Kong Stock Connects**

| Name | A-share code | Shenzhen/Shanghai Stock Connect | H-share code | Hong Kong Stock Connect |
|---|---|---|---|---|
| Northeast Electric | 000585.SZ | In: 2016/12/05-2018/04/02; Out: 2018/04/03-2018/12/31 | 0042.HK | In: 2016/12/05-2018/04/08; Out: 2018/04/09-2018/12/31 |
| Ganfeng Lithium | 002460.SZ | In: 2016/12/05-2018/12/31 | 1772.HK | Out: 2016/12/05-2018/11/04; In: 2018/11/05-2018/12/31 |
| Shandong Molong Petroleum Machinery | 002490.SZ | In: 2016/12/05-2017/04/06; Out:2017/04/07-2018/04/15; Re-in: 2018/04/16-2018/12/31 | 0568.HK | In: 2016/12/05-2017/04/06; Out: 2017/04/07-2018/04/15; Re-in: 2018/04/16-2018/12/31 |
| Lanzhou Zhuangyuan Pasture | 002910.SZ | Out: 2016/12/05-2017/11/13; In: 2017/11/14-2018/12/31 | 1533.HK | Out: 2016/12/05-2017/11/13; In: 2017/11/14-2018/12/31 |
| Bank of Zhengzhou | 002936.SZ | Out: 2016/12/05-2018/10/10; In: 2018/10/11-2018/12/31 | 6196.HK | Out: 2016/12/05-2018/10/10; In: 2018/10/11-2018/12/31 |
| Shandong Gold Mining | 600547.SH | In: 2014/11/17-2018/12/31 | 1787.HK | Out: 2014/11/17-2018/10/21; In: 2018/01/22-2018/12/31 |
| Shanghai Dazhong Public Utilities | 600635.SH | In: 2014/11/17-2018/12/31 | 1635.HK | Out: 2014/11/17-2017/01/08; In: 2017/01/09-2018/12/31 |
| Fuyao Glass Industry Group | 600660.SH | In: 2014/11/17-2018/12/31 | 3606.HK | Out: 2014/11/17-2015/05/10; In: 2015/05/11-2018/12/31 |
| Beijing Jingcheng Machinery Electric | 600860.SH | Out: 2014/11/17-2015/03/23; In: 2015/03/24-2017/03/20; Out: 2017/03/21-2018/04/03; Re-in:2018/04/04- | 0187.HK | Out: 2014/11/17-2015/04/12; In: 2015/04/13-2017/04/23; Out: 2017/04/24-2018/04/22; Re-in: 2018/04/23- |
| Sinopec Oilfield Service | 600871.SH | Out: 2014/11/17-2015/03/30; In: 2015/03/31-2018/03/28; Out: 2018/03/29-2018/12/31 | 1033.HK | Out: 2014/11/17-2015/04/12; In: 2015/04/13-2018/04/22; Out: 2018/04/23-2018/12/31 |
| Orient Securities | 600958.SH | Out: 2014/11/17-2015/06/14; In: 2015/06/15-2018/12/31 | 3958.HK | Out: 2014/11/17-2016/08/07; In: 2016/08/08-2018/12/31 |
| China Merchants Securities | 600999.SH | In: 2014/11/17-2018/12/31 | 6099.HK | Out: 2014/11/17-2016/11/06; In: 2016/11/07-2018/12/31 |
| Chongqing Iron & Steel | 601005.SH | In: 2014/11/17-2017/04/04; Out:2017/04/05-2018/03/08; Re-in: 2018/03/09-2018/12/31 | 1053.HK | In: 2014/11/17-2017/04/23; Out: 2017/04/24-2018/04/22; Re-in: 2018/04/23-2018/12/31 |
