Sources of Investor Sentiment and Price Deviations of Cross-Listed Shares: Evidence from Chinese A- and H-shares

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Abstract

We test how differences in the local, global, and total sentiment indices in China and Hong Kong affect the price deviations of A- and H-shares cross listed on the respective markets. We also examine the effect of important institution reforms in China on the price deviations of A- and H-shares. We find that investor sentiment, particularly local sentiment, significantly affects price deviations. Higher total and local sentiment in China relative to that in Hong Kong increases A-share prices relative to H-share prices. The impact of local sentiment differences on price deviations remains significant and is reversed after the fourth year, indicating a significantly longer sentiment effect than previously found in the literature.

Keywords: Asset pricing; Cross-listed shares; Investor sentiment; Price deviations

JEL Classification: G12, G14.

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1. Introduction

A growing literature indicates that investor sentiment has an important impact on asset pricing (Baker and Wurgler, 2006, 2007; Baker *et al*., 2012; Brown and Cliff, 2004, 2005; Firth *et al*., 2015; Lee *et al*., 1990; Stein, 1996; Yu and Yuan, 2011). In particular, Baker and Wurgler (2006) find that investor sentiment serves as a contrarian predictor of market returns and has a greater impact on stocks that are difficult to value and arbitrage. Baker *et al*. (2012) extend the research by decomposing the total sentiment index into local and global components and examine their influences on stock prices. Based on a validation test using a sample of three Siamese twin companies cross-listed on the US and UK stock markets, they find that the relative prices of these stock pairs are affected by differences in investor sentimemt across different markets.

Compared with the univariate analysis framework in Baker *et al.* (2012), we extend the research on the effects of cross-market investor sentiment on price deviations of cross-listing shares. Our paper makes the following contributions to the literature. Firstly, after controlling for information asymmetry, demand elasticity, liquidity and risk aversion, we find that differences in investor sentiment across markets are an important factor affecting price deviations of A- and H-shares, which help explains the puzzle of discounts on the foreign cross-listed Chinese equity shares. Secondly, we find that institutional reforms on the Chinese stock markets help mitigate the effects of the cross-market differences in investor sentiment on price deviations. Finally, our study show that the cross-market differences in investor sentiment have a long lasting effect on the A- and H-share price deviations.

We choose Chinese A- and H-share cross-listed companies as our sample.[1] A-shares of

[1] B-shares of Chinese companies are listed on either the Shanghai Stock Exchange (SHSE) or the Shenzhen Stock Exchange (SZSE), priced in US dollars (on the SHSE) or Hong Kong dollars (on the SZSE). Before 2001, B-shares are traded by non-Chinese citizens. We do not include B-shares in our tests because domestic investors of China have been permitted to trade B-shares since February 2001, which led to a non-strict segmentation

Chinese companies are listed on either the Shanghai Stock Exchange (SHSE) or the Shenzhen Stock Exchange (SZSE), priced in Renminbi (RMB), and are available to Chinese citizens and domestic institutions (including qualified foreign institutional investors). H-shares of the same Chinese companies are listed on the Hong Kong Stock Exchange (HKSE), priced in Hong Kong dollars (HKD), and traded by investors from all over the world except those from China.[2] The underlying assets of cross-listed shares have the same cash flow streams, and, therefore, their prices should theoretically satisfy the law of one price. Nevertheless, the literature shows that the foreign share prices of cross-listed companies are higher than the domestic share prices in almost all countries except China (Gagnon and Karolyi, 2010, 2011; Gu and Reed, 2013). For example, analyzing data of 506 cross-listed shares, Gagnon and Karolyi (2010) find that foreign share prices are higher on average than dometic share prices by approximately 38%. However, the prices of Hong Kong cross-listed H-shares are consistenly significantly lower than those of domestically listed A-shares in China. For example, for a sample of 86 cross-listed companies, the the average closing price of H-shares on June 19, 2015 is lower than that of A shares by approximately 47.75%. The price anomaly of Chinese cross-listed shares is glaring, causing the literature to refer to the matter as a 'puzzle in the Chinese stock market' (Fernald and Rogers, 2002). Factors proposed to explain this phenomenon based on the rational financial theory include information asymmetry (Bailey, 1994; Chakravarty *et al*., 1998; Chan *et al*, 2008), differential demand elasticity (Stulz and Wasserfallen, 1995), differential liquidity (Amihud and Mendelson, 1986; Bailey, 1994; Longstaff, 1995), and differential risk aversion (Ma, 1996). Froot and Dabora (1999) test six hypotheses for the price deviations of cross-listed

between A- and B-shares (Chan *et al.*, 2008).

[2] Starting on November 17, 2014, through the Shanghai-Hong Kong Stock Connect, investors in China and Hong Kong can trade and settle eligible shares on the other market via the exchange and clearinghouse in their local market. Our entire sample period precedes the implementation of this stock connect, which ensures a stricter segmentation between these two markets.

shares, including the discretionary use of dividends by parent companies, differences in parent expenditures, voting rights, currency fluctuations, ex-dividend date timing, and tax-induced investor heterogeneity. They find that only the last hypothesis can partially explain the price deviations. We attempt to explain the price deviations of A- and H-shares by the cross-market investor sentiment. In addition to the data from six countries as used in Baker *et al*. (2012), we include data from the China and Hong Kong stock markets to construct the total, local and global sentiment indices. Specifically, following Baker *et al*. (2012), we construct total sentiment indices for eight stock markets including China, Hong Kong, Canada, France, Germany, Japan, the United Kingdom, and the United States. We use volatility premium (*PVOL*), turnover (*TURN*), total number of initial public offerings (IPOs; *NIPO*), and the first-day returns of IPOs (*RIPO*) as investor sentiment proxy variables to construct eight total sentiment indices for these countries or regions. We then construct a global sentiment index with these eight total sentiment indices and then decompose the total sentiment indices of China and Hong Kong into two local sentiment indices. We use 62 cross-listed companies with A- and H-shares to investigate the influence of the total, local, and global sentiment differences on the price deviations of A- and H-shares. We find that the total investor sentiment is a significant factor influencing the price deviations of A- and H-shares, with the effects mainly driven by local investor sentiment, a finding that has not to date been comprehensively examined.

Meanwhile, we find that institutional reforms of trading regulations tend to ease the effects of investor sentiment on stock prices. Although the Chinese stock market has undergone reform and development for more than 20 years, it remains an emerging market with peculiar institutional features, such as individual investor-dominated trading, excessive government interventions, and a constant revolving supervision system. It is difficult to study all institutional reforms on the China stock market, so that we focus on the reforms that are

likely to simultaneously affect international, as well as domestic investors, such as exchange rate system reform, split share structure reform, and Qualified Foreign Institutional Investors (QFII) and Qualified Domestic Institutional Investors (QDII) schemes. They play a crucial role in decreasing fraction and giving more freedom to the capital market. Li (2012) shows that these reforms significantly strengthen the link between China's financial markets and other markets around the world. We thus further investigate whether the institutional reforms in the Chinese capital market affect the price deviations of A-and H-shares. We find that the exchange rate system reform is helpful in decreasing A- and H-share price deviations whereas the split share structure reform increases price deviations. Before the institutional reforms, the total sentiment differences between China and Hong Kong positively affect the price deviations of A- and H-shares. We find that local sentiment differences between China and Hong Kong are mainly responsible for the effect, while global sentiment differences have little effect on the A- and H-share price deviations. With the exchange rate system reforms, the split structure reform, and the QFII and QDII schemes, the marginal effects of the total and local sentiment differences on the price deviations of cross-listed shares significantly decline, indicating that institutional reforms have a moderating effect on investor sentiment.

We also study how firm characteristics affect the relations of sentiment differences and price deviations of A- and H-shares. Following Chang *et al.* (2012)'s method, we include the interaction terms of sentiment differences and a dummy variable that equals one if the firm is more influenced by investor sentiment. We find that total sentiment differences have a larger effect on price deviations for small firms and firms without dividends.

Next, we investigate the lasting effects of sentiment differences on price deviations of A- and H-shares. We regress the price deviations on up to six lagged years of sentiment differences. The results indicate that the local sentiment differences between China and Hong Kong have a long-lasting effect on the price deviations of A- and H-share, which is reversed

in the fourth year. This effect is much longer than that previously found in the literature. The impact of the lagged total sentiment and lagged global sentiment differences is not significant. We think that the long-lasting effect of local sentiment is caused by the individual-trader dominated A-share investor structure. China's local market sentiment is dominated by noise investors, which tends to drive prices further away from fundamentals. Thus, due to limits to arbitrage, rational investors may be unable or reluctant to arbitrage the price deviations away due to significant risk and transaction costs (Barberis*et al*., 1998; De Long*et al.*, 1990; Shleifer and Vishny, 1997). Thus, local sentiment differences between China and Hong Kong have a long-lasting effect on price deviations of A- and H-shares. On the other hand, lagged global sentiment does not have a significant effect on the price deviations of A and H shares possible due to market segmentations and capital restrictions. We thus find that the sentiment of an individual investor-dominated market has a long-lasting effect on stock prices likely due to more noise trading on the market (Baker *et al*., 2012; Chuang and Susmel, 2011; Schmeling, 2007).

Finally, as a robustness check, we investigate the sentiment differences on price deviations of A- and H-shares by industry. Based on the industry classifications of the China Securities Regulatory Commission, we classify our sample into seven industries. We find that the effects of sentiment differences on price deviations are, in general, consistent among industries. We also rerun our tests by excluding finance industry, cutting our sample into two subperiods and using P/E ratio as total sentiment proxy, respectively, and find similar results.

To the best of our knowledge, this paper is the first examining the effects of cross-market investor sentiment on the discount of foreign cross-listed Chinese equity shares. Studies that are related to ours include Grossmann *et al*. (2007), Arquette *et al*. (2008) and Baker *et al*. (2012). Grossmann *et al*. (2007) study price deviations of American Depositary Receipts (ADRs) and find that not only ADRs but also the underlying securities of ADRs are

more affected by that American consumer index, a proxy for investor sentiment, than by local sentiment. However, Grossmann *et al*. (2007) do not decompose their sentiment index into different components of local and global investor sentiment. Arquette *et al*. (2008) alternatively measure the market sentiment by the ratio of the Shanghai A-Share Index price/earnings (P/E) ratio to the Hang Seng China Enterprises Index P/E ratio (or the S&P500 P/E ratio) and measure company sentiment by the company P/E ratio to the Shanghai A-Share Index P/E ratio. They find that both relative market sentiment and company sentiment can significantly account for the US ADR and H-share discounts of SHSE-listed firms. However, P/E ratios likely capture effects other than investor sentiment. P/E ratio as a proxy for investor sentiment is not as widely used in the literature, compared to the investor sentiment index by Wurgler *et al.* (2006) and Wurgler *et al.* (2012). Baker *et al*. (2012) decompose the total sentiment index into global and local components and find that both the total and local sentiment differences between listing countries significantly affect price deviations.

The remainder of this paper is organizedas follows. Section 2 describes China's capital market and institutional background. Sections 3 and 4 present the research methodology and empirical results, respectively. Finally, Section 5 concludes.

2. China's capital market and institutional background

For almost 40 years, China's capital market experienced significant changes through the process of transforming from a centrally planned to a market-oriented economy. Because the establishment of the SHSE and the SZSE is entirely planned by the government, the markets have been heavily influenced by the central government since their inception, which is very different from the market-led establishment of capital markets in most of Western countries. Early IPOs in these two exchanges primarily served the capital needs of state-owned

enterprises. Over time, the exchanges became increasingly market-oriented as private stake holders acquired stronger bargaining power within the developing economy. Private enterprises demanded equal rights and the same opportunities of capital raising enjoyed by state-owned enterprises, and investors demanded legal protections of their investment rights and interests. In addition, international investors asked for access to the Chinese capital markets to participate in its rapid economic growth and to diversify their investment risk.

As a result, the SHSE and the SZSE, established during the early 1990s, grew rapidly. According to World Federation of Exchanges statistics, at the end of May 2015 the SHSE and the SZSE ranked third and fifth in the world, respectively, in market capitalization. Several important market reforms, such as the exchange rate system reform, the split share structure reform, and the QFII and QDII schemes, have been instituted to improve China's market infrastructure and likely affect the price deviations of A-and H-shares.

Individual investors consistently dominate the A-share market, which causes excessive market volatility and reduces market efficiency (Allen and Shen, 2013). Foreign investors were initially restricted from investing on the A-share markets. After joining the World Trade Organization in November 2001, China accelerated the process of opening up and liberalizing its capital markets. In August 2003, the Chinese government approved the first QFII scheme, which allowed qualified foreign institutions to invest in the A-share and government bond markets. The objective of the QFII scheme is to improve market efficiency and corporate governance of listed companies. As of August 2014, 254 foreign institutions were approved, and the total amount of investment was US$59.67 billion. Nevertheless, Chinese domestic investors were initially confined to the A-share markets, resulting in their inability to diversify internationally. However, in December 2004, in an effort to make a better use of the large amount of foreign exchange reserves and to increase capital market transparency (Piotroski and Wong, 2013), China launched its QDII scheme, which allowed qualified

domestic institutions to invest in the foreign capital markets.

From September 1997 to June 2005, China instituted a fixed exchange rate system to maintain capital inflows and trade surplus and accumulated a large amount of foreign exchange reserves. The RMB was tightly pegged to the US dollar (USD) at the level of 1 USD to 8.28 RMB during that time period. Domestic and foreign investors widely believed that the RMB was undervalued, resulting in strong revaluation expectations. Eventually, in July 2005, the Chinese government implemented a managed floating exchange rate system with respect to a basket of reference currencies, partially responding to market demand and supply. From July 2005 to December 2012, the RMB appreciated by more than 28% against the USD. The exchange rate system reforms likely made the domestic capital markets more responsive to changes in international economic conditions and stock market fluctuations.

