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**SENTIMENT EFFECTS ON CHINESE SHARE PRICES AND SAVINGS DEPOSITS:
THE 2003-2007 EXPERIENCE**

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Abstract: This paper examines the importance of sentiment effects on asset allocation decisions in mainland China and beyond. Rising stock market sentiment is found to negatively and significantly impact Chinese savings deposit growth over the 2003-2007 period. Investor sentiment also exerted consistently significant effects on the discounts attached to Chinese B-shares, H-shares and ADRs by foreign investors. Although the sample period is limited by availability of the sentiment data, the indicated effects remain most robust when controlling for relative stock market performance, liquidity levels, expected exchange rate movements, and such 'indirect' sentiment measures as market and firm-specific price-earnings ratios.

Keywords: China; savings deposits; share prices; sentiment; Shanghai; Hong Kong; ADRs

JEL Classifications: O16; G15

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Introduction

Mainland China's stock markets remained moribund in the early part of the new millennium, trending downward from 2001-2005 amid the fallout from a 2001 government plan to sell-off a large portion of its ownership in China's state-owned enterprises (SOEs).¹ Local share prices soared during 2006-2007, however, with the Shanghai A-share index than doubling in 2006 and rising by a further 96% in 2007. The combined stock market capitalization for Shanghai and Shenzhen reached RMB 26 trillion, up from just RMB 3.2 trillion at the end of 2005.² Rising stock market sentiment helps explain an accompanying, quite unprecedented, slowing of savings deposits growth in China in 2006-2007. Outright declines were registered in a number of months and Chinese savings deposits fell by RMB 7.6 billion during October 2006 alone. As this trend continued into 2007, the People's Bank cited enthusiasm for the stock market as the major reason for the decline in deposits (*People's Daily Online*, (January 5, 2007)). Indeed, over the first four months of 2007, more than RMB 70 billion was transferred from savings accounts into the stock market (*China Securities Journal*, May 14, 2007).³

This same rise in investor sentiment also coincided with rising discounts attached by foreign investors to the share prices of mainland Chinese companies. In addition to the A-share market for local Chinese investors, B-shares for foreign investors have been trading in US dollars in Shanghai and in Hong Kong dollars in Shenzhen since 1992.

¹ For more details on the evolution of China's financial markets, see, for example, Wong (2006), Chan, Fung and Liu (2007) and Burdekin (2008, Chapter 8).

² This reflects greatly expanded numbers of firm listings as well as share price increases. The market growth numbers are based on Shanghai and Shenzhen A-share Index data retrieved from Bloomberg.

³ This represented a sharp break from past practice, whereby most Chinese citizens had ignored the stock market and simply deposited their money in savings accounts. One rationale for the People's Bank's successive interest rate hikes during 2007 was, in fact, to slow the flow of funds from households and corporations into the stock market.

Many Chinese firms have also obtained listings in offshore markets, principally in the form of H-shares listed in Hong Kong and American Depositary Receipts (ADRs) in the United States. Like the B-shares, H-shares are technically equivalent to A-shares and have identical ownership rights and dividends. ADRs are strictly speaking certificates of ownership held by a third party, often representing multiple shares of the underlying asset – and with all dividends payable in US dollars. Like the B-shares and H-shares, the ADRs remain theoretically equivalent to A-shares, however, insofar as they derive their value from the same cash flows and discount rates, and have the same ownership rights.

Although it is not unusual for B-shares, H-shares and ADRs to trade at a discount to the firm's corresponding A-shares, these discounts became especially wide during 2006-2007 – suggesting that the Chinese companies were either being increasingly undervalued by foreign investors or increasingly overvalued by local investors. Whereas past research has addressed these discounts, often citing varying transaction costs and exchange rate expectations in addition to possible sentiment effects, no such analysis has incorporated direct evidence on sentiment levels.⁴ The present paper utilizes People's Bank of China survey data on investor sentiment to better assess the potential importance of this factor in explaining both the withdrawals from savings deposits and the rising discounts attached to Chinese companies by foreign investors.

Investor Sentiment and the Draining of China's Savings Deposits

The People's Bank has been surveying households' investment preferences on a quarterly basis since September 2003. In the last quarter of 2007 responses listing stocks

⁴ On this literature, see, for example, Arquette, Brown and Burdekin (2008) and the references cited therein.

and funds as their first investment choice reached a record high, when 44.3% “believed that it pays to invest in the stock market” (*People’s Daily Online*, October 15, 2007). Although negative real interest rates in the face of China’s rising inflation during 2007-2008 undoubtedly added to the relative attractiveness of the stock market over savings deposits, savings accounts had begun to dwindle even while real interest rates remained positive through December 2006. Figure 1 shows the relationship between savings deposit growth and Chinese investor sentiment. While the growth of savings deposits is very volatile, a negative relationship with the investor sentiment series appears to be present over the 2003-2007 period.