| China Securities | 601066.SH | Out: 2014/11/17-2018/07/03; In: 2018/07/04-2018/12/31 | 6066.HK | Out: 2014/11/17-2018/07/15; In: 2018/07/16-2018/12/31 |
| China Aluminum International Engineering | 601068.SH | Out: 2014/11/17-2018/09/13; In: 2018/09/14-2018/12/31 | 2068.HK | Out: 2014/11/17-2018/10/21; In: 2018/10/22-2018/12/31 |
| Guotai Haitong Securities | 601211.SH | Out: 2014/11/17-2015/12/13; In: 2015/12/14-2018/12/31 | 2611.HK | Out: 2014/11/17-2017/05/21; In: 2017/05/22-2018/12/31 |
| PICC Group | 601319.SH | Out: 2014/11/17-2018/11/29; In: 2018/11/30-2018/12/31 | 1339.HK | In: 2014/11/17-2018/12/31 |
| Qinhuangdao Port | 601326.SH | Out: 2014/11/17-2017/08/29; In: 2017/08/30-2018/12/31 | 3369.HK | Out: 2014/11/17-2017/09/03; In: 2017/09/14-2018/12/31 |
| Dynagreen Environmental Protection Group | 601330.SH | Out: 2014/11/17-2018/06/25; In: 2018/06/26-2018/12/31 | 1330.HK | Out: 2014/11/17-2018/07/15; In: 2018/07/16-2018/12/31 |
| Central China Securities | 601375.SH | Out: 2014/11/17-2017/01/16; In: 2017/01/16-2018/12/31 | 1375.HK | Out: 2014/11/17-2017/02/12; In: 2017/02/13-2018/12/31 |
| Huatai Securities | 601688.SH | In: 2014/11/17-2018/12/31 | 6886.HK | Out: 2014/11/17-2015/07/05; In: 2015/07/06-2018/12/31 |
| Everbright Securities | 601788.SH | Out: 2014/11/17-2015/06/14; In: 2015/06/15-2018/12/31 | 6178.HK | Out: 2014/11/17-2016/10/16; In: 2016/10/17-2018/12/31 |
| Xinhua Winshare Publishing & Media | 601811.SH | Out: 2014/11/17-2016/08/21; In: 2016/08/22-2018/12/31 | 0811.HK | Out: 2014/11/17-2016/09/04; In: 2016/09/05-2018/12/31 |
| Red Star Macalline Group | 601828.SH | Out: 2014/11/17-2018/01/30; In: 2018/01/31-2018/12/31 | 1528.HK | Out: 2014/11/17-2015/10/08; In: 2015/10/09-2016/03/13; Out: 2016/03/14-2018/02/25; Re-in:2018/02/26- |
| Yangtze Optical Fibre and Cable | 601869.SH | Out: 2014/11/17-2018/08/02; In: 2018/08/03-2018/12/31 | 6869.HK | Out: 2014/11/17-2018/08/19; In: 2018/08/20-2018/12/31 |
| China Galaxy Securities | 601881.SH | Out: 2014/11/17-2017/02/12; In: 2017/02/13-2018/12/31 | 6881.HK | Out: 2014/11/17-2015/10/08; In: 2015/10/09-2018/12/31 |
| Xinjiang LaChapelle Fashion | 603157.SH | Out: 2014/11/17-2017/10/15; In: 2017/10/16-2018/12/31 | 6116.HK | Out: 2014/11/17-2017/10/22; In: 2017/10/23-2018/12/31 |
| Wuxi Apptec | 603259.SH | Out: 2014/11/17-2018/12/16; In: 2018/12/17-2018/12/31 | 2359.HK | Out: 2014/11/17-2018/12/31 |