In the early 1990s, to raise funds from the stock market and at the same time retain majority ownership, when initially listed state-owned enterprises issued additional tradable shares to the general public and retained the original shares, which were non-tradable on the market. The retained non-tradable shares resulted in the coexistence of tradable and non-tradable shares; such a shareholder structure is often referred to as a split share structure. As the capital market develops, the coexistence of non-tradable and tradable shares becomes problematic. First, under the split share structure, not all types of legal shareholders are allowed to trade, so the pricing mechanism of capital market is distorted, which induces inefficient capital allocations. Second, because a significant amount of non-tradable shares is owned by large shareholders and managers, the capital market is not able to provide effective incentives or disciplinary measures, which undermines the role of markets as a corporate governance mechanism. Third, tradable shares are publicly traded, while non-tradable shares are transferred privately by agreed-upon prices between transacting parties. The markets for the equity of the same firms are effectively segmented, which causes great difficulties in firm

valuations and hampers the fundamental market pricing functions. Finally, because multiple spot prices are quoted for tradable and non-tradable shares, pricing equity derivatives is difficult and can significantly impede derivative market development (China Securities Regulatory Commission, 2012). In 2005, the Chinese government formally launched the split share structure reform, which allows non-tradable shares to be traded on the stock markets by requiring shareholders of non-tradable shares to pay shareholders of tradable shares a premium. Li *et al*. (2011) describe this reform. Chen *et al*. (2012) argue that the reform plays an important role in removing a major market friction in China. Due to decreased market frictions, we expect that the split share structure reform has a significant impact on the price deviations of A- and H-shares. That is, an increased supply of tradable shares should depress A-share prices. However, if trading interests and demand in A-shares increases significantly after the well-publicized split share structure reform, A-share prices may instead increase. Thus, how the price deviations of A- and H-shares change after the reform is an empirical issue.

3. Research method

Since the listing of Tsingtao Brewery's H-shares on July 15, 1993, 86 companies with H-shares have cross listed on the HKSE. Our initial sample includes cross-listed A- and H-shares data from August 1993 to December 2012. We delete companies with less than 30 monthly observations, resulting in a final sample of 62 companies. Table 1 shows the sample selection process, and Appendix A1 provides the detailed listing dates and share codes of the sample firms.

[INSERT TABLE 1 ABOUT HERE]

3.1 Dependent variable

The average daily price deviations of A- and H-shares in a month, denoted as $DPRICE_{i,m}$, is calculated as

$$DPRICE_{i,m} = \frac{1}{D_m}\sum_{t=1}^{D_m} \ln\left(\frac{price_{i,t}^{A}}{price_{i,t}^{H} * R_{ex}}\right), \quad (1)$$

where $price_{i,t}^{A}$ and $price_{i,t}^{H}$ are the closing price of A- and H-shares, respectively, for firm *i* on day *t*. R_{ex} is the exchange rate of Hong Kong dollar to RMB. D_m is the number of trading days in month *m*. Although China and Hong Kong are located in the same time zone, the trading hours of A- and H-shares are not completely synchronized.[3] We use average monthly data to prevent spurious price deviations caused by nonsynchronous trading (Gagnon and Karolyi, 2010; Kadlec and Patterson, 1999). If $DPRICE_{i,m}$ is zero, then the prices of A- and H-shares satisfy the law of one price. A positive (negative) $DPRICE_{i,m}$ indicates that A-shares are trading at a premium (discount) relative to H-shares. Figure 1 shows that A-share prices are at a significant premium relative to H-share prices for almost the entire sample period. The equally weighted average price deviation of A- and H-shares is 90.33%. The standard deviation is 81.41%, and the maximum and minimum price deviations are 242.09% and –18.01%, respectively. The price deviations of A- and H-shares are large initially and then become smaller with time. Price deviations rise steadily from 1994 to 1998, stay at a relative high level from 1998 to 2001, and then begin to fall gradually starting in 2001.

[INSERT FIGURE 1 ABOUT HERE]

3.2 Investor sentiment indices

3.2.1 Investor sentiment proxy variables

[3] The trading time period of A-shares is 9:30-11:30 and 13:00-15:00, while that of H-shares is 9:30-12:00 and 13:00-16:00.

We follow Baker *et al*. (2012) to construct sentiment indices. We use volatility premium, turnover, number of IPOs and the average first-day returns of IPOs from 1993 to 2012 as sentiment proxies and construct sentiment indices for China, Hong Kong, Canada, France, Germany, Japan, the United Kingdom and the United States. The volatility premium is the ratio of the value-weight average market-book ratio of high volatility stocks to that of low volatility stocks.[4] The number of IPOs is in log forms and the first-day IPO returns are the log of the equally weight average initial IPO returns. The turnover is the log of the total yearly dollar trading volume divided by the average total capitalization at the beginning and end of the year. We detrend it with three-year moving average.

To control for information related to macroeconomic expectation rather than to sentiment, we orthogonalize each proxy with respect to six macroeconomic variables: consumption growth, industrial production growth, inflation, employment growth, the short-term rate, and the term premium. We use the GDP growth in Hong Kong to substitute for industrial production growth because the output of the service sector in Hong Kong is as high as 85% of its GDP.[5] The GDP growth adequately reflects the economic conditions of Hong Kong.[6] Table 2 lists the sentiment proxies and macroeconomic variables. Table 3 reports the summary statistics of sentiment proxies. The initial returns of IPOs in China are significantly higher than those in the other countries as seen in Table 3, which reflects the overheated IPO markets on the A-share market, possibly due to high investor sentiment during the sample period.

[INSERT TABLE 2 AND 3 ABOUT HERE]

[4] Appendix A2 gives the sample size of calculating volatility.

[5] The ratio is calculated with data obtained from the Chinese National Statistics Bureau since 1997.

[6] In addition, we orthogonalize the sentiment proxies of Hong Kong without the short-term rate and the term premium because some of the data are missing from 1993 to 2012.

3.2.2 Total sentiment indices

The total sentiment indices for each market are measured by the first principal component of the macro-orthogonalized sentiment proxies. The resulting indices are linear functions of the within-market standardized values of the proxies and thus have a mean of zero. The fractions of variance explained by the first principal components for the eight sample markets are between 34% and 49%, similar to those in Baker *et al*. (2012).[7] The linear functions of the eight total sentiment indices are

$$SENT^{Total}_{China,t} = 0.6262TURN^{\perp}_{t} + 0.2810PVOL^{\perp}_{t} - 0.1490NIPO^{\perp}_{t} + 0.7118RIPO^{\perp}_{t}, \quad (2)$$

$$SENT^{Total}_{HK,t} = -0.4437TURN^{\perp}_{t} - 0.0631PVOL^{\perp}_{t} + 0.5482NIPO^{\perp}_{t} + 0.7061RIPO^{\perp}_{t}, \quad (3)$$

$$SENT^{Total}_{Canada,t} = -0.4396TURN^{\perp}_{t} + 0.3481PVOL^{\perp}_{t} + 0.4656NIPO^{\perp}_{t} + 0.6847RIPO^{\perp}_{t}, \quad (4)$$

$$SENT^{Total}_{France,t} = 0.2686TURN^{\perp}_{t} + 0.6771PVOL^{\perp}_{t} + 0.5979NIPO^{\perp}_{t} + 0.3345RIPO^{\perp}_{t}, \quad (5)$$

$$SENT^{Total}_{Germany,t} = 0.5741TURN^{\perp}_{t} + 0.5271PVOL^{\perp}_{t} - 0.2876NIPO^{\perp}_{t} - 0.5566RIPO^{\perp}_{t}, \quad (6)$$

$$SENT^{Total}_{Japan,t} = 0.3756TURN^{\perp}_{t} + 0.1622PVOL^{\perp}_{t} + 0.6986NIPO^{\perp}_{t} + 0.5871RIPO^{\perp}_{t}, \quad (7)$$

$$SENT^{Total}_{UK,t} = -0.3881TURN^{\perp}_{t} + 0.6367PVOL^{\perp}_{t} - 0.0401NIPO^{\perp}_{t} + 0.6652RIPO^{\perp}_{t}, \quad (8)$$

$$SENT^{Total}_{US,t} = 0.1668TURN^{\perp}_{t} - 0.5612PVOL^{\perp}_{t} + 0.5644NIPO^{\perp}_{t} + 0.5819RIPO^{\perp}_{t}, \quad (9)$$

where $SENT^{Total}_{c,t}$ is the total sentiment index for country or region *c*, and $TURN^{\perp}_{t}$, $PVOL^{\perp}_{t}$, $NIPO^{\perp}_{t}$ and $RIPO^{\perp}_{t}$ are macro-orthogonalized turnover ratios, volatility premium, number of IPOs and the average first-day returns of IPOs, respectively. Figure 2 plots the total sentiment indices. We measure the sentiment differences between China and Hong Kong as

[7] In Baker *et al*. (2012), the fraction of variance explained by the first principal components of total sentiment indices for Germany, France, the United Kingdom, Japan, Canada and the United States are 48%, 40%, 37%, 37%, 38% and 42%, respectively. The fraction of variance explained by the first principal components of sentiment indices for the United States is 49% in Baker and Wurgler (2006).

the total sentiment index of China minus that of Hong Kong, $SENT_{A-H,t}^{Total} = SENT_{China,t}^{Total} - SENT_{\mathrm{HK},t}^{Total}$. Figure 2 indicates that the total sentiment indices of China, Canada, France, and Japan reflect high investor sentiment before the global financial crisis of 2008, whereas the total sentiment indices of France, the United Kingdom, and the United States show particularly low investor sentiment after the Internet bubble in the late 1990s. The total sentiment index of China aligns with the bull market of A-shares from 1998 to 2000, the five-year bear market from 2001 to 2005, and the rise and fall of the stock markets from 2006 to 2008 due to subprime mortgages. The total sentiment index of Hong Kong also reflects investor sentiment surrounding the Asian financial crisis in 1997 and the Internet bubble in the late 1990s.

[INSERT FIGURE 2 ABOUT HERE]

3.2.3 Global and local investor sentiment indices

We next construct the global sentiment index by forming the first principal component of the eight total sentiment indices as

$$\begin{aligned} SENT_t^{Global} = & -0.3136 SENT_{China,t}^{Total} + 0.4022 SENT_{HK,t}^{Total} + 0.2708 SENT_{Canada,t}^{Total} + \\ & 0.5406 SENT_{France,t}^{Total} - 0.5830 SENT_{\mathrm{German},t}^{Total} - 0.0536 SENT_{Japan,t}^{Total} + \\ & 0.0923 SENT_{UK,t}^{Total} - 0.1516 SENT_{US,t}^{Total}, \end{aligned} \tag{10}$$

where $SENT_t^{Global}$ is the global sentiment index. The first principal component of the eight total sentiment indices accounts for 27.75% of the total variance. We then regress the total sentiment index of each region on the global sentiment index, $SENT_{c,t}^{Total} = b_c SENT_t^{Global} + \varepsilon_{c,t}$. Finally, the residual, $\varepsilon_{c,t}$, is the local sentiment index, $SENT_{c,t}^{Local}$, which shows the extent of

the local sentiment component in the standardized total sentiment. The coefficient, b_c, is the sensitivity of global sentiment in market *c*. To measure the differences in local and global investor sentiment between the A- and H-share markets, we take the differences between the local (global) indices of China and Hong Kong, $SENT_{A-H,t}^{Local} = SENT_{China,t}^{Local} - SENT_{HK,t}^{Local}$ ($SENT_{A-H,t}^{Global} = (b_{China} - b_{HK})\mathrm{SENT}_t^{Global}$). If b_{China} is bigger (smaller) than b_{HK}, then the global sentiment causes more (less) price increases in China market relative to those in the Hong Kong market. Thus, the global sentiment difference is positively (negatively) related to price deviations of A- and H-shares if $b_{China} - b_{HK}$ is positive (negative).[8] Table 4 shows the summary statistics of the total, local and sentiment indices and the correlation coefficients between the global sentiment index and the eight total sentiment indices. Figure 3 plots the global sentiment index and local indices of China and Hong Kong. As expected, the pattern of the global sentiment index is in line with the Internet bubble surrounding 2000 and the global financial crisis surrounding 2008. The Chinese local sentiment index suggests that the low sentiment after 2008 is likely attributable to exogenous shocks coming from the global financial crisis, whereas the sentiment fluctuations before that period are more likely caused by local investors. The Hong Kong local sentiment index reflects the Internet bubble surrounding 2000 and the global financial crisis surrounding 2008.

[INSERT FIGURE 3 ABOUT HERE]

[INSERT TABLE 4 ABOUT HERE]

3.3 Control variables

[8] We find that $b_{China} - b_{HK}$ is -0.7158, so we expect the global sentiment difference to be negatively related to price deviations of A- and H-shares.

Prior literature shows that factors that affect price deviations of cross-listed stocks include information asymmetry, demand elasticity, liquidity and risk aversion (Amihud, 2002; Chakravarty *et al*., 1998; Domowitz *et al*., 1997; Wang and Jiang, 2004). We use firm size, demand elasticity, illiquidity, and risk as proxy variables to control for these factors.

Firm size is used to proxy for information asymmetry, as suggested by Chakravarty *et al*. (1998).Investors in China are likely to have an information advantage over Chinese stocks compared to investors in Hong Kong. The information asymmetry problem is likely more significant for small firms and causes price deviations for small firms to become larger. Firm size is measured by its total market value as

$$SIZE_{i,m} = \frac{1}{D_m}\sum_{t=1}^{D_m} \ln(MV_{i,t}), \tag{11}$$

where $SIZE_{i,m}$ is the total market value for firm *i* in month *m*, $MV_{i,t}$ is total market value for firm *i* on day *t*. We expect company size to be negatively related to price deviations.

The demand elasticity hypothesis suggests that foreign investors have more investment channels than domestic investors (Domowitz*et al*., 1997). Thus, their demand elasticity is lower, which leads to a discount of H-shares. The relative demand is measured by the ratio of the total H-share capital to the sum of the A- and H-share capital as

$$SHARE_{i,m} = \frac{1}{D_m}\sum_{t=1}^{D_m} \frac{share_{i.t}^{H}}{share_{i,t}^{H} + share_{i,t}^{A}}, \tag{12}$$

where $share_{i,t}^{A}$ is the outstanding share of A-share on day *t*, and $share_{i,t}^{H}$ is the outstanding share of H-share on day *t*. A large ratio indicates low demand elasticity for Hong Kong investors; we expect demand elasticity to be positively related to A- and H-share price deviations.