**Note:**

1.Firms not mentioned refer to those that were included to the Shanghai/Shenzhen-Hong Kong Stock Connects upon the launch and have maintained their status without being removed by the end of 2018.

**Table 4: Impact of Shanghai-Hong Kong Stock Connect on AH Premium: A Control Group**

| Dependent | AH P | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | All listed firms | | | | Shanghai listed firms | | | |
| | 2009-2018 | | 2009-2015 | | 2009-2018 | | 2009-2015 | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Method | OLS | FE | OLS | FE | OLS | FE | OLS | FE |
| $In\text{-}Out_{it}$ | -0.238*** | -0.053 | -0.334*** | -0.209*** | -0.193*** | 0.056 | -0.261*** | -0.046 |
| | (0.071) | (0.052) | (0.095) | (0.068) | -0.074 | -0.054 | (0.089) | (0.067) |
| Foreign Reserve Ratio | -0.026*** | -0.029*** | -0.035*** | -0.045*** | -0.024*** | -0.027*** | -0.029*** | -0.043*** |
| | (0.007) | (0.005) | (0.010) | (0.007) | -0.008 | -0.005 | (0.010) | (0.007) |
| QDII Ratio | -0.010** | -0.013*** | -0.011 | -0.012** | -0.009* | -0.012*** | -0.008 | -0.010* |
| | (0.005) | (0.003) | (0.008) | (0.006) | -0.005 | -0.003 | (0.008) | (0.005) |
| NonSOE | 0.080** | | 0.111** | | -0.107*** | | -0.115** | |
| | (0.032) | | (0.049) | | -0.032 | | (0.048) | |
| Political Connection | -0.007*** | -0.003** | -0.008*** | -0.004* | -0.002 | -0.001 | 0.000 | -0.001 |
| | (0.001) | (0.002) | (0.002) | (0.002) | -0.001 | -0.001 | (0.002) | (0.002) |
| Overseas Revenue Ratio | -0.002*** | -0.008*** | -0.002* | -0.006*** | -0.003*** | -0.012*** | -0.002 | -0.009*** |
| | (0.001) | (0.001) | (0.001) | (0.002) | -0.001 | -0.001 | (0.001) | (0.002) |
| Market Capitalization | -0.322*** | -0.152*** | -0.389*** | -0.228*** | -0.253*** | -0.089*** | -0.315*** | -0.172*** |
| | (0.012) | (0.024) | (0.015) | (0.033) | -0.014 | -0.025 | (0.021) | (0.033) |
| QFII Ratio | -0.076*** | -0.049*** | -0.055*** | -0.028* | -0.031** | -0.046*** | -0.015 | -0.017 |
| | (0.013) | (0.013) | (0.015) | (0.015) | -0.013 | -0.013 | (0.015) | (0.015) |
| Beta(A) | -0.313*** | -0.007 | -0.444*** | 0.017 | -0.256*** | 0.009 | -0.391*** | 0.064 |
| | (0.046) | (0.033) | (0.065) | (0.049) | -0.05 | -0.034 | (0.068) | (0.049) |
| Beta(A, HSI) | -0.091* | -0.045 | -0.052 | -0.009 | -0.156*** | -0.097*** | -0.139** | -0.096** |
| | (0.049) | (0.029) | (0.062) | (0.038) | -0.051 | -0.029 | (0.062) | (0.038) |
| Beta(H) | 0.113*** | 0.097*** | 0.114** | 0.152*** | 0.182*** | 0.199*** | 0.158*** | 0.287*** |
| | (0.043) | (0.028) | (0.049) | (0.035) | -0.05 | -0.029 | (0.054) | (0.036) |
| Beta(H, CSI300) | 0.203*** | 0.004 | 0.247*** | 0.025 | 0.130** | -0.044 | 0.129* | -0.102** |
| | (0.047) | (0.033) | (0.067) | (0.045) | -0.052 | -0.035 | (0.072) | (0.047) |
| Institutional Investor Ratio | -0.005*** | -0.008*** | -0.006*** | -0.007*** | -0.003*** | -0.006*** | -0.002** | -0.003** |
| | (0.001) | (0.001) | (0.001) | (0.001) | -0.001 | -0.001 | (0.001) | (0.001) |
| Turnover Rate | 0.012*** | 0.009*** | 0.013** | 0.007* | 0.011* | 0.002 | -0.000 | -0.002 |
| | (0.004) | (0.003) | (0.005) | (0.004) | -0.006 | -0.003 | (0.008) | (0.004) |
| Return Volatility | 0.468*** | 0.372*** | 0.509*** | 0.469*** | 0.420*** | 0.344*** | 0.340*** | 0.352*** |
| | (0.049) | (0.033) | (0.069) | (0.046) | -0.05 | -0.033 | (0.063) | (0.045) |
| Dividend | -0.067*** | -0.028*** | -0.074*** | -0.012 | -0.072*** | -0.040*** | -0.076*** | -0.026*** |
| | (0.007) | (0.007) | (0.009) | (0.009) | -0.007 | -0.007 | (0.010) | (0.010) |
| Outstanding Shares | -0.038*** | -0.092*** | -0.041*** | -0.094*** | -0.029*** | -0.092*** | -0.028*** | -0.089*** |
| | (0.007) | (0.011) | (0.010) | (0.019) | -0.007 | -0.01 | (0.011) | (0.018) |
| Market Sentiment | 0.498*** | 0.209* | 0.602*** | 0.417*** | 0.431** | 0.088 | 0.527** | 0.222 |
| | (0.170) | (0.125) | (0.221) | (0.153) | -0.178 | -0.126 | (0.223) | (0.151) |
| Forward Exchange Rate | -0.372*** | -0.377*** | -0.570 | -0.625*** | -0.343*** | -0.309*** | -0.288 | -0.304 |
| | (0.124) | (0.089) | (0.349) | (0.226) | -0.132 | -0.09 | (0.360) | (0.226) |
| Interest Rate | -0.063 | -0.058 | -0.103 | -0.085 | -0.08 | -0.053 | -0.121 | -0.050 |
| | (0.049) | (0.036) | (0.083) | (0.058) | -0.051 | -0.036 | (0.084) | (0.058) |
| Industry | YES | YES | YES | YES | YES | YES | YES | YES |
| Province | YES | YES | YES | YES | YES | YES | YES | YES |
| Year | YES | YES | YES | YES | YES | YES | YES | YES |
| Quarter | YES | YES | YES | YES | YES | YES | YES | YES |
| Observations | 3,085 | 3,085 | 1,963 | 1,963 | 2,552 | 2,552 | 1,637 | 1,637 |
| R-squared | 0.660 | 0.296 | 0.695 | 0.357 | 0.642 | 0.359 | 0.685 | 0.398 |
| Number of firms | | 107 | | 86 | | 87 | | 69 |

**Note:**

1.Robust standard errors are reported in parenthesis. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level,