The liquidity hypothesis indicates that the trading costs of low liquidity stocks are high, which induces a liquidity premium in returns and lowers stock prices for illiquid stocks. We

use the Amihud illiquidity measure (*AMI*), calculated as the dollar trading volume divided by the absolute returns (Amihud, 2002), to gauge the liquidity of A-and H-shares. We then calculate the relative A- and H-share illiquidity as the ratio of A- and H-share *AMI* measures as

$$AMI_{i,m}^{A} = \frac{1}{D_m}\sum_{t=1}^{D_m}\frac{volume_{i,t}^{A}}{\left|return_{i,t}^{A}\right|}, \tag{13}$$

$$AMI_{i,m}^{H} = \frac{1}{D_m}\sum_{t=1}^{D_m}\frac{volume_{i,t}^{H}}{\left|return_{i,t}^{H}\right|}, \tag{14}$$

$$AMI_{i,m} = AMI_{i,m}^{A} - AMI_{i,m}^{H}, \tag{15}$$

where $volume_{i,t}$ is the dollar trading volume of stock *i* on day *t*, $return_{i,t}$ is the return of stock *i* on day *t*, and $AMI_{i,t}^{A}$ and $AMI_{i,t}^{H}$ are the illiquidity measures in month *m* for stock *i*'s A-and H-shares and standardized, respectively. $AMI_{i,m}$ is the relative illiquidity for stock *i*'s A- and H-shares in month *m*. We expect that the relative A- to H-share illiquidity is negatively related to price deviations, because a high relative H-share illiquidity will cause a larger discount to H-shares.

The risk of A-shares can be higher than that of H-shares because the Chinese stock markets are still emerging and are not as well developed as the Hong Kong stock markets. As a result, the investors of A-shares may require a higher risk premium, which can lower the price of A-shares and the premium of A-share prices relative to H-share prices. We use return variance during a month as a proxy for risk (Wang and Jiang, 2004), calculated as

$$SD_{i,m} = \frac{\sigma_{A,m}^{2}}{\sigma_{H,m}^{2}}, \tag{16}$$

Where $\sigma_{A,m}^{2}$ and $\sigma_{H,m}^{2}$ are the variance of stock *i*'s daily returns of A- and H-shares in month *m*, respectively, and $SD_{i,m}$ is the relative risk measure.

3.4 Institutional variables

The effect of the exchange rate system reform is captured by a dummy variable, which is equal to 1 after July 2005, and zero otherwise. Similarly, the effect of the split share structure reform is measured by a time dummy, which is equal to 1 after the month in which the non-tradable shares of the firm are listed for public trading, and zero otherwise. We use the total accumulative amount of the QFII and QDII schemes approved by the Chinese Administration of Foreign Exchange as the proxy variable for the effect of allowing partial capital flows between China and foreign markets. The first QFII scheme was approved in August2003. QDIIs were allowed to invest in overseas stock markets in May, 2007, so we start to include the amount of QDII schemes from then on.

3.5 Model

Our basic regression model is

$$\begin{aligned} DPRICE_{i,t} = \beta_0 + \beta_1 DPRICE_{i,t-1} + \beta_2 SENT_{A-H,t} + \beta_3 SIZE_{i,t} + \beta_4 SHARE_{i,t} + \\ \beta_5 AMI_{i,t} + \beta_6 SD_{i,t} + \beta_7 D_{ex} + \beta_8 D_{reform} + \beta_9 (QFII + QDII) + \varepsilon_{i,t}. \end{aligned} \tag{17}$$

where $DPRICE_{i,t}$ is the price deviations of A-and H-shares, and $SENT_{A-H,t}$ is the differences in sentiment indices between China and Hong Kong (i.e., total, local, or global sentiment differences). $SIZE_{i,t}$, $SHARE_{i,t}$, $AMI_{i,t}$, and $SD_{i,t}$ are proxy variables of information asymmetry, relative demand elasticity, relative illiquidity and relative risk, respectively. D_{ex}, D_{reform}, and $QFII + QDII$ are the exchange rate system reform dummy, the split share structure reform dummy, and the cumulative amount of the QFII and QDII schemes, respectively.

With various institutional changes, the stock markets in China become more liberalized and are less costly to trade, so we expect the effects of sentiment on the price deviations of

A-and H-shares to decrease. To verify this expectation, in alternative tests we include in our model the interaction terms of sentiment differences and the institutional reform variables. Finally, considering that the price deviations are usually persistent (Baker *et al.*, 2012; Sun and Tong, 2000), we include the lag terms. We use the cross-sectional fixed effects method and the ordinary least square method (OLS), with robust standard errors clustered by firm, to obtain robust results.

4. Empirical results

4.1 Sentiment differences and the price deviations of A-and H-shares

Table 5 shows the regression results of the A- and H-share price deviations on the total sentiment differences, and Table 6 shows those of the price deviations on local and global sentiment differences. To check the robustness of our results, we run regressions using annual data; Tables 7 and 8 show the results. Models 1 to 7 are estimated by the cross-sectional fixed effects method while Model 8 is estimated by the OLS method. The coefficients of the lagged price deviations are significantly positive at the 1% level, showing that the price deviations are quite persistent.

[INSERT TABLE 5 ABOUT HERE]

[INSERT TABLE 6 ABOUT HERE]

[INSERT TABLE 7 ABOUT HERE]

[INSERT TABLE 8 ABOUT HERE]

From the results in Tables 5 and 6, with or without control and institutional variables, total and local sentiment differences have a significant positive effect on price deviations, whereas global sentiment differences have little effect. These results indicate that the higher

the total and local investor sentiment of A-shares is compared to that of H-shares, the larger the price deviations are. Tables 7 and 8, which shows annual data, provides similar results. Model 7 in Table 7 shows that the coefficient on total sentiment difference is 6.30%. Given that the standard deviation of total sentiment difference is 1.1504, one standard deviation movement in total sentiment difference changes the price deviations by 7.25% (6.30%×1.1504), which is about 9.21% of one standard deviation (78.73%) of the price deviations.

Model 7 of Table 8 decomposes total sentiment difference into local and global sentiment differences. Local sentiment differences have a significant impact on price deviations, but global sentiment differences do not. A one standard deviation (0.9603) increase in local sentiment difference increases the price deviations by 15.63% based on a local sentiment coefficient of 16.28%, which is about 19.86% of one standard deviation of the price deviations (78.73%). Overall, we find that the price deviations of A-and H-shares are mainly influenced by local sentiment.

We conjecture that the significant impact of local sentiment on price deviations may be due to the institutional investment restrictions in China. Investors in China are not allowed to trade H-shares, and diversifying into global markets is difficult due to various capital flow constraints.[9] Thus, global sentiment affects the Chinese markets very little. Further, Hong Kong and global investors are not allowed to trade A-shares in our sample period. These factors diminish the impact of global sentiment on A-share prices.

We also test the effect of institutional reforms. The coefficient on the exchange rate

[9] According to Chinese laws and regulations, including Regulations on the Foreign Exchange System of the People's Republic of China, and Administration of the Settlement, Sale and Payment of Foreign Exchange Provisions, the direct foreign investment of domestic investors must be approved by the State Department. In addition to financial institution and business enterprises approving foreign borrowing, individual investors are not allowed to trade foreign securities. Only financial institutions approved by the People' Bank of China can buy foreign bonds.

system reform is negative, indicating that exchange rate reform decreases A- and H-share price deviations, possibly due to less cross-border capital movement constraints and less stringent foreign exchange controls on the RMB after the reform. Furthermore, the dividends of H-share are denominated in RMB but paid in HKD, so the investors of H-shares receive the benefits of expected RMB appreciation. Thus they are likely to invest more in H-shares, which decreases the price deviations of A-and H-shares. This result is consistent with Arquette *et al*. (2008) that the expectation of RMB revaluation reduces price deviations.

The dummy variable of the split share structure reform is positive, which shows that the implementation of this reform has a positive impact on price deviations. The split share structure reform allows non-tradable shares to become tradable. On the one hand, if the reform causes the demand curve to slope downward, holding the level of demand constant, the prices of A-shares would tend to decrease. On the other hand, the reform may instead generate more interests in trading A-shares and thus increase the demand level and prices of A-shares. Thus, how demand in A-shares reacts to split share structure reform is an empirical issue. Our results support the latter argument of an increased demand in A-shares following the reform. At the end of October 2006, companies that completed the split share structure reform comprise more than 94% of the total market capitalization. In unreported results, we test the daily turnover ratios on the SHSE from 1991 to 2013 by the Chow test and find a significant structure change in 2006. Namely, the turnover ratios increase significantly, which coincides with the completion of the split share structure reform. Investors trade more actively after the reform, which increases the relative prices of A-shares.

For the effects of the QFII and QDII schemes, we do not obtain consistent results with monthly and annual data. To study the sentiment effect changes due to institutional reforms, we analyze the interaction terms between sentiment differences and the institutional reform variables. Tables 5, 6, 7, and 8 show that the marginal effects of sentiment differences on

price deviations decrease significantly after the institutional reforms. Because standard errors change by including the interaction terms, to gauge the marginal effects of sentiment differences, we have to recalculate the marginal effects of sentiment differences and their standard errors according to Models 4, 5 and 6 in Tables 5 and 6.[10] Panel A of Table 9 provides the results using monthly data. We also recalculate the marginal effects of sentiment differences according to Models 4, 5 and 6 in Tables 7 and 8. Panel B shows the results using annual data.

[INSERT TABLE 9 ABOUT HERE]

Considering that the marginal effects and standard errors of the coefficient of the QFII and QDII schemes vary with their levels, we use the average level to gauge the effect of the QFII and QDII schemes. Table 9 shows that the effects of total and local sentiment differences on price deviations decrease significantly due to all three institutional reforms. But the effects of global sentiment differences become strong after the reforms.

Panel B in Table 9 shows that the marginal effect of global sentiment differences are -0.0798, -0.0946 and -0.0674, respectively, after the exchange rate system reform, split share structure reform and after the cumulative amount of the QFII and QDII schemes is greater than its sample period mean (5.1687). A one-standard deviation movement in global sentiment differences are associated with a change in the price deviations of -4.24% (-7.98%×0.5311), -5.02% (-9.46%×0.5311) and –3.58% (–6.74%×0.5311), respectively,

[10] According to Brambor *et al.* (2006), taking total sentiment deviation and exchange rate system reform for instance, prior to the reform the marginal effect of total sentiment deviation is β_2 and its standard error is in parentheses. After the reform, the marginal effect of total sentiment deviation is $\beta_2 + \beta_{ex} D_{ex}$ and its standard error is $\sqrt{\mathrm{var}(\beta_2)+\mathrm{var}(\beta_{ex})\mathrm{D}_{ex}^2+2D_{ex}\,\mathrm{cov}(\beta_2,\beta_{ex})}$, where β_{ex} is the coefficient of the interaction item of the total sentiment deviations and the exchange rate system reform.

which are equivalent to 5.38%, 6.38%, and 4.55% of a standard deviation in price deviations (78.73%). Overall, we find that the exchange rate system reform, the split share structure reform, and the QDII and QFII schemes are helpful in alleviating market frictions in China and help decrease A- and H-share price deviations. More importantly, price deviations between A- and H-shares are significantly influenced by the global sentiment differences, although its economic significance is relatively small.

Among the control variables, the negative coefficient on firm size (*SIZE*) shows that the information asymmetry between foreign and domestic investors gets worse for smaller firms and thus induces higher price deviations between A-and H-shares. The coefficient of H-shares' relative market capitalization (*SHARE*) is positive. More H-shares implies a low demand elasticity of Hong Kong investors, and demand elasticity is expected to be positively related to the A- and H-share price deviations. The coefficient on the relative A- and H-share illiquidity ratio (*AMI*) is negative, which indicates that a high relative H-share illiquidity will cause a larger discount to H-shares, consistent with our expectation. Finally, the relative risk of A-and H-shares, proxied by the relative A- and H-share volatility, is not significantly related to price deviations.

Baker and Wurgler (2006) study how investor sentiment affects cross-sectional stock returns and show that investor sentiment has a larger effect on stocks whose valuations are more subjective and hard to arbitrage. Therefore, we explore how firm characteristics impact the relations between investor sentiment differences and price deviations of A- and H-shares in annual data. We define a dummy variable, D_{fc}, which equals one if firms are harder to value and hence are more likely to be affected by sentiment, and zero otherwise. Firm characteristics include firm size (*ASSET*), asset tangibility (*TANGIBILITY*), firm profitability (*ROA*), institutional ownership (*INSTP*) and dividend payment (*DIVIP*). *ASSET* is the total assets at the end of each year. *TANGIBILITY* is gross property, plant, and equipment, divided

by lagged total assets. *ROA* is the average return on total assets for the past three years. *INSTP* is the institutional ownership at the end of year. *DIVIP* is a dummy variable, which equals zero if the firm does not pay dividends, and one otherwise. All the data are from Wind database.

We divide the firm sample into four groups according to each firm characteristic each year. D_{fc} equals one if *ASSET, TANGIBILITY, ROA* or *INSTP* is in the lowest quintile, and zero otherwise. If *DIVIP* equals zero (one), D_{fc} equals one (zero). Following Chang *et al.* (2012), we include the interaction terms of D_{fc} and investor sentiment differences. The results are reported in Table 10. The coefficients of the interaction terms of D_{fc} and investor sentiment difference are positive and significant for *ASSET* and *DIVIP*, which indicates that total sentiment difference has a larger impact on the price deviations of A-and H-shares for small firms and firms that do not pay dividends.

[INSERT TABLE 10 ABOUT HERE]

4.2 Persistence of the effect of investor sentiment on price deviations

Firth *et al.* (2015), studying the relation between corporate transparency and investor sentiment on the Chinese stock markets, find that the impact of sentiment on market excess returns is reversed after the twelfth month. Ben-Rephael *et al.* (2012) find that investor sentiment is positively related to the contemporaneous aggregate stock market excess returns in the United States, and 85% of returns are reversed within four months. The remainder is reversed within 10 months. In addition, they also find that this effect is stronger for small stocks and growth stocks.

We next explore the effects of investor sentiment differences on short- and long-term price deviations. We regress the price deviations on six lags of sentiment differences from one to six years. Table 11 provides the results. Panel B shows that the coefficients of the first

three lags of local sentiment differences are positively significant, but they become significantly negative starting from lag 4. The results of local sentiment differences from annual data are similar; the impact of the local sentiment differences on the price deviations are reversed after the fourth year. This impact of sentiment on the prices of A- and H-shares are much longer than previously found in other stock markets (Baker *et al*., 2012; Ben-Rephael *et al*., 2012; Firth *et al*., 2015).