**Table 5: Impact of SH-HK SC on AH Premium: Robustness Checks**

| Dependent | AH P | | | | | |
|---|---|---|---|---|---|---|
| | Announcement | | Impementation | | Adding SZ-HK SC | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Method | OLS | FE | OLS | FE | OLS | FE |
| $SHHK_t$ | -0.281*** | -0.276*** | -0.089 | -0.122 | -0.386*** | -0.372*** |
| | (0.082) | (0.059) | (0.126) | (0.092) | (0.088) | (0.067) |
| $SZHK_t$ | | | | | -0.049 | 0.003 |
| | | | | | (0.073) | (0.056) |
| Foreign Reserve Ratio | -0.028*** | -0.033*** | -0.023*** | -0.027*** | -0.027*** | -0.032*** |
| | (0.007) | (0.005) | (0.007) | (0.005) | (0.007) | (0.005) |
| QDII Ratio | -0.011** | -0.014*** | -0.010** | -0.013*** | -0.009* | -0.013*** |
| | (0.005) | (0.003) | (0.005) | (0.003) | (0.005) | (0.003) |
| NonSOE | 0.084*** | | 0.085*** | | 0.084*** | |
| | (0.032) | | (0.032) | | (0.032) | |
| Political Connection | -0.007*** | -0.003* | -0.008*** | -0.003* | -0.007*** | -0.003* |
| | (0.001) | (0.002) | (0.001) | (0.002) | (0.001) | (0.002) |
| Overseas Revenue Ratio | -0.002*** | -0.008*** | -0.002*** | -0.008*** | -0.002*** | -0.008*** |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Market Capitalization | -0.325*** | -0.145*** | -0.327*** | -0.154*** | -0.325*** | -0.144*** |
| | (0.011) | (0.024) | (0.011) | (0.024) | (0.011) | (0.024) |
| QFII Ratio | -0.076*** | -0.048*** | -0.077*** | -0.049*** | -0.075*** | -0.047*** |
| | (0.013) | (0.013) | (0.013) | (0.013) | (0.013) | (0.013) |
| Beta(A) | -0.322*** | -0.019 | -0.309*** | -0.005 | -0.320*** | -0.018 |
| | (0.047) | (0.033) | (0.046) | (0.033) | (0.046) | (0.033) |
| Beta(A, HSI) | -0.089* | -0.034 | -0.104** | -0.050* | -0.090* | -0.033 |
| | (0.049) | (0.029) | (0.048) | (0.029) | (0.049) | (0.029) |
| Beta(H) | 0.106** | 0.083*** | 0.122*** | 0.100*** | 0.100** | 0.080*** |
| | (0.044) | (0.028) | (0.043) | (0.028) | (0.043) | (0.028) |
| Beta(H, CSI300) | 0.214*** | 0.021 | 0.193*** | -0.002 | 0.220*** | 0.023 |
| | (0.047) | (0.033) | (0.047) | (0.033) | (0.048) | (0.033) |
| Institutional Investor Ratio | -0.005*** | -0.008*** | -0.005*** | -0.008*** | -0.005*** | -0.008*** |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Turnover Rate | 0.012*** | 0.008*** | 0.012*** | 0.009*** | 0.012*** | 0.009*** |
| | (0.004) | (0.003) | (0.004) | (0.003) | (0.004) | (0.003) |
| Return Volatility | 0.473*** | 0.371*** | 0.474*** | 0.374*** | 0.468*** | 0.368*** |
| | (0.048) | (0.033) | (0.049) | (0.033) | (0.048) | (0.033) |
| Dividend | -0.068*** | -0.030*** | -0.068*** | -0.029*** | -0.068*** | -0.029*** |
| | (0.007) | (0.007) | (0.007) | (0.007) | (0.007) | (0.007) |
| Outstanding Shares | -0.038*** | -0.092*** | -0.037*** | -0.091*** | -0.038*** | -0.092*** |
| | (0.007) | (0.011) | (0.007) | (0.011) | (0.007) | (0.011) |
| Market Sentiment | 0.372** | 0.310*** | 0.320 | 0.312* | 0.704*** | 0.626*** |
| | (0.145) | (0.112) | (0.254) | (0.166) | (0.186) | (0.137) |
| Forward Exchange Rate | -0.300** | -0.337*** | -0.351*** | -0.395*** | -0.370*** | -0.434*** |
| | (0.124) | (0.088) | (0.127) | (0.091) | (0.131) | (0.093) |
| Interest Rate | -0.037 | -0.044 | -0.057 | -0.068* | -0.066 | -0.077** |
| | (0.049) | (0.035) | (0.052) | (0.037) | (0.050) | (0.036) |
| Industry | YES | YES | YES | YES | YES | YES |
| Province | YES | YES | YES | YES | YES | YES |
| Year | YES | YES | YES | YES | YES | YES |
| Quarter | YES | YES | YES | YES | YES | YES |
| Observations | 3,085 | 3,085 | 3,085 | 3,085 | 3,085 | 3,085 |
| R-squared | 0.660 | 0.301 | 0.659 | 0.297 | 0.661 | 0.304 |
| Number of firms | | 107 | | 107 | | 107 |

**Notes:**

1.Columns (1) and (2) show the impact of the announcement of Shanghai-Hong Kong Connect.

2.Columns (3) and (4) show the impact of the implementation of Shanghai-Hong Kong Connect.