[INSERT TABLE 11 ABOUT HERE]

We conjecture that the unusually long cycle of price reversals is related to the individual-dominated trading on the A-share market. According to the SHSE Annual Statistics Report in 2013, the proportion of the trades by individual investors on the A-share market is as high as 80.78%. This finding indicates the existence of a large amount of noise trading as the literature finds that individual investors are noise traders (Black, 1986; Kyle, 1985). Thus, they are more vulnerable to the impact of sentiment. By contrast, the majority of global investors are institutional investors who more likely to be better trained and disciplined.[11] In addition, we divide our sample by the average proportion of institutional holdings. We find that the effects of the lagged local sentiment differences reverse within two years for the high institutional holding samples and within four years for the low institutional holding samples. These results show that the long-lasting effect of local sentiment is at least partially caused by the individual-trader dominated structure of the A-share market.

4.3 Robustness checks

As a robustness check, we examine the effects of investor sentiment differences on price

[11] According to HKSE, the turnover for foreign investors accounts for 39% of total market turnover from October 2013 to September 2014, of which 34% comes from institutional investors.

deviations in different industries. Guo (2013) explores the factors that affect the price discounts of Chinese cross-listed companies. He finds that the effects of expected exchange rate changes, relative market sentiment, and relative company sentiment vary significantly among industries. According to the industry classification standard of the China Securities Regulatory Commission, we classify our samples into seven industries. We then test a dynamic panel model for each industry using cross-sectional fixed effects method. We do not investigate the effect of institutional reforms by industry because the sample periods of some industries are too short to cover the institutional reform period.

Table 12 shows the results by industry. The effects of sentiment differences on price deviations are generally consistent among industries. All coefficients of local sentiment difference are positive, and all of them are significant. The coefficients of global sentiment difference are again, in general, not significant. All the coefficients of total sentiment differences are positive, and about one-half are significant at the 5% level.

[INSERT TABLE 12 ABOUT HERE]

In addition, we follow Arquette *et al*. (2008) and use the P/E ratios of eight markets as the total sentiment index and decompose them into local and global indices by the principal component analysis. In Panel A of Table 13, we again find a significant impact of total and the local sentiment indices on the price deviations of A- and H-shares, and once again the impact of the global sentiment index on price deviations is not significant at the 5% level. Overall, the results are similar. We rerun our tests by excluding the finance industry and use the first order difference of price deviations as the dependent variable and find similar results in Panels B and C. We further cut our samples into two subperiods at June 2003, and the results are shown in Panels D and E. It indicates that the global sentiment significantly

impacts the price deviations in the latter period, which is consistent with our findings on the influences of institutional reform mostly occurring in the latter period.

Finally, cross-listed companies use different accounting standards to report their financial statements, and differences in accounting information may attribute to price deviationsof cross-listed shares (Akins *et al.*, 2012; Bushman *et al.*, 2004). The accounting disclosures between China and Hong Kong are inconsistent until China implemented new accounting standards on January 1, 2007. We thus test whether the differences in accounting standards affect the price deviations of A- and H-shares. We cut our samples into two subperiods at 2007 and repeat all of our tests. From Panels F and G of Table 13, our findings are qualitatively similar in that the total and the local sentiment differences have, in general, a significantly positive affect on the A- and H-share price deviations before and after 2007, and the global sentiment differences show a negative effect after 2007.

[INSERT TABLE 13 ABOUT HERE]

5. Conclusions

We investigate the effects of sentiment differences in China and Hong Kong on the price deviations of cross-listed A-and H-shares. We study whether the price deviations are impacted by total, local, and global sentiment differences. We also examine the effect of institutional changes such as the exchange rate reform, the split share structure reform, and the QFII and QDII schemes. We find that total and local sentiment differences have a significantly positive effect on price deviations. Global sentiment differences are, in general, not significantly related to price deviations, possibly due to capital restrictions in China that deter the effect of global investor sentiment. We further document that the total sentiment differences have a larger effect on price deviations for small firms and firms without

dividends.

Institutional reforms have a moderating effect on investor sentiment. After the exchange rate reform and the implementation of QFII and QDII schemes, the marginal effects of total and local sentiment differences on price deviations decrease. Nevertheless, the share segmentation reform increases price deviations, possibly due to increased investor demand and interests to participate in the A-share markets after the reform.

We find that the impact of sentiment differences on the price deviations of A-and H-shares takes up to four years to reverse, which is significantly longer than previously reported in the literature. The A-share market is dominated by individual traders and thus the market prices in China are more influenced by investor sentiment. This influence of noise trading is likely causing the effect of investor sentiment to last longer. In addition to supporting prior studies that find that sentiment has a more significant impact on stocks that are difficult to arbitrage (Baker and Wurgler, 2006; Baker *et al*., 2012), we show that the effects of investor sentiment tend to last much longer in a market that is dominated by individual investors, a result has yet to be reported in the literature.

Appendix A1 Basic information of the sample cross-listed companies

The table lists company names, share codes, listing dates, and industry of the sample's cross-listed companies. The A-share code symbol SS indicates that the firm is listed on the Shanghai Stock Exchange, and SZ indicates that the firm is listed on the Shenzhen Stock Exchange.

No.	Company Name	A-share Code	A-share listing date	H-share Code	H-share listing date	Industry
1	ZTE Corp	000063.SZ	18/11/1997	0763.HK	09/12/2004	Manufacturing
2	Weichai Power Co Ltd	000338.SZ	30/04/2007	2338.HK	11/03/2004	Manufacturing
3	Chenming Paper	000488.SZ	20/11/2000	1812.HK	18/06/2008	Manufacturing
4	Northeast Electric Dev	000585.SZ	13/12/1995	0042.HK	06/07/1995	Manufacturing
5	Jingwei Textile Machinery	000666.SZ	10/12/1996	0350.HK	02/02/1996	Manufacturing
6	Shandong Xinhua Pharmaceutical	000756.SZ	06/08/1997	0719.HK	31/12/1996	Manufacturing
7	Angang Steel	000898.SZ	25/12/1997	0347.HK	24/07/1997	Manufacturing
8	HisenseKelon Electrical	000921.SZ	13/07/1999	0921.HK	23/07/1996	Manufacturing
9	Huaneng Power International	600011.SS	06/12/2001	0902.HK	21/01/1998	Utility
10	Anhui Expressway	600012.SS	07/01/2003	0995.HK	13/11/1996	Transportation
11	Minsheng Bank	600016.SS	19/12/2000	1988.HK	26/11/2009	Finance
12	China Shipping Development	600026.SS	23/05/2002	1138.HK	11/11/1994	Transportation
13	Huadian Power International	600027.SS	03/02/2005	1071.HK	30/06/1999	Utility
14	Sinopec Corp.	600028.SS	08/08/2001	0386.HK	19/10/2000	Mining
15	China Southern Airlines	600029.SS	25/07/2003	1055.HK	31/07/1997	Transportation,
16	China Merchants Bank	600036.SS	09/04/2002	3968.HK	22/09/2006	Finance
17	China Eastern Airlines	600115.SS	05/11/1997	0670.HK	05/02/1997	Transportation
18	Yanzhou Coal Mining	600188.SS	01/07/1998	1171.HK	01/04/1998	Mining
19	Guangzhou Pharm	600332.SS	06/02/2001	0874.HK	30/10/1997	Manufacturing

Appendix A1 (*cont.*)

No.	Company Name	A-share Code	A-share listing date	H-share Code	H-share listing date	Industry
20	Jiangxi Copper	600362.SS	11/01/2002	0358.HK	12/06/1997	Manufacturing
21	Jiangsu Expressway	600377.SS	16/01/2001	0177.HK	27/06/1997	Transportation
22	Shenzhen Expressway	600548.SS	25/12/2001	0548.HK	12/03/1997	Transportation
23	Anhui Conch Cement	600585.SS	07/02/2002	0914.HK	21/10/1997	Manufacturing
24	Tsingtao Brewery	600600.SS	27/08/1993	0168.HK	15/07/1993	Manufacturing
25	Guangzhou Shipyard International	600685.SS	28/10/1993	0317.HK	06/08/1993	Manufacturing
26	Sinopec Shanghai Petrochemical	600688.SS	08/11/1993	0338.HK	26/07/1993	Manufacturing
27	Nanjing Panda Electric	600775.SS	18/11/1996	0553.HK	02/05/1996	Manufacturing
28	Kunming Machine Tool	600806.SS	03/01/1994	0300.HK	07/12/1993	Manufacturing
29	Maanshan Iron & Steel	600808.SS	06/01/1994	0323.HK	03/11/1993	Manufacturing
30	Beiren Printing Machinery	600860.SS	06/05/1994	0187.HK	06/08/1993	Manufacturing
31	Sinopec Yizheng Chemical Fibre	600871.SS	11/04/1995	1033.HK	29/03/1994	Manufacturing
32	Tianjin Capital Envir Protection	600874.SS	30/06/1995	1065.HK	17/05/1994	Utility
33	Dongfang Electric Corp	600875.SS	10/10/1995	1072.HK	06/06/1994	Manufacturing
34	Luoyang Glass	600876.SS	31/10/1995	1108.HK	08/07/1994	Manufacturing
35	Chongqing Iron & Steel	601005.SS	28/02/2007	1053.HK	17/10/1997	Manufacturing
36	China Shenhua Energy	601088.SS	09/10/2007	1088.HK	15/06/2005	Mining
37	Sichuan Expressway	601107.SS	27/07/2009	0107.HK	07/10/1997	Transportation
38	Air China	601111.SS	18/08/2006	0753.HK	15/12/2004	Transportation
39	China Rail Construction	601186.SS	10/03/2008	1186.HK	13/03/2008	Construction
40	Agricultural Bank Of China	601288.SS	15/07/2010	1288.HK	16/07/2005	Finance
41	Ping An of China	601318.SS	01/03/2007	2318.HK	24/06/2004	Finance

Appendix A1 (*cont.*)

No.	Company Name	A-share Code	A-share listing date	H-share Code	H-share listing date	Industry
42	Bank of Communications	601328.SS	15/05/2007	3328.HK	23/06/2005	Finance
43	Guangshen Railway	601333.SS	22/12/2006	0525.HK	14/05/1996	Transportation, Storage and Postal Service
44	China Railway	601390.SS	03/12/2007	0390.HK	07/12/2007	Construction
45	Ind& Com Bank of China	601398.SS	27/10/2006	1398.HK	27/10/2006	Finance
46	Beijing North Star	601588.SS	16/10/2006	0588.HK	14/05/1997	Real estate
47	Aluminum Corp of China	601600.SS	30/04/2007	2600.HK	12/12/2001	Manufacturing
48	CPIC	601601.SS	25/12/2007	2601.HK	23/12/2009	Finance
49	MCC	601618.SS	21/09/2009	1618.HK	24/09/2009	Construction
50	China Life	601628.SS	09/01/2007	2628.HK	18/12/2003	Finance
51	Shanghai Electric	601727.SS	05/12/2008	2727.HK	28/04/2005	Manufacturing
52	CSR	601766.SS	18/08/2008	1766.HK	21/08/2008	Manufacturing
53	China Oilfield Services	601808.SS	28/09/2007	2883.HK	20/11/2002	Mining
54	PetroChina	601857.SS	05/11/2007	0857.HK	07/04/2000	Mining
55	China Shipping Container Lines	601866.SS	12/12/2007	2866.HK	16/06/2004	Transportation, Storage and Postal Service
56	China Coal Energy	601898.SS	01/02/2008	1898.HK	19/12/2006	Mining
57	Zijin Mining	601899.SS	25/04/2008	2899.HK	23/12/2003	Mining
58	China COSCO	601919.SS	26/06/2007	1919.HK	30/06/2005	Transportation, Storage and Postal Service
59	China Construction Bank	601939.SS	25/09/2007	0939.HK	27/10/2005	Finance
60	Bank Of China	601988.SS	05/07/2006	3988.HK	01/06/2006	Finance
61	Datang Power	601991.SS	20/12/2006	0991.HK	21/03/1997	Heat, Electricity, Gas and Water Production and Supply
62	China CITIC Bank	601998.SS	27/04/2007	0998.HK	27/04/2007	Finance

Appendix A2 Sample size for calculating volatility premium

Market	Companies (*n*)	Exchange
China	2,468	Shanghai Stock Exchange and Shenzhen Stock Exchange
Hong Kong	1,690	Hong Kong Stock Exchange
Canada	3,783	Canadian stock market
France	956	French stock market
Germany	1,089	German stock market
Japan	3,746	Japanese stock market
UK	1,636	UK stock market
US	17,802	US stock market

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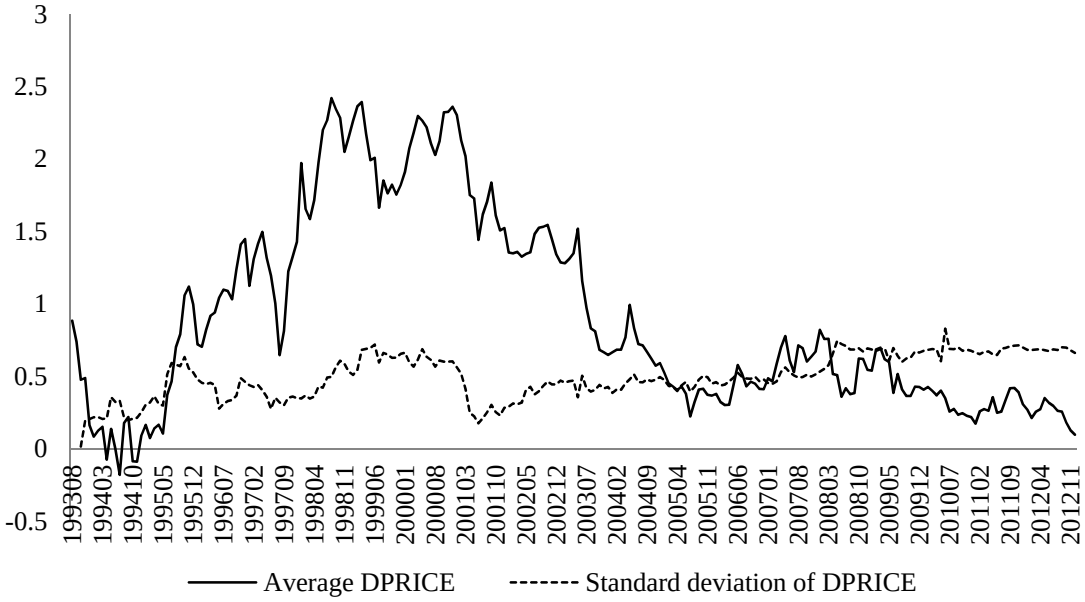

Figure 1

The price deviations of A-and H-shares, 1993:08-2012:12

The figure plots the time-series price deviations of A- and H-shares. The solid line depicts the monthly average daily price deviations. The dashed line depicts the standard deviation of price deviations.

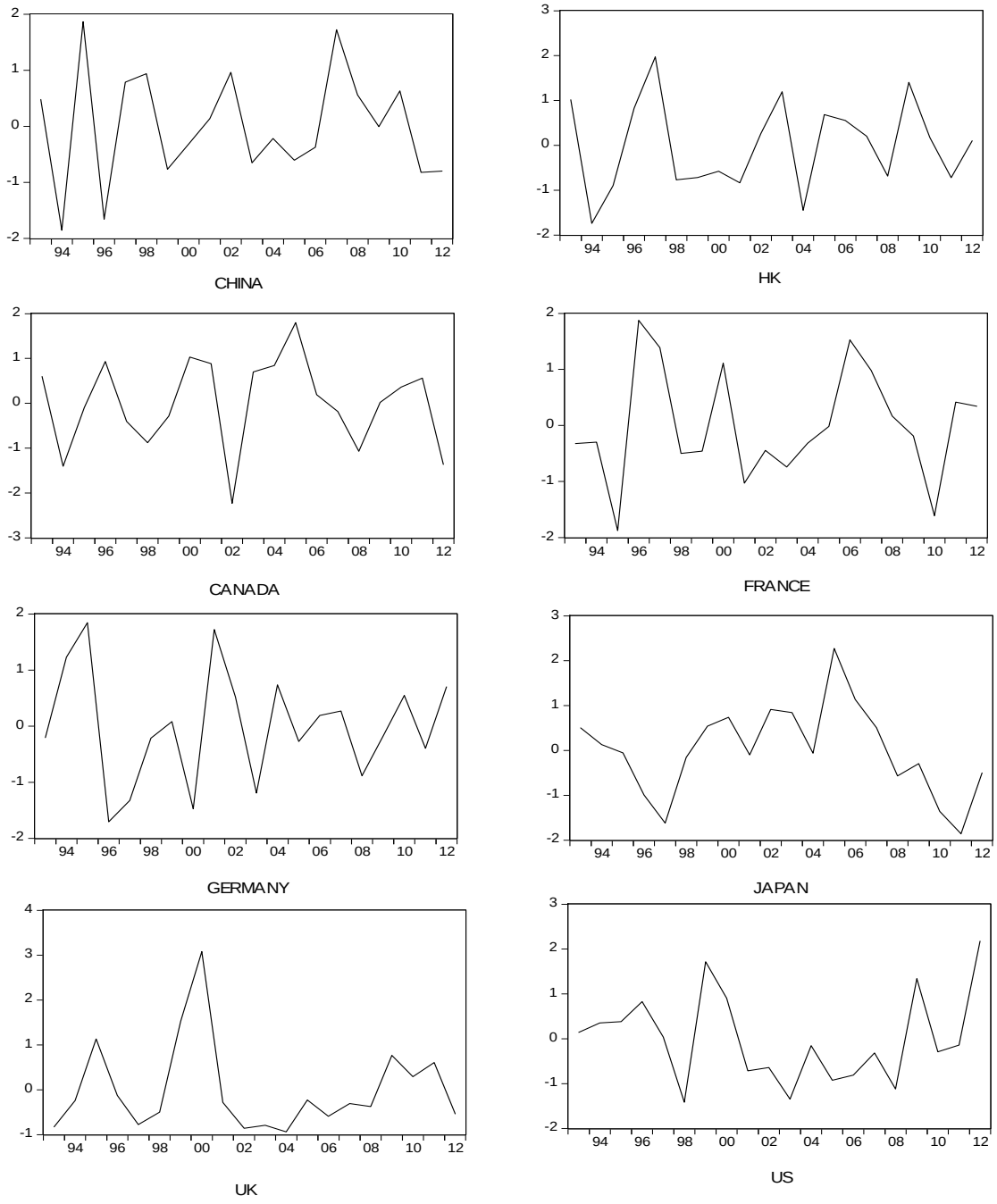

Figure 2

Total investor sentiment, 1993-2012

These figures plot the total investor sentiment for the eight sample countries and regions. Total investor sentiment is the first principal component of four sentiment proxies in each region. The first proxy (*TURN*) is the log of the total trading volume over the year divided by the average total capitalization at the beginning and end of the year, smoothed with the up-to-three-year moving average. The second proxy (*NIPO*) is the log of the total number of IPOs. The third proxy (*RIPO*) is the log of the equally weight average initial returns of IPOs. The fourth proxy (*PVOL*) is the ratio of the value-weight average market-book ratio of high volatility stocks to that of low volatility stocks. The four proxies are regressed on consumption growth, industry production growth, employment growth, inflation, the short-term interest and the term premium prior to forming the first principal component. The resulting indices are linear functions of the within-market standardized values of the proxies and thus have mean zero.

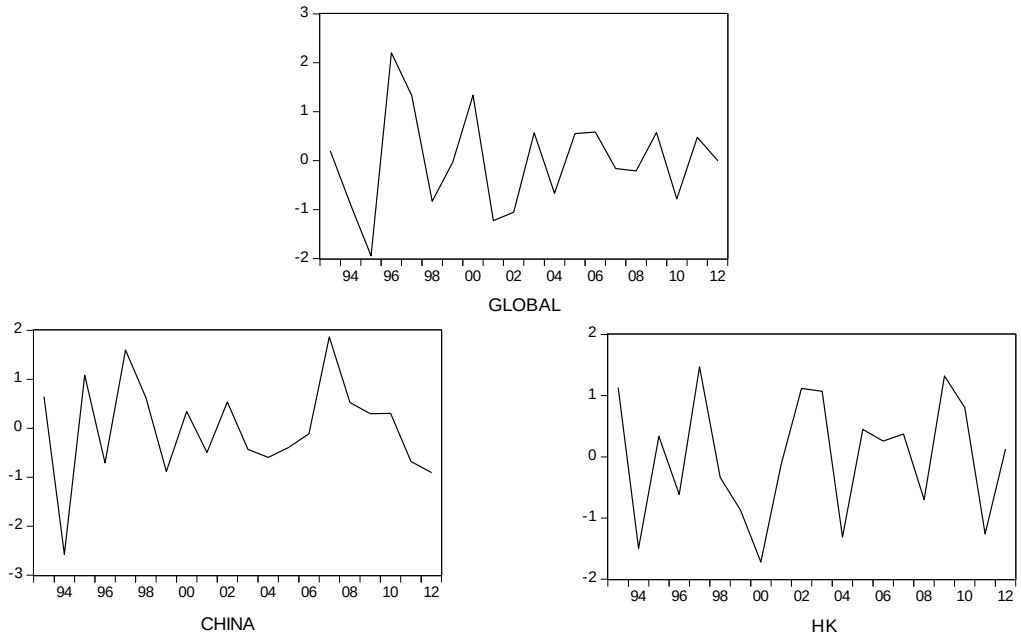

Figure 3

Global investor sentiment and local investor sentiment for China and Hong Kong, 1993-2012

Global investor sentiment is the first principal component of the total sentiment indices of the eight countries and regions. Local investor sentiment is the residual from the $SENT_{c,t}^{Total} = b_c SENT_t^{Global} + \varepsilon_{c,t}$ regression for China and Hong Kong, respectively.

Table 1 Sample selection process

This table lists the data selection process and the number of firms and observations during each selection step.

	Number of firms	Observations
Total observations from August 1993 to December 2012 obtained from Wind Database	72	7,368
Less		
Firms whose monthly observations is less than 30	10	203
Observations with insufficient data to calculate control variables	–	122
Final observations	62	7,043

Table 2 Investor sentiment proxies, macroeconomic variables and data sources

This table shows the data source and sample period for the sentiment proxies and macroeconomic variables.

Variable	Measuring method	Item	Country and region	Period	Data source
Panel A: Investor sentiment proxy					
Turnover (*TURN*)	$\ln\left(\frac{volume_t}{capi_{t-1} + capi_t/2}\right)$	Volume	All countries or regions	1991–2012	Datastream
		Year-end total capitalization (capi)	All countries or regions	1991–2012	Datastream
IPO volume (*NIPO*)	ln(NIPO)	NIPO	China	1993–2012	Wind
			Germany	1993–2002, 2004–2011	http://bear.warrington.ufl.edu/ritter/ipodata.htm
			France	1993–2011	http://bear.warrington.ufl.edu/ritter/ipodata.htm
			Others	1993–2012	http://bear.warrington.ufl.edu/ritter/ipodata.htm
IPO first-day returns (*RIPO*)	ln(average RIPO)	RIPO	China	1993–2012	Wind
			Germany	1993–2002, 2004–2011	http://bear.warrington.ufl.edu/ritter/ipodata.htm
			France	1993–2011	http://bear.warrington.ufl.edu/ritter/ipodata.htm
			Others	1993–2012	http://bear.warrington.ufl.edu/ritter/ipodata.htm

Table 2 (contd.)

Variable	Measuring method	Item	Country and region	Period	Data source
Volatility premium (*PVOL*)	$(\frac{ME}{BE})_H \Big/ (\frac{ME}{BE})_L$	Monthly rehabilitation closing price	All countries or regions	12/1991–12/2011	Datastream
		Market value (ME)	All countries or regions	1993–2012	Datastream
		Book market (BM)	All countries or regions	1993–2012	Datastream
Panel B: Macroeconomic variable					
Consumption growth	$\ln(con_t) - \ln(con_{t-1})$	Residents' consumption level index (con)	China	1992–2012	CEInet Statistics Database
		Private consumption expenditure (con)	Hong Kong	1992–2012	Wind
		Consumption growth	Others	1993–2012	CEInet Statistics Database
Industry production growth	$\ln(ind_t) - \ln(ind_{t-1})$	Industrial added value index (ind)	China	1992–2012	CEInet Statistics Database
		GDP (ind)	Hong Kong	1992–2012	Wind
		Industry production growth	Others	1993–2012	CEInet Statistics Database
Inflation		CPI	Hong Kong	1993–2012	Wind
		CPI	Others	1993–2012	CEInet Statistics Database
Employment growth	$\ln(\frac{1-rune_t}{1-rune_{t-1}})$	Unemployment rate (rune)	Hong Kong	1992–2012	Wind
		Registered urban unemployment rate (rune)	China	1992–2012	CEInet Statistics Database
		Unemployment rate (rune)	Others	1992–2012	OECD

Table 2 (contd.)

Variable	Measuring method	Item	Country and region	Period	Data source
Short-term rate		Lending rates under six months (stir)	China	1993–2012	The people's bank of China
		The short-term interest rate (stir)	Others (except Hong Kong)	1993–2012	OECD
Term premium	ltir– stir	Lending rates more than five years (ltir)	China	1993–2012	The people's bank of China
		Long-term interest rates (ltir)	Others (except Hong Kong)	1993-2012	OECD

Table 3 Investor sentiment proxy and total investor sentiment

This table provides the summary statistics of sentiment proxies for every country or region. For each sentiment proxy, the average (Mean), standard variance (Std), minimum (Min), maximum (Max), correlations with total sentiment and correlations with other proxies are reported. The first proxy (*TURN*) is the log of the total trading volume over the year divided by the average total capitalization at the beginning and end of the year, smoothed with up-to-three-year moving average. The second proxy (*NIPO*) is the log of the total volume of IPOs in the year. The third proxy (*RIPO*) is the log of the equal-weight average initial returns of IPOs in the year. The fourth proxy (*PVOL*) is the ratio of the value-weight average market-book ratio of high volatility stocks to that of low volatility stocks. Total investor sentiment is the first principal component of four sentiment proxies for every country. The sample period is over 1993-2012. The value in parentheses is the correlation's p value.

Country or region	Sentiment proxy	Mean	Std	Min	Max	Correlations with $SENT_i^{Total}$	Correlations with sentiment proxy		
							TURN	*PVOL*	*NIPO*
China	*TURN*	-0.0046	0.3044	-0.5676	0.4708	0.7622	1.0000		
						(0.0001)			
	PVOL	1.3677	0.3989	0.3842	2.0037	0.2350	0.0243	1.0000	
						(0.3187)	(0.9190)		
	NIPO	4.6082	0.7354	2.7081	5.8551	-0.1668	0.1080	0.1488	1.0000
						(0.4821)	(0.6504)	(0.5311)	
	RIPO	0.8390	0.4424	0.1913	1.8251	0.4178	0.2858	-0.1637	-0.1459
						(0.0668)	(0.2219)	(0.4904)	(0.5393)
HK	*TURN*	0.0048	0.2474	-0.4208	0.4290	-0.4743	1.0000		
						(0.0346)			
	PVOL	0.4407	0.3246	-0.0145	1.2098	-0.0682	0.1527	1.0000	
						(0.7750)	(0.5204)		
	NIPO	3.8212	0.3836	3.1781	4.4308	0.5304	-0.0330	-0.3239	1.0000
						(0.0161)	(0.8901)	(0.1636)	
	RIPO	0.0966	0.0850	-0.0151	0.3031	0.8036	-0.3064	-0.1760	0.5797
						(0.0000)	(0.1889)	(0.4580)	(0.0074)

Table 3 (contd.)

Country or region	Sentiment proxy	Mean	Std	Min	Max	Correlations with $SENT_i^{Total}$	Correlations with sentiment proxy		
							TURN	*PVOL*	*NIPO*
Canada	*TURN*	0.0081	0.0601	-0.0699	0.1844	-0.5249	1.0000		
						(0.0175)			
	PVOL	1.7311	3.4927	-3.3779	15.6812	0.2133	-0.0107	1.0000	
						(0.3666)	(0.9645)		
	NIPO	2.6460	0.9129	1.3863	4.1271	0.4462	0.0089	0.2315	1.0000
						(0.0486)	(0.9703)	(0.3260)	
	RIPO	0.0528	0.0500	-0.0834	0.1231	0.5293	-0.1403	0.2626	0.3387
						(0.0164)	(0.5553)	(0.2634)	(0.1440)
France	*TURN*	0.0053	0.1071	-0.1577	0.1566	0.3758	1.0000		
						(0.1025)			
	PVOL	1.1777	2.0661	-2.1759	5.8162	0.7165	0.1910	1.0000	
						(0.0004)	(0.4199)		
	NIPO	3.3844	1.1406	0.6931	4.7957	0.3751	-0.1101	0.4687	1.0000
						(0.1136)	(0.6535)	(0.0430)	
	RIPO	0.0460	0.1302	-0.4432	0.1681	0.2024	-0.0387	0.1944	0.5118
						(0.4059)	(0.8751)	(0.4251)	(0.0251)
Germany	*TURN*	0.0031	0.2639	-0.7266	0.6319	0.6953	1.0000		
						(0.0007)			
	PVOL	2.5836	3.1155	0.3473	11.3298	0.4315	0.4010	1.0000	
						(0.0575)	(0.0797)		
	NIPO	3.0486	1.1348	1.3863	5.1648	-0.1481	0.1816	0.1648	1.0000
						(0.5577)	(0.4708)	(0.5134)	

Table 3 (contd.)