3.Robust standard errors are reported in parenthesis. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

**Table 6: Impact of SH-HK SC on AH Premium: Short-selling**

| Dependent | AH P | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Methods | OLS | FE | OLS | FE |
| $SHHK_t$ | -0.379*** | -0.373*** | -0.379*** | -0.373*** |
| | (0.086) | (0.066) | (0.086) | (0.066) |
| Foreign Reserve Ratio | -0.029*** | -0.032*** | -0.029*** | -0.032*** |
| | (0.007) | (0.005) | (0.007) | (0.005) |
| QDII Ratio | -0.009* | -0.013*** | -0.009* | -0.013*** |
| | (0.005) | (0.003) | (0.005) | (0.003) |
| NonSOE | 0.087*** | | 0.087*** | |
| | (0.032) | | (0.032) | |
| Political Connection | -0.007*** | -0.003* | -0.007*** | -0.003* |
| | (0.001) | (0.002) | (0.001) | (0.002) |
| Overseas Revenue Ratio | -0.002** | -0.008*** | -0.002** | -0.008*** |
| | (0.001) | (0.001) | (0.001) | (0.001) |
| Market Capitalization | -0.308*** | -0.146*** | -0.308*** | -0.146*** |
| | (0.012) | (0.025) | (0.012) | (0.025) |
| QFII Ratio | -0.065*** | -0.047*** | -0.065*** | -0.047*** |
| | (0.013) | (0.013) | (0.013) | (0.013) |
| Beta(A) | -0.303*** | -0.019 | -0.303*** | -0.019 |
| | (0.047) | (0.033) | (0.047) | (0.033) |
| Beta(A, HSI) | -0.092* | -0.032 | -0.092* | -0.032 |
| | (0.048) | (0.029) | (0.048) | (0.029) |
| Beta(H) | 0.122*** | 0.079*** | 0.122*** | 0.079*** |
| | (0.044) | (0.028) | (0.044) | (0.028) |
| Beta(H, CSI300) | 0.222*** | 0.023 | 0.222*** | 0.023 |
| | (0.047) | (0.033) | (0.047) | (0.033) |
| Institutional Investor Ratio | -0.006*** | -0.008*** | -0.006*** | -0.008*** |
| | (0.001) | (0.001) | (0.001) | (0.001) |
| Turnover Rate | 0.009* | 0.009*** | 0.009* | 0.009*** |
| | (0.005) | (0.003) | (0.005) | (0.003) |
| Return Volatility | 0.465*** | 0.368*** | 0.465*** | 0.368*** |
| | (0.048) | (0.033) | (0.048) | (0.033) |
| Dividend | -0.072*** | -0.029*** | -0.072*** | -0.029*** |
| | (0.007) | (0.007) | (0.007) | (0.007) |
| Outstanding Shares | -0.037*** | -0.092*** | -0.037*** | -0.092*** |
| | (0.007) | (0.011) | (0.007) | (0.011) |
| Market Sentiment | 0.714*** | 0.626*** | 0.715*** | 0.624*** |
| | (0.184) | (0.137) | (0.185) | (0.137) |
| Forward Exchange Rate | -0.399*** | -0.432*** | -0.399*** | -0.430*** |
| | (0.124) | (0.089) | (0.125) | (0.089) |
| Interest Rate | -0.058 | -0.078** | -0.058 | -0.078** |
| | (0.049) | (0.035) | (0.049) | (0.035) |
| Short-selling Ratio | -0.978*** | 0.102 | -0.985*** | 0.116 |
| | (0.178) | (0.173) | (0.209) | (0.192) |
| Short-selling Ratio×HSI | | | 0.016 | -0.031 |
| | | | (0.211) | (0.180) |
| Industry | YES | YES | YES | YES |
| Province | YES | YES | YES | YES |
| Year | YES | YES | YES | YES |
| Quarter | YES | YES | YES | YES |
| Observations | 3,085 | 3,085 | 3,085 | 3,085 |
| R-squared | 0.664 | 0.304 | 0.664 | 0.304 |
| Number of firms | | 107 | | 107 |

**Note:**

1.Robust standard errors are reported in parenthesis. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

**Table 7: Increased Trading Volume of H-Shares under SH-HK SC**

| | H-share turnover rate | |
|---|---|---|
| | (2) | (4) |
| Method | OLS | FE |
| $SHHK_t$ | 0.231*** | 0.198*** |
| | (0.057) | (0.046) |
| Foreign Reserve Ratio | 0.004 | 0.003 |
| | (0.007) | (0.005) |
| QDII Ratio | -0.006 | -0.007** |
| | (0.004) | (0.003) |
| NonSOE | -0.015 | |
| | (0.024) | |
| Political Connection | 0.000 | -0.004*** |
| | (0.001) | (0.001) |
| Overseas Revenue Ratio | 0.003*** | 0.004*** |
| | (0.001) | (0.001) |
| Market Capitalization | 0.132*** | 0.236*** |
| | (0.011) | (0.021) |
| QFII Ratio | -0.012* | -0.010 |
| | (0.007) | (0.011) |
| Beta(H) | -0.030 | -0.062*** |
| | (0.032) | (0.023) |
| Beta(H, CSI300) | 0.101*** | 0.059** |
| | (0.031) | (0.025) |
| Institutional Investor Ratio | -0.002*** | -0.004*** |
| | (0.000) | (0.001) |
| H-share volatility | 0.016*** | 0.015*** |
| | (0.001) | (0.001) |
| Dividend | 0.002 | 0.013** |
| | (0.004) | (0.006) |
| Log(outstanding H-shares) | -0.086*** | -0.045 |
| | (0.010) | (0.032) |
| Log (HK market index) | 0.836*** | 0.696*** |
| | (0.171) | (0.133) |
| Forward Exchange Rate | -0.121 | -0.159** |
| | (0.101) | (0.079) |
| Interest Rate | 0.017 | 0.003 |
| | (0.043) | (0.031) |
| Industry | YES | YES |
| Province | YES | YES |
| Year | YES | YES |
| Quarter | YES | YES |
| Observations | 3,085 | 3,085 |
| R-squared | 0.448 | 0.345 |
| Number of firms | 107 | 107 |