Country or region	Sentiment proxy	Mean	Std	Min	Max	Correlations with $SENT_i^{Total}$	Correlations with sentiment proxy		
							TURN	*PVOL*	*NIPO*
Japan	*RIPO*	0.1156	0.1325	0.0100	0.4324	-0.4471	-0.1005	0.0400	0.6907
						(0.0628)	(0.6914)	(0.8747)	(0.0015)
	TURN	-0.0054	0.4226	-1.1455	0.9884	0.4155	1.0000		
						(0.0685)			
	PVOL	9400.74	40971.3	0.02876	183436	0.1812	0.0892	1.0000	
						(0.4446)	(0.7083)		
	NIPO	4.5078	0.6957	2.9444	5.3132	0.5650	-0.0354	0.2748	1.0000
						(0.0094)	(0.8824)	(0.2410)	
	RIPO	0.3320	0.2328	0.0944	0.8667	0.5798	0.0043	-0.1604	0.2890
						(0.0074)	(0.9856)	(0.4992)	(0.2166)
UK	*TURN*	0.0031	0.04820	-0.0832	0.1034	-0.4290	1.0000		
						(0.0591)			
	PVOL	2.6339	8.0307	-5.5204	35.7502	0.7608	-0.0701	1.0000	
						(0.0001)	(0.7691)		
	NIPO	4.3987	0.8352	1.9459	5.4293	-0.0281	0.0633	0.2966	1.0000
						(0.9065)	(0.7909)	(0.2042)	
	RIPO	0.1590	0.1357	0.0677	0.6114	0.7109	-0.0863	0.5875	0.1669
						(0.0004)	(0.7174)	(0.0065)	(0.4819)
US	*TURN*	0.0026	0.3727	-0.8367	0.9453	0.1241	1.0000		
						(0.6023)			
	PVOL	-4020.71	18394.1	-82102.6	1909.78	-0.5063	0.0419	1.0000	
						(0.0227)	(0.8609)		

Table 3 (contd.)

Country or region	Sentiment proxy	Mean	Std	Min	Max	Correlations with $SENT_i^{Total}$	Correlations with sentiment proxy		
							TURN	*PVOL*	*NIPO*
	NIPO	5.1043	0.9732	3.0445	6.5147	0.3167	-0.3663	0.1473	1.0000
						(0.1736)	(0.1122)	(0.5356)	
	RIPO	0.1598	0.1194	0.6203	0.5359	0.4964	-0.1709	-0.0025	0.4755
						(0.0260)	(0.4713)	(0.9915)	(0.0341)

Table 4 Summary statistics for total, local and global sentiment.

Global investor sentiment is the first principal component of the total sentiment indices in the eight countries or regions. Local investor sentiment is the residual from the regression: $SENT_{i,t}^{Total} = b_i SENT_t^{Global} + \varepsilon_{i,t}$, for each country or region. The sample period is over 1993-2012. The value in parentheses is the correlation's p value.

Panel A: Total and global sentiment

Total sentiment	Mean	Std	Min	Max	Correlations with $SENT^{Global}$	Correlations among $SENT_i^{Total}$						
						China	HK	Canada	France	Germany	Japan	UK
China	0.0000	1.0000	-1.8564	1.8664	-0.4439	1.0000						
					(0.0499)							
Hong Kong	0.0000	1.0000	-1.7390	1.9740	0.6311	0.0987	1.0000					
					(0.0028)	(0.6790)						
Canada	0.0000	1.0000	-2.1662	1.9476	0.2810	-0.1311	0.1964	1.0000				
					(0.2301)	(0.5818)	(0.4067)					
France	0.0000	1.0000	-1.8784	1.8692	0.8159	-0.3178	0.3500	0.0021	1.0000			
					(0.0000)	(0.1721)	(0.1304)	(0.9931)				
Germany	0.0000	1.0000	-1.7052	1.8461	-0.8754	0.2415	-0.5307	-0.2013	-0.6330	1.0000		
					(0.0000)	(0.3050)	(0.0161)	(0.3948)	(0.0027)			
Japan	0.0000	1.0000	-1.8619	2.2702	-0.0888	-0.0207	0.0198	0.1877	-0.0552	0.1014	1.0000	
					(0.7096)	(0.9309)	(0.9341)	(0.4281)	(0.8173)	(0.6704)		
UK	0.0000	1.0000	-0.9407	3.0795	0.0888	-0.0676	-0.2523	0.1674	-0.0213	-0.1141	0.0062	1.0000
					(0.7096)	(0.7771)	(0.2831)	(0.4806)	(0.9291)	(0.6318)	(0.9793)	
US	0.0000	1.0000	-1.4147	2.1747	0.2179	-0.3202	0.0035	-0.1358	0.1587	0.0476	-0.2066	0.4775
					(0.3561)	(0.1687)	(0.9883)	(0.5682)	(0.5040)	(0.8421)	(0.3822)	(0.0332)
Global sentiment	0.0000	1.0000	-1.9959	2.2110								

Table 4 (contd.)

Panel B: Local sentiment				
	Mean	Std	Min	Max
China	0.0000	1.0000	-2.5264	1.8665
Hong Kong	0.0000	1.0000	-1.7016	1.3765
Canada	0.0000	1.0000	-1.9884	1.8875
France	0.0000	1.0000	-2.0848	1.8537
Germany	0.0000	1.0000	-2.0563	1.6435
Japan	0.0000	1.0000	-1.8356	2.3224
UK	0.0000	1.0000	-0.9090	2.9868
US	0.0000	1.0000	-1.5050	2.2058

Panel C: Sentiment differences				
	Mean	Std	Min	Max
Total sentiment difference	-0.0709	1.1504	-2.4808	2.7635
Local sentiment difference	-0.0436	0.9603	-1.5045	2.0619
Global sentiment difference	-0.0243	0.5311	-1.5753	1.3935

Table 5 Regression tests of the price deviations of A-and H-shares on the total sentiment differences: Monthly data

The dependent variable is the average daily price deviation ($DPRICE_{i,t}$) between A-and H-shares for each company *i* over month *t*. The main explanatory variable $SENT^{Total}_{A\text{-}H,t}$, is the total sentiment difference between A-and H-share markets in the year *t*. Control variables *SIZE*, *SHARE*, *AMI*, and *SD* are proxies for information asymmetry, differential demand elasticity, differential liquidity and differential risk aversion, respectively. Institutional reform variables include the following. D_{ex} is a dummy variable of exchange rate reform, which equal to 1 for July 2005 onward, and zero otherwise. D_{reform} is a dummy variable, which is equal to 1 since the month that the non-tradable shares for the firm became tradable, and zero otherwise. *QFII+QDII* is the total cumulative amount of the QFII and QDII schemes approved by the Chinese Administration of Foreign Exchange, where QFII started in August 2003 and QDII started in May 2007. Models 1 to 7 are estimated by cross-sectional fixed effect method and model 8 is estimated by OLS method. Robust standard errors are clustered by firm in parentheses. ***, ** and * represent significance at the 1%, 5% and 10% level, respectively.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
				Fixed-effect				OLS
DPRICE(-1)	0.9627***	0.9407***	0.9398***	0.9394***	0.9394***	0.9385***	0.9380***	0.9743***
	(0.0036)	(0.0050)	(0.0055)	(0.0057)	(0.0055)	(0.0057)	(0.0056)	(0.0052)
$SENT^{Total}_{A\text{-}H,t}$	0.0112***	0.0127***	0.0127***	0.0163***	0.0234***	0.0179***	0.0237***	0.0180***
	(0.0011)	(0.0015)	(0.0015)	(0.0019)	(0.0026)	(0.0018)	(0.0026)	(0.0029)
SIZE		-0.0167***	-0.0152***	-0.0139***	-0.0146***	-0.0136***	-0.0140***	-0.0074***
		(0.0036)	(0.0041)	(0.0040)	(0.0040)	(0.0041)	(0.0040)	(0.0016)
SHARE		0.0703***	0.0556***	0.0596***	0.0561***	0.0622***	0.0612***	0.0208
		(0.0119)	(0.0177)	(0.0181)	(0.0176)	(0.0179)	(0.0180)	(0.0132)
SD		-0.0006	-0.0005	0.0005	-0.0005	0.0005	-0.0003	0.0049
		(0.0043)	(0.0043)	(0.0043)	(0.0043)	(0.0043)	(0.0044)	(0.0043)
AMI		-0.0183***	-0.0184***	-0.0185***	-0.0186***	-0.0186***	-0.0187***	-0.0134***
		(0.0024)	(0.0025)	(0.0025)	(0.0025)	(0.0025)	(0.0025)	(0.0022)
D_{ex}			-0.0025	-0.0036	-0.0021	0.0017	0.0062	0.0226***
			(0.0060)	(0.0060)	(0.0060)	(0.0060)	(0.0073)	(0.0057)
D_{ex}* $SENT^{Total}_{A\text{-}H,t}$				-0.0075***			0.0107**	0.0078*
				(0.0019)			(0.0044)	(0.0039)

Table 5 (*cont.*)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
				Fixed-effect				OLS
D_{reform}			0.0067	0.0070	0.0044	0.0055	0.0026	0.0076*
			(0.0109)	(0.0114)	(0.0109)	(0.0116)	(0.0116)	(0.0044)
D_{reform} * $SENT^{Total}_{A\text{-}H,t}$					-0.0116***		-0.0081**	-0.0048
					(0.0029)		(0.0032)	(0.0033)
(QFII+ QDII)			-0.0010	-0.0010	-0.0011	-0.0018**	-0.0025**	-0.0039***
			(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0010)	(0.0008)
(QFII+ QDII) * $SENT^{Total}_{A\text{-}H,t}$						-0.0019***	-0.0031***	-0.0026***
						(0.0002)	(0.0006)	(0.0006)
C	0.0219***	0.3955***	0.3691***	0.3333***	0.3548***	0.3272***	0.3410***	0.1685***
	(0.0026)	(0.0901)	(0.0978)	(0.0974)	(0.0949)	(0.0983)	(0.0962)	(0.0330)
Firm-specific fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Adj-R^2	0.9408	0.9431	0.9431	0.9431	0.9431	0.9433	0.9433	0.9777
Observations	7,102	6,990	6,990	6,990	6,990	6,990	6,990	6,990

Table 6 Regression tests of the price deviations of A- and H-shares on local and the global sentiment differences: Monthly data

The dependent variable is the average daily price deviation ($DPRICE_{i,t}$) between A- and H-shares for each company *i* over month *t*. The main explanatory variables $SENT^{Local}_{A-H,t}$ and $SENT^{Global}_{A-H,t}$ are the local and global sentiment differences between A-and H-share markets in year *t*, respectively. Control variables *SIZE*, *SHARE*, *AMI*, and *SD* are proxies for information asymmetry, differential demand elasticity, differential liquidity and differential risk aversion, respectively. Institutional reform variables include the following. D_{ex} is a dummy variable of exchange rate reform, which is equal to 1 for July 2005 onward, and zero otherwise. D_{reform} is a dummy variable, which equal to 1 since the month that the non-tradable shares for the firm became tradable, and zero otherwise. *QFII+QDII* is the total cumulative amount of the QFII and QDII schemes approved by the Chinese Administration of Foreign Exchange, where QFII started in August 2003 and QDII started in May 2007. Models 1 to 7 are estimated by cross-sectional fixed effect method and model 8 is estimated by OLS method. Robust standard errors are clustered by firm in parentheses. ***, ** and * represent significance at the 1%, 5% and 10% level, respectively.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
				Fixed-effect				OLS
DPRICE(-1)	0.9597***	0.9394***	0.9355***	0.9327***	0.9347***	0.9318***	0.9278***	0.9699***
	(0.0034)	(0.0048)	(0.0051)	(0.0055)	(0.0051)	(0.0053)	(0.0055)	(0.0062)
$SENT^{Local}_{A-H,t}$	0.0222***	0.0223***	0.0229***	0.0382***	0.0423***	0.0365***	0.0458***	0.0338***
	(0.0018)	(0.0020)	(0.0021)	(0.0034)	(0.0078)	(0.0029)	(0.0078)	(0.0068)
$SENT^{Global}_{A-H,t}$	-0.0062**	-0.0009	-0.0018	0.0033	0.0093***	0.0040	0.0108***	0.0076**
	(0.0024)	(0.0029)	(0.0029)	(0.0033)	(0.0032)	(0.0033)	(0.0034)	(0.0031)
SIZE		-0.0187***	-0.0166***	-0.0131***	-0.0156***	-0.0139***	-0.0155***	-0.0077***
		(0.0034)	(0.0038)	(0.0038)	(0.0037)	(0.0038)	(0.0040)	(0.0018)
SHARE		0.0591***	0.0514***	0.0576***	0.0516***	0.0586***	0.0567***	0.0158
		(0.0110)	(0.0159)	(0.0154)	(0.0157)	(0.0155)	(0.0157)	(0.0134)
SD		-0.0020	-0.0014	0.0004	-0.0013	-0.0006	-0.0006	0.0055
		(0.0041)	(0.0040)	(0.0040)	(0.0040)	(0.0040)	(0.0041)	(0.0041)
AMI		-0.0166***	-0.0171***	-0.0165***	-0.0174***	-0.0167***	-0.0169***	-0.0114***
		(0.0023)	(0.0024)	(0.0023)	(0.0024)	(0.0023)	(0.0023)	(0.0020)
D_{ex}			-0.0150**	-0.0178***	-0.0146**	-0.0107*	0.0469***	0.0435***
			(0.0059)	(0.0060)	(0.0059)	(0.0057)	(0.0097)	(0.0069)

Table 6 (*cont.*)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
				Fixed-effect				OLS
D_{ex}* $SENT_{A-H,t}^{Local}$				-0.0240***			-0.0589***	-0.0407***
				(0.0034)			(0.0074)	(0.0071)
D_{ex}* $SENT_{A-H,t}^{Global}$				-0.0131***			0.2415***	0.1419***
				(0.0040)			(0.0270)	(0.0281)
D_{reform}			0.0027	0.0019	-0.0025	-0.0012	-0.0019	0.0072
			(0.0093)	(0.0097)	(0.0099)	(0.0097)	(0.0109)	(0.0047)
D_{reform}* $SENT_{A-H,t}^{Local}$					-0.0205**		-0.0072	0.0009
					(0.0079)		(0.0082)	(0.0068)
D_{reform}* $SENT_{A-H,t}^{Global}$					-0.0121***		-0.0076	-0.0075*
					(0.0045)		(0.0050)	(0.0043)
QFII+ QDII			0.0003	0.0001	0.0001	-0.0010	-0.0079***	-0.0068***
			(0.0009)	(0.0008)	(0.0009)	(0.0008)	(0.0011)	(0.0009)
*(QFII+QDII)** $SENT_{A-H,t}^{Local}$						-0.0035***	0.0024***	0.0009
						(0.0004)	(0.0007)	(0.0007)
*(QFII+QDII)** $SENT_{A-H,t}^{Global}$						-0.0033***	-0.0323***	-0.0196***
						(0.0005)	(0.0035)	(0.0036)
C	0.0240***	0.4512***	0.4150***	0.3292***	0.3956***	0.3516***	0.3960***	0.1844***
	(0.0024)	(0.0846)	(0.0914)	(0.0914)	(0.0869)	(0.0919)	(0.0963)	(0.0387)
Firm-specific fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Adj-R^2	0.9419	0.9439	0.9440	0.9445	0.9440	0.9446	0.9448	0.9781
Observations	7,102	6,990	6,990	6,990	6,990	6,990	6,990	6,990

Table 7 Regressions of price deviations of A-and H-shares on total sentiment difference: Annual data

The dependent variable is the average daily price deviation ($DPRICE_{i,t}$) between A-and H-shares for each company *i* over year *t*. The main explanatory variables $SENT^{Total}_{A\text{-}H,t}$, *is* total sentiment difference between A-and H-share markets in year *t*. Control variables *SIZE, SHARE, AMI*, and *SD* are proxies for information asymmetry, differential demand elasticity, differential liquidity and differential risk aversion, respectively. *QFII+QDII* is the total cumulative amount of the QFII and QDII schemes approved by the Chinese Administration of Foreign Exchange, where QFII started in August 2003 and QDII started in May 2007. Models 1 to 7 are estimated by cross-sectional fixed effect method and model 8 is estimated by OLS method. Robust standard errors are clustered by firm in parentheses. ***, ** and * represent significance at the 1%, 5% and 10% level, respectively.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
				Fixed-effect				OLS
DPRICE(-1)	0.7394***	0.5649***	0.5493***	0.5499***	0.5512***	0.5524***	0.5647***	0.8316***
	(0.0249)	(0.0259)	(0.0297)	(0.0298)	(0.0296)	(0.0300)	(0.0282)	(0.0384)
$SENT^{Total}_{A\text{-}H,t}$	0.0716***	0.0611***	0.0516***	0.0571***	0.0637***	0.0695***	0.0630***	0.0705***
	(0.0079)	(0.0096)	(0.0098)	(0.0156)	(0.0139)	(0.0157)	(0.0156)	(0.0153)
SIZE		-0.1040***	-0.1232***	-0.1212***	-0.1190***	-0.1163***	-0.1152***	-0.0557***
		(0.0335)	(0.0354)	(0.0350)	(0.0351)	(0.0349)	(0.0323)	(0.0115)
SHARE		0.4891***	0.7490***	0.7559***	0.7582***	0.7503***	0.5359***	0.2046*
		(0.0873)	(0.1132)	(0.1145)	(0.1144)	(0.1154)	(0.1398)	(0.1135)
SD		-0.2290***	-0.1702***	-0.1669***	-0.1595**	-0.1567**	-0.1293**	-0.0031
		(0.0546)	(0.0581)	(0.0608)	(0.0600)	(0.0616)	(0.0581)	(0.0395)
AMI		-0.1357***	-0.1338***	-0.1338***	-0.1336***	-0.1336***	-0.1305***	-0.0871***
		(0.0252)	(0.0241)	(0.0241)	(0.0240)	(0.0239)	(0.0229)	(0.0144)
D_{ex}			-0.2531***	-0.2590***	-0.2425***	-0.2314***	0.2076**	0.4605***
			(0.0407)	(0.0465)	(0.0380)	(0.0391)	(0.0844)	(0.0812)
D_{ex}* $SENT^{Total}_{A\text{-}H,t}$				-0.0109			0.4013***	0.5180***
				(0.0179)			(0.0557)	(0.0526)

Table 7 (*cont.*)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
				Fixed-effect				OLS
D_{reform}			0.1552***	0.1610***	0.1472***	0.1637***	0.0021	-0.0297
			(0.0481)	(0.0514)	(0.0472)	(0.0499)	(0.0417)	(0.0325)
D_{reform}* $SENT_{A\text{-}H,t}^{Total}$					-0.0259*		-0.0770***	-0.1219***
					(0.0146)		(0.0151)	(0.0257)
(QFII+ QDII)			0.0210***	0.0212***	0.0207***	0.0166***	-0.0299**	-0.0525***
			(0.0050)	(0.0050)	(0.0050)	(0.0057)	(0.0113)	(0.0103)
(QFII+ QDII)* $SENT_{A\text{-}H,t}^{Total}$						-0.0051**	-0.0504***	-0.0623***
						(0.0024)	(0.0079)	(0.0079)
C	0.1570***	2.6627***	2.9050***	2.8496***	2.7880***	2.7265***	2.8361***	1.2717***
	(0.0189)	(0.8058)	(0.8267)	(0.8160)	(0.8181)	(0.8129)	(0.7546)	(0.2662)
Firm-specific fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Adj-R^2	0.6407	0.7414	0.7567	0.7564	0.7572	0.7581	0.7697	0.8911
Observations	568	563	563	563	563	563	563	563

Table 8 Regressions of price deviations of A-and H-shares on local and global sentiment differences: Annual data

The dependent variable is the average daily price deviation ($DPRICE_{i,t}$) between A-and H-shares for each company *i* over year *t*. The main explanatory variables $SENT^{Local}_{A-H,t}$ and $SENT^{Global}_{A-H,t}$ are local, and global sentiment differences, respectively, between A-and H-share markets in year *t*. Control variables *SIZE*, *SHARE*, *AMI*, and *SD* are proxies for information asymmetry, differential demand elasticity, differential liquidity and differential risk aversion, respectively. *QFII+QDII* is the total cumulative amount of the QFII and QDII schemes approved by the Chinese Administration of Foreign Exchange, where QFII started in August 2003 and QDII started in May 2007. Models 1 to 7 are estimated by cross-sectional fixed effect method and model 8 is estimated by OLS method. Robust standard errors are clustered by firm in parentheses. ***, ** and * represent significance at the 1%, 5% and 10% level, respectively.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
				Fixed-effect				OLS
DPRICE(-1)	0.7666***	0.6202***	0.6002***	0.6123***	0.6157***	0.6180***	0.5892***	0.8531***
	(0.0240)	(0.0318)	(0.0329)	(0.0334)	(0.0330)	(0.0336)	(0.0319)	(0.0367)
$SENT^{Local}_{A-H,t}$	0.1385***	0.1072***	0.1034***	0.1504***	0.1544***	0.1651***	0.1628***	0.1983***
	(0.0131)	(0.0145)	(0.0134)	(0.0251)	(0.0234)	(0.0247)	(0.0250)	(0.0235)
$SENT^{Global}_{A-H,t}$	-0.0423*	-0.0017	-0.0210	0.0057	0.0088	0.0145	0.0103	-0.0097
	(0.0232)	(0.0253)	(0.0266)	(0.0326)	(0.0321)	(0.0331)	(0.0330)	(0.0326)
SIZE		-0.1068***	-0.1271***	-0.1153***	-0.1148***	-0.1099***	-0.1186***	-0.0486***
		(0.0296)	(0.0310)	(0.0299)	(0.0293)	(0.0292)	(0.0280)	(0.0113)
SHARE		0.3570***	0.6425***	0.6584***	0.6405***	0.6056***	0.3871***	0.1445
		(0.0837)	(0.1009)	(0.1020)	(0.1010)	(0.1054)	(0.1253)	(0.0970)
SD		-0.1648***	-0.0917*	-0.0642	-0.0502	-0.0549	-0.0752	0.0714*
		(0.0515)	(0.0534)	(0.0606)	(0.0583)	(0.0587)	(0.0571)	(0.0410)
AMI		-0.1150***	-0.1131***	-0.1075***	-0.1063***	-0.1051***	-0.1030***	-0.0618***
		(0.0219)	(0.0205)	(0.0200)	(0.0195)	(0.0193)	(0.0192)	(0.0116)
D_{ex}			-0.2665***	-0.3012***	-0.2306***	-0.2054***	0.4836***	0.3945***
			(0.0370)	(0.0462)	(0.0325)	(0.0378)	(0.1107)	(0.0842)

Table 8 (*cont.*)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
				Fixed-effect				OLS
D_{ex}* $SENT^{Local}_{A-H,t}$				-0.0682***			0.1007**	0.2506***
				(0.0243)			(0.0414)	(0.0497)
D_{ex}* $SENT^{Global}_{A-H,t}$				-0.0855**			1.7020***	0.8907***
				(0.0405)			(0.2216)	(0.2165)
D_{reform}			0.1181***	0.1483***	0.0845**	0.1293***	-0.0394	-0.0589*
			(0.0422)	(0.0482)	(0.0368)	(0.0440)	(0.0384)	(0.0301)
D_{reform}* $SENT^{Local}_{A-H,t}$					-0.0784***		-0.0469***	-0.0697***
					(0.0226)		(0.0166)	(0.0172)
D_{reform}* $SENT^{Global}_{A-H,t}$					-0.1034***		-0.2371***	-0.3095***
					(0.0368)		(0.0466)	(0.0697)
QFII+ QDII			0.0268***	0.0281***	0.0261***	0.0153***	-0.0594***	-0.0414***
			(0.0043)	(0.0043)	(0.0041)	(0.0051)	(0.0136)	(0.0112)
(QFII+ QDII)$SENT^{Local}_{A-H,t}$						-0.0128***	-0.0321***	-0.0451***
						(0.0030)	(0.0068)	(0.0071)
(QFII+QDII)$SENT^{Global}_{A-H,t}$						-0.0158***	-0.1928***	-0.0938***
						(0.0047)	(0.0277)	(0.0269)
C	0.1355***	2.7127***	2.9587***	2.6302***	2.6198***	2.5301***	2.9609***	1.0661***
	(0.0184)	(0.7176)	(0.7283)	(0.7016)	(0.6875)	(0.6858)	(0.6651)	(0.2711)
Firm-specific fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Adj-R^2	0.6920	0.7607	0.7785	0.7838	0.7862	0.7885	0.7999	0.9072
Observations	568	563	563	563	563	563	563	563

Table 9 Impact of reforms on the marginal effects of sentiment differences on the price deviations of A- and H-shares

Panel A reports the marginal effects of total, local and global sentiment differences before and after institutional reforms. $SENT^{Total}_{A\text{-}H,t}$, $SENT^{Local}_{A-H,t}$, and $SENT^{Global}_{A-H,t}$ are the total, local, and global sentiment differences, respectively, between the A-and H-share markets in year *t*. D_{ex}, *and* D_{reform} are the exchange rate reform dummy and the split share reform dummy, respectively. The columns of *QFII+QDII* show the effects of QFII and QDII evaluated at zero and the average amount of the sample period, respectively. For Panel B, the marginal effects of sentiment are measured with the amount of QFII and QDII at zero and at the sample average, respectively. Robust standard errors clustered by firm are in parentheses. ***, ** and * represent significance at the 1%, 5% and 10% level, respectively.

Panel A: Monthly data

	D_{ex}		D_{reform}		*QFII+QDII*	
	Prior to reform	After reform	Prior to reform	After reform	Zero	Sample average
$SENT^{Total}_{A\text{-}H,t}$	0.0163***	0.0088***	0.0234***	0.0118***	0.0179***	0.0090***
	(0.0019)	(0.0015)	(0.0026)	(0.0015)	(0.0018)	(0.0013)
$SENT^{Local}_{A-H,t}$	0.0382***	0.0143***	0.0423***	0.0218***	0.0365***	0.0200***
	(0.0034)	(0.0013)	(0.0078)	(0.0020)	(0.0029)	(0.0015)
$SENT^{Global}_{A-H,t}$	0.0033	-0.0098***	0.0093***	-0.0028	0.0040	-0.0117***
	(0.0033)	(0.0037)	(0.0032)	(0.0032)	(0.0033)	(0.0028)

Panel B: Annual data

	D_{ex}		D_{reform}		*QFII+QDII*	
	Prior to reform	After reform	Prior to reform	After reform	Zero	Sample average
$SENT^{Total}_{A\text{-}H,t}$	0.0571***	0.0462***	0.0637***	0.0378***	0.0695***	0.0430***
	(0.0156)	(0.0104)	(0.0139)	(0.0101)	(0.0157)	(0.0086)
$SENT^{Local}_{A-H,t}$	0.1504***	0.0822***	0.1544***	0.0760***	0.1651***	0.0990***
	(0.0251)	(0.0096)	(0.0234)	(0.0100)	(0.0247)	(0.0116)
$SENT^{Global}_{A-H,t}$	0.0057	-0.0798***	0.0088	-0.0946***	0.0145	-0.0674***
	(0.0326)	(0.0284)	(0.0321)	(0.0266)	(0.0331)	(0.0227)

Table 10 Cross-sectional analysis on the relation between sentiment differences and price deviations of A- and H-shares: Annual data

This table reports how firm characteristics affect the relation between sentiment differences and price deviations of A- and H-shares. We define a dummy variable, D_{fc}, which equals one if firms are more are affected by sentiment, and zero otherwise. Firm characteristics include firm size (*ASSET*), asset tangibility (*TANGIBILITY*), firm profitability (*ROA*), institutional ownership (*INSTP*) and dividend payment (*DIVIP*). We divide the firm sample into four groups according to these firm characteristics each year. *F* equals one (zero) if *ASSET, TANGIBILITY, ROA* or *INSTP* is in the lowest (highest) quintile. If a firm doesn't pay dividends, *F* equals one, and zero otherwise. Our regression model is as following.

$$DPRICE_{i,t} = \beta_0 + \beta_1 DPRICE_{i,t-1} + \beta_2 SENT_{A\text{-}H,t} + \beta_3 D_{fc} * SENT_{A\text{-}H,t} + \beta_4 SIZE_{i,t} + \beta_5 SHARE_{i,t} + \beta_6 AMI_{i,t} + \beta_7 SD_{i,t} + \beta_8 D_{ex} + \beta_9 D_{reform} + \beta_{10}(QFII + QDII) + \varepsilon_{i,t}.$$

where $DPRICE_{i,t}$ is price deviations of A- and H-shares, $SENT_{A\text{-}H,t}$ is total (local and global) sentiment difference, *SIZE*, *SHARE*, *AMI*, and *SD* are proxies for information asymmetry, differential demand elasticity, differential liquidity and differential risk aversion, respectively. *Dex* is a dummy variable of exchange rate reform, which is equal to 1 for 2005 onward, and zero otherwise. *Dreform* is a dummy variable, which equal to 1 since the year that the non-tradable shares for the firm became tradable, and zero otherwise. *QFII+QDII* is the total cumulative amount of the QFII and QDII schemes approved by the Chinese Administration of Foreign Exchange, where QFII started in August 2003 and QDII started in May 2007. All the models are estimated by the cross-sectional fixed-effect method and Robust standard errors clustered by firm in parentheses. ***, ** and * represent significance at the 1%, 5% and 10% level, respectively.