**Note:**

1.Robust standard errors are reported in parenthesis. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

**Table 8: Heterogeneous Effects of the SH-HK SC on AH Premium**

| | AH P | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Method | OLS | FE | OLS | FE | OLS | FE | OLS | FE | OLS | FE |
| $SHHK_t$ | -0.351*** | -0.338*** | -0.358*** | -0.314*** | -0.181** | -0.268*** | -0.254*** | -0.305*** | -0.326*** | -0.325*** |
| | (0.086) | (0.067) | (0.088) | (0.068) | (0.088) | (0.068) | (0.090) | (0.072) | (0.087) | (0.067) |
| NonSOE | 0.153*** | | | | | | | | | |
| | (0.048) | | | | | | | | | |
| $NonSOE \times SHHK_t$ | -0.110** | -0.136*** | | | | | | | | |
| | (0.050) | (0.036) | | | | | | | | |
| Low Political Connection | | | 0.017 | 0.033 | | | | | | |
| | | | (0.041) | (0.036) | | | | | | |
| Low Political Connection $\times SHHK_t$ | | | -0.041 | -0.116*** | | | | | | |
| | | | (0.042) | (0.032) | | | | | | |
| Low Overseas Revenue | | | | | 0.163*** | 0.065* | | | | |
| | | | | | (0.036) | (0.036) | | | | |
| Low Overseas Revenue$\times SHHK_t$ | | | | | -0.137*** | -0.117*** | | | | |
| | | | | | (0.044) | (0.031) | | | | |
| Small Market Capitalization | | | | | | | 0.106** | -0.009 | | |
| | | | | | | | (0.042) | (0.035) | | |
| Small Market Capitalization$\times SHHK_t$ | | | | | | | -0.316*** | -0.166*** | | |
| | | | | | | | (0.042) | (0.031) | | |
| Low QFII Ratio | | | | | | | | | 0.206*** | 0.095*** |
| | | | | | | | | | (0.037) | (0.033) |
| Low QFII Ratio$\times SHHK_t$ | | | | | | | | | -0.148*** | -0.086** |
| | | | | | | | | | (0.044) | (0.041) |
| Other controls | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Industry | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Province | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Year | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Quarter | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Observations | 3,085 | 3,085 | 3,085 | 3,085 | 3,085 | 3,085 | 3,085 | 3,085 | 3,085 | 3,085 |
| R-squared | 0.661 | 0.307 | 0.661 | 0.307 | 0.663 | 0.307 | 0.668 | 0.313 | 0.663 | 0.306 |
| Number of firms | | 107 | | 107 | | 107 | | 107 | | |

**Notes:**

1.Columns (1) and (2) present the different impact of Shanghai-Hong Kong Stock Connect on SOEs versus Non-SOEs.

2.Columns (3) and (4) show different impacts of SHHK Stock Connect on firms with high political connection versus firms with low political connection.

3.Columns (5) and (6) report the different impact of Shanghai-Hong Kong Stock Connect on firms with high overseas sales revenue ratio versus firms with low overseas sales revenue ratio.

4.Columns (7) and (8) report the different impact of Shanghai-Hong Kong Stock Connect on large market value companies versus small market value companies.

5.Columns (9) and (10) report the different impact of Shanghai-Hong Kong Stock Connect on firms with high QFII ratio versus firms with low QFII ratio.

6. Robust standard errors are reported in parenthesis. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

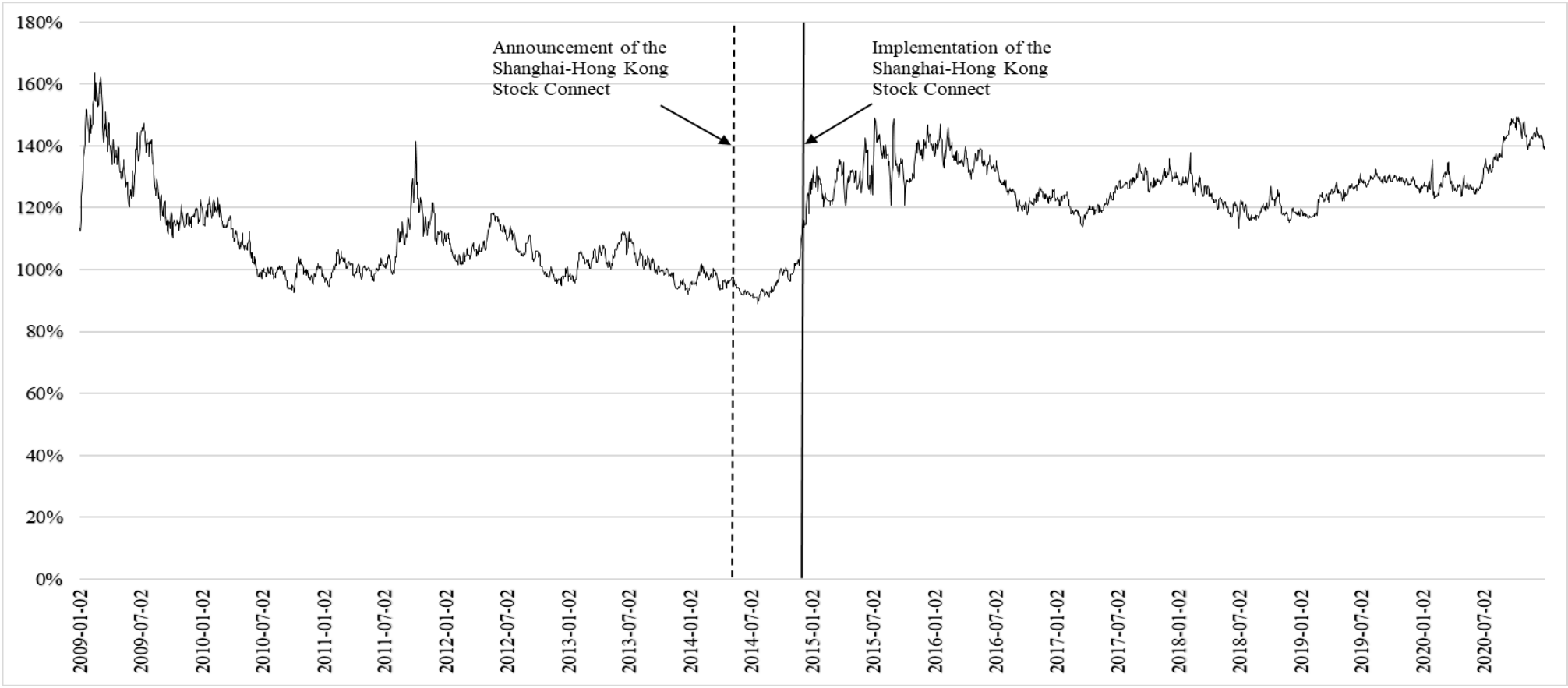


**Figure A1: Hang Seng Stock Connect China AH Premium Index**

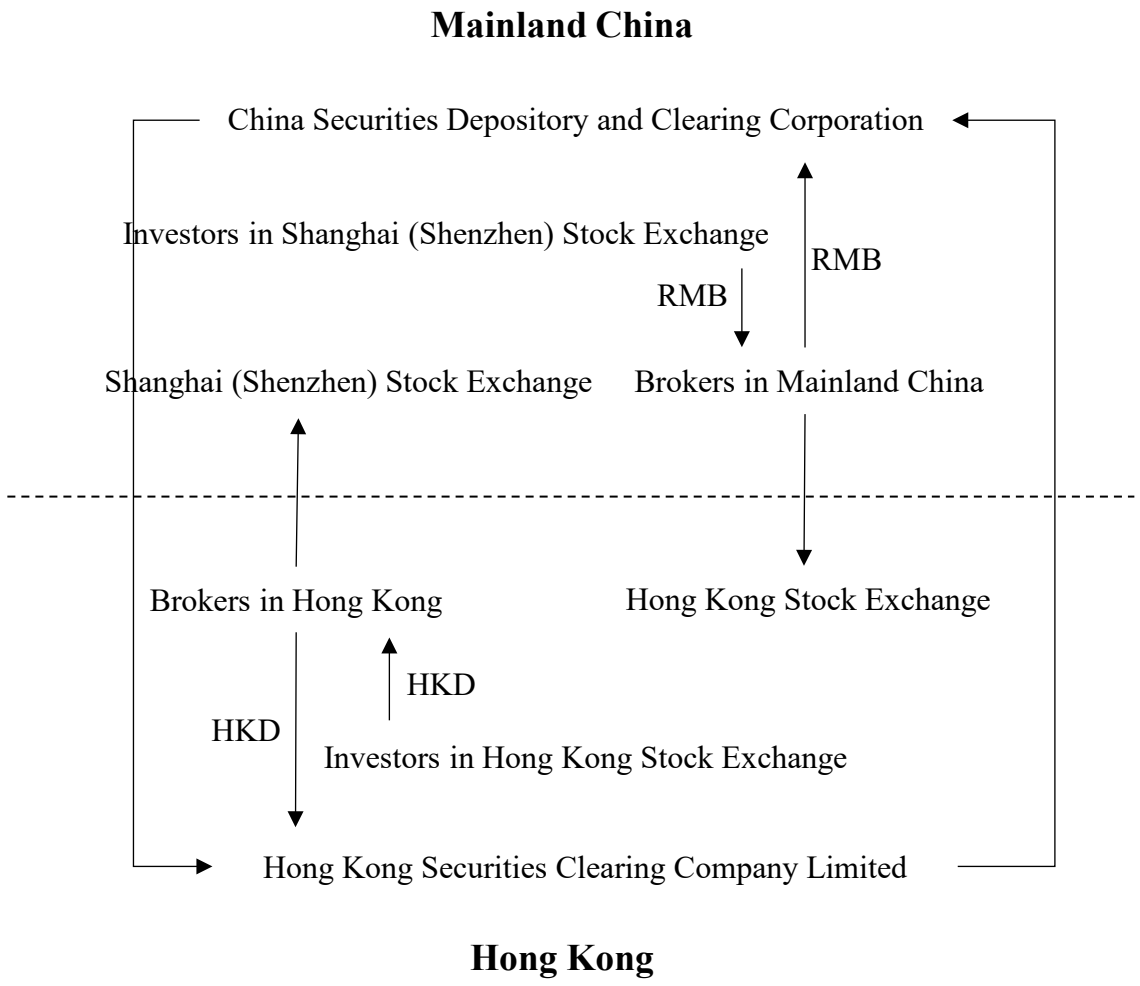