$SENT_{A\text{-}H,t}^{Total}$	$F^* SENT_{A\text{-}H,t}^{Total}$	$SENT_{A-H,t}^{Local}$	$F^* SENT_{A-H,t}^{Local}$	$SENT_{A-H,t}^{Global}$	$F^* SENT_{A-H,t}^{Global}$	Firm-specific fixed effects
D_{fc} =1 if *ASSET* is in the lowest quintile						
0.0436***	0.0283*	0.0958***	0.0273	-0.0336	0.0439	Yes
(0.0109)	(0.0154)	(0.0145)	(0.0249)	(0.0288)	(0.0520)	
D_{fc} =1 if *TANGIBILITY* is in the lowest quintile						
0.0597***	-0.0221	0.1083***	0.0080	-0.0042	-0.0570	Yes
(0.0113)	(0.0200)	(0.0160)	(0.0243)	(0.0320)	(0.0461)	
D_{fc} =1 if *ROA* is in the lowest quintile						
0.0581***	0.0069	0.1014***	0.0061	-0.0158	0.0330	Yes
(0.0097)	(0.0182)	(0.0161)	(0.0201)	(0.0284)	(0.0475)	
D_{fc} =1 if *INSTP* is in the lowest quintile						
0.0339***	0.0043	0.0708***	-0.0094	-0.0753**	0.0604	Yes
(0.0100)	(0.0164)	(0.0148)	(0.0198)	(0.0353)	(0.0513)	

Table 10 (contd.)

$SENT^{Total}_{A\text{-}H,t}$	$F^{*}\,SENT^{Total}_{A\text{-}H,t}$	$SENT^{Local}_{A-H,t}$	$F^{*}\,SENT^{Local}_{A-H,t}$	$SENT^{Global}_{A-H,t}$	$F^{*}\,SENT^{Global}_{A-H,t}$	Firm-specific fixed effects
D_{fc} =1 if *DIVIP* equals zero						
0.0388***	0.0461***	0.0948***	0.0390	-0.0545*	0.1042**	Yes
(0.0115)	(0.0160)	(0.0140)	(0.0252)	(0.0304)	(0.0504)	

Table 11 Regression tests of price deviations of A-and H-shares on lagged sentiment differences

The dependent variable is the average daily price deviation ($DPRICE_{i,t}$) between A- and H-shares for each company *i* over month or year *t*. The main explanatory variables $SENT^{Total}_{A\text{-}H,t}$, $SENT^{Local}_{A-H,t}$ and $SENT^{Global}_{A-H,t}$ are the total, local and global sentiment differences, respectively, between A-and H-share markets in year *t*. We include control variables *SIZE, SHARE, AMI* and *SD*, which are proxies for information asymmetry, differential demand elasticity, differential liquidity and differential risk aversion, respectively. Institutional reform variables include the following. D_{ex} is a dummy variable of exchange rate reform, which equal 1 for July 2005 onward, and zero otherwise. D_{reform} is a dummy variable which equal 1since the month that the non-tradable shares for the firm became tradable, and zero otherwise. *QFII+QDII* is the total cumulative amount of the QFII and QDII schemes approved by the Chinese Administration of Foreign Exchange, where QFII started in August 2003 and QDII started in May 2007. For simplicity, we omit the coefficients of control and institutional variables. All the models are estimated by the cross-sectional fixed-effect method and Robust standard errors clustered by firm in parentheses. ***, ** and * represent significance at the 1%, 5% and 10% level, respectively.

	t–1	*t*–2	*t*–3	*t*–4	*t*–5	*t*–6
Panel A: Total sentiment difference: Monthly data						
$SENT^{Total}_{A\text{-}H,t}$	-0.0017	-0.0065***	0.0033***	-0.0045***	0.0008	-0.0021**
	(0.0010)	(0.0006)	(0.0008)	(0.0014)	(0.0008)	(0.0010)
Firm-specific fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj-R^2	0.9420	0.9416	0.9422	0.9446	0.9513	0.9464
Observations	6,948	6,872	6,751	6,604	6,422	6,218
Panel B: Local and global sentiment differences: Monthly data						
$SENT^{Local}_{A-H,t}$	-0.0006	0.0037***	0.0019	-0.0031**	-0.0095***	-0.0171***
	(0.0013)	(0.0012)	(0.0012)	(0.0014)	(0.0011)	(0.0016)
$SENT^{Global}_{A-H,t}$	-0.0041*	-0.0246***	0.0061***	-0.0071**	0.0133***	0.0098***
	(0.0021)	(0.0023)	(0.0020)	(0.0030)	(0.0024)	(0.0021)
Firm-specific fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj-R^2	0.9420	0.9421	0.9422	0.9446	0.9518	0.9472
Observations	6,948	6,872	6,751	6,604	6,422	6,218

Table 11 (contd.)

	t–1	*t*–2	*t*–3	*t*–4	*t*–5	*t*–6
Panel C: Total sentiment difference: Annual data						
$SENT^{Total}_{A\text{-}H,t}$	0.0227***	-0.0563***	0.0089	-0.0213**	-0.0019	-0.0153*
	(0.0064)	(0.0075)	(0.0058)	(0.0094)	(0.0075)	(0.0077)
Firm-specific fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj-R^2	0.7453	0.7657	0.7480	0.7536	0.7551	0.7837
Observations	563	560	554	543	530	514
Panel D: Local and global sentiment differences: Annual data						
$SENT^{Local}_{A-H,t}$	0.0510***	0.0197**	0.0113*	-0.0886***	-0.0644***	-0.1037***
	(0.0094)	(0.0079)	(0.0065)	(0.0087)	(0.0097)	(0.0138)
$SENT^{Global}_{A-H,t}$	-0.0139	-0.1743***	0.0046	0.0687***	0.0706***	0.0532***
	(0.0127)	(0.0155)	(0.0159)	(0.0225)	(0.0211)	(0.0138)
Firm-specific fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj-R^2	0.7507	0.7914	0.7476	0.7736	0.7703	0.8144
Observations	563	560	554	543	530	514

Table 12 Regression tests of price deviations of A-and H-shares by industry on sentiment differences

The dependent variable is the average daily price deviation ($DPRICE_{i,t}$) between A- and H-shares for each company *i* over month *t*. The main explanatory variables $SENT^{Total}_{A\text{-}H,t}$, $SENT^{Local}_{A-H,t}$ and $SENT^{Global}_{A-H,t}$ are the total, local and global sentiment differences, respectively, between A- and H-share markets in year *t*. Control variables *SIZE*, *SHARE*, *AMI* and *SD* are proxies for information asymmetry, differential demand elasticity, differential liquidity and differential risk aversion, respectively. For simplicity, we don't report control variables. All the models are estimated by the cross-sectional fixed-effect method and Robust standard errors clustered by firm in parentheses. ***, ** and * represent significance at the 1%, 5% and 10% level, respectively.

Industry	*C*	*DPRICE(-1)*	$SENT^{Total}_{A\text{-}H,t}$	$SENT^{Local}_{A-H,t}$	$SENT^{Global}_{A-H,t}$	Firm-specific fixed effects	Adj-R^2	Firm number	Observations
Manufacturing	0.2990**	0.9386***	0.0144***			Yes	0.9483	25	3,857
	(0.1191)	(0.0065)	(0.0019)						
Manufacturing	0.3983***	0.9358***		0.0285***	0.0006	Yes	0.9493	25	3,857
	(0.1120)	(0.0055)		(0.0022)	(0.0035)				
Transportation	0.3970*	0.9532***	0.0120**			Yes	0.9405	11	1,124
	(0.2096)	(0.0130)	(0.0038)						
Transportation	0.4016*	0.9572***		0.0131***	0.0083	Yes	0.9405	11	1,124
	(0.2027)	(0.0134)		(0.0035)	(0.0065)				
Construction	-0.1975	0.9034***	0.0011			Yes	0.7754	3	156
	(1.4858)	(0.0184)	(0.0035)						
Construction	1.2324	0.7699***		0.0279*	-0.0706*	Yes	0.8067	3	156
	(0.6847)	(0.0524)		(0.0071)	(0.0203)				
Mining	0.4915	0.9294***	0.0068*			Yes	0.9281	7	608
	(0.4722)	(0.0141)	(0.0029)						
Mining	0.6461	0.9258***		0.0141**	-0.0121***	Yes	0.9290	7	608
	(0.4180)	(0.0182)		(0.0047)	(0.0014)				

Table 12 (contd.)

Industry	*C*	*DPRICE(-1)*	$SENT^{Total}_{A\text{-}H,t}$	$SENT^{Local}_{A-H,t}$	$SENT^{Global}_{A-H,t}$	Firm-specific fixed effects	R^2	Firm number	Observations
Utility	0.7237	0.9440***	0.0159**			Yes	0.9206	4	507
	(0.5255)	(0.0130)	(0.0039)						
Utility	0.6193	0.9403***		0.0217**	0.0080	Yes	0.9210	4	507
	(0.5191)	(0.0114)		(0.0047)	(0.0098)				
Finance	0.1474	0.8774***	0.0068*			Yes	0.8985	11	664
	(0.3597)	(0.0208)	(0.0035)						
Finance	0.0736	0.8727***		0.0120***	-0.0144**	Yes	0.9003	11	664
	(0.3361)	(0.0192)		(0.0035)	(0.0061)				

Table 13 Robustness check

This table reports the results of robustness check. The dependent variables of Panel A to Panel F are the average daily price deviation ($DPRICE_{i,t}$) between A- and H-shares for each company *i* over month *t*. The dependent variable of Panel A is the first order difference in $DPRICE_{i,t}$. The main explanatory variables $SENT^{Total}_{A\text{-}H,t}$, $SENT^{Local}_{A-H,t}$ and $SENT^{Global}_{A-H,t}$ are the total, local and global sentiment differences, respectively, between A- and H-share markets in year *t*. Control variables *SIZE*, *SHARE*, *AMI* and *SD* are proxies for information asymmetry, differential demand elasticity, differential liquidity and differential risk aversion, respectively. Panel A, B and G also include three institutional variables, which are exchange rate system reform (D_{ex}), split share structure reform (D_{reform}), and QFII and QDII schemes. For simplicity, we don't report control and institutional variables. All the models are estimated by the cross-sectional fixed-effect method and Robust standard errors clustered by firm in parentheses. ***, ** and * represent significance at the 1%, 5% and 10% level, respectively.

	C	*DPRICE(-1)*	$SENT^{Total}_{A\text{-}H,t}$	$SENT^{Local}_{A-H,t}$	$SENT^{Global}_{A-H,t}$	Firm-specific fixed effects	R^2	Observations
Panel A: P/E ratio as total investor sentiment proxy								
	0.2476***	0.9428***	0.0042***			Yes	0.9424	6990
	(0.0865)	(0.0059)	(0.0015)					
	0.2310**	0.9440***		0.0039**	-0.0764*	Yes	0.9424	6990
	(0.0876)	(0.0062)		(0.0016)	(0.0393)			
Panel B: Excluding finance industry								
	0.3554***	0.9412***	0.0135***			Yes	0.9440	6326
	(0.0961)	(0.0056)	(0.0015)					
	0.4044***	0.9365***		0.0244***	-0.0010	Yes	0.9449	6326
	(0.0896)	(0.0052)		(0.0021)	(0.0030)			
Panel C: First order difference in price deviations of A-and H-shares								
	0.1526**	0.1104***	0.0072***			Yes	0.0356	6927
	(0.0587)	(0.0105)	(0.0011)					
	0.1795***	0.1000***		0.0150***	-0.0043*	Yes	0.0436	6927
	(0.0545)	(0.0100)		(0.0014)	(0.0023)			

Table 13 (contd.)

	C	*DPRICE(-1)*	$SENT^{Total}_{A\text{-}H,t}$	$SENT^{Local}_{A-H,t}$	$SENT^{Global}_{A-H,t}$	Firm-specific fixed effects	R^2	Observations
Panel D: 08/1993-06/2003								
	-0.1046	0.9147***	0.0157***			Yes	0.9182	1776
	(0.3411)	(0.0112)	(0.0030)					
	-0.2792	0.8962***		0.0481***	0.0093*	Yes	0.9215	1776
	(0.3800)	(0.0107)		(0.0050)	(0.0047)			
Panel E: 07/2003-12/2012								
	0.1253	0.8898***	0.0130***			Yes	0.8554	5214
	(0.0923)	(0.0072)	(0.0013)					
	0.1333	0.8897***		0.0189***	-0.0067**	Yes	0.8570	5214
	(0.0903)	(0.0075)		(0.0013)	(0.0029)			
Panel F: 08/1993-12/2006								
	0.4246**	0.9412***	0.0166***			Yes	0.9508	2974
	(0.1640)	(0.0073)	(0.0021)					
	0.4347***	0.9376***		0.0350***	0.0068*	Yes	0.9519	2974
	(0.1555)	(0.0067)		(0.0032)	(0.0036)			
Panel G: 01/2007-12/2012								
	0.3792**	0.8552***	0.0078***			Yes	0.8145	4016
	(0.1451)	(0.0092)	(0.0017)					
	0.4191***	0.8479***		0.0144***	-0.0199***	Yes	0.8175	4016
	(0.1443)	(0.0099)		(0.0015)	(0.0044)			