**Figure A2: Trading Procedure under Shanghai (or Shenzhen)-Hong Kong Stock Connect**

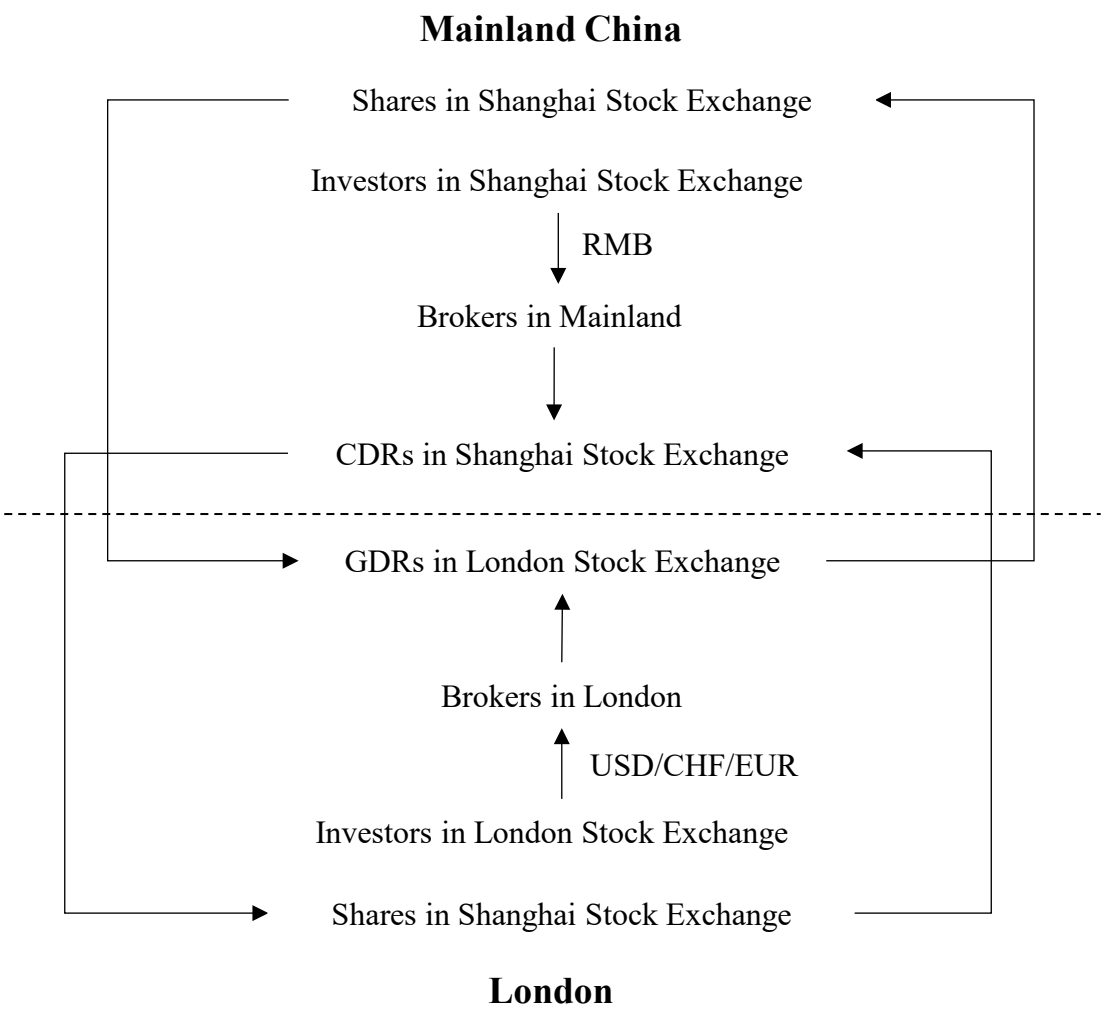


**Figure A3: The trading procedure under Shanghai-London Stock Connect**