In the People’s Bank’s investor sentiment surveys, 20,000 households are questioned from large, medium and small cities throughout the People’s Republic. With the surveys being compiled throughout each quarter, growth between quarters seems to be a reasonable basis for estimating monthly sentiment levels. In order to control for other factors besides investor sentiment, data on base money growth (M0), savings deposit levels, savings deposit rates, per-capita monthly income, inflation, and the Shanghai A index were drawn from the Great China Database (<http://www.finasia.biz/tejonline/tejonline.htm>). As per-capita income was only reported on a quarterly basis in 2007, monthly figures for that year were derived by linear interpolation. The real one-year savings deposit rate was calculated by subtracting current period inflation from the current period one-year rate on savings deposits. Savings deposits, money growth, per-capita income, and the Shanghai A Index were all converted into log growth rates for the regression analysis so as to assure stationarity. The basic regression model is as follows:

$$\text{Growth_of_Savings_Deposits}_i = \alpha_i + \beta_1 \text{Growth_of_M0}_i + \beta_2 \text{Growth_of_Per-Capita_Monthly_Income}_i + \beta_3 \text{Real_Savings_Deposit_Rate}_i + \beta_4 \text{Investor_Sentiment}_i + \beta_5 \text{Lagged_Growth_of_Savings_Deposits}_i + 11 \text{ seasonal dummies}^5 \quad (1)$$

Investor sentiment measures the percent of people that list stocks or funds as their first investment choice, so as investor sentiment increases more people prefer the stock market over other options like savings accounts. The growth of M0 was used as an independent variable in our basic regression equation because the broader money supply measure, M2, includes time deposits, our dependent variable. Other controls were added in subsequent regressions, including growth in the Shanghai A index, a “price satisfaction” series drawn from further People’s Bank surveys, and a time trend. The price satisfaction index simply reflects people’s stated level of satisfaction with current prices. The higher the index, the greater the satisfaction – and the less those surveyed appear to be worrying about inflation.

The regression results reported in Table 1 suggest that, after controlling for the negative real interest rate and seasonal trends, there is a pronounced negative relationship between the growth in savings deposits and Chinese investor sentiment that is significant at the 95% level. This is consistent with the premise that, as local Chinese became more enamored with the stock market, they substituted away from their traditional concentration in savings accounts. The growth in M0 itself has a consistent positive relationship with savings deposit growth, and is significant at the 99% level. This is to be expected given that as the money supply in the economy expands more money is available for all uses, including savings deposits. Growth in per capita income has no

⁵ The regression has 45 observations after adjusting for the lagged dependent variable, leaving 28 degrees of freedom.

significant relationship with savings deposits over the sample period and the real interest rate also is not significant.

The relationship between investor sentiment and growth in savings deposits remains negative and statistically significant as we control for additional factors. In column (2), which adds a time trend to the specification, the significance of investor sentiment falls slightly but remains above 90%. The growth in the Shanghai A-share index arguably was one of the main drivers behind the recent reduction in savings deposits. Nevertheless, column (3) reveals that, while the growth in the Shanghai A index does have a negative coefficient, it is insignificant and does not change the significance of investor sentiment. This suggests that the recent change in individuals' investment preferences may transcend the strong performance of the stock market in being the primary driver of the outflow of funds from savings deposits.⁶ Column (4) includes another sentiment measure, Price Satisfaction, which actually ends up increasing the significance of stock propensity by a small amount.

Sentiment Effects on Foreign vs. Domestic Valuations of Chinese Companies

Investor sentiment has often been assessed on the basis of closed end funds, for which market prices are free to diverge from the net asset value of the underlying shares as demand for the fixed quantity of outstanding shares rises and falls (see, for example, Zweig, 1973; DeLong et al., 1990; Lee, Shleifer, and Thaler, 1991; Neal and Wheatley, 1998; Baker and Wurgler, 2006). Bodurtha, Kim, and Lee (1995) specifically study

⁶ Re-running the regression with investor excluded (not shown) not surprisingly makes the growth in the Shanghai A index appear more significant than in column (4) – and its effects will be exaggerated in studies that do not take account of the additional role played by investor sentiment.

country closed-end funds that invest purely in securities traded in a single foreign country. They find that the share prices for such country-specific closed-end funds are subject to a US specific risk effect even though this factor has no direct bearing on the net asset value (NAV) of the portfolio. This phenomenon cannot be explained with traditional index models, and suggests that changing US sentiment may be the underlying determinant. The ability of investor sentiment to predict returns is still controversial throughout finance, however (see, for example, Chen, Kan, and Miller, 1993; Elton, Martin, and Busse, 1998).

Figure 2 shows that rising investor sentiment in mainland China was accompanied by a rising discount attached to the one US closed end fund investing in Chinese A-shares, the Morgan Stanley China A Share Fund (stock symbol CAF). This fund holds a basket of Shanghai and Shenzhen A-shares and trades on the New York Stock Exchange. Although it only began operations on September 28, 2006, Figure 2 shows that, consistent with the H-share and ADR trading patterns analyzed in more detail below, it reveals a widening discount through the end of 2007. Indeed, after first trading at a premium to NAV, the market price falls behind the NAV until the closed end fund shares are eventually seen trading at an approximate 30% discount to net asset value.⁷

Evidence of foreign investors valuing Chinese securities differently from local Chinese investors has, in fact, been present from the outset. Bailey's (1994) analysis of the large discounts attached to B-shares relative to A-shares found that the divergence reflected, in part, linkages between B-share valuations and US and Hong Kong market indices – as well as US Treasury rates. Similarly, H-share valuations have been found to

⁷ Evidencing continued extreme volatility, it subsequently returned to a premium in July 2008.

be influenced by Hong Kong market developments and ADR valuations influenced by US market developments (see, for example, Wang and Jiang, 2003; Suh, 2003). Sentiment is certainly one plausible explanation for such discrepancies, with more positive sentiment on the part of local Chinese investors potentially fueling the observed B-share, H-share and ADR discounts. Such sentiment effects may well have become particularly important in 2006-2007 as the surge in the Shanghai A-share market was accompanied by record highs in the People's Bank's investor sentiment series and weakened, and at times negative, savings deposit growth. This is also consistent with the very sharp increase in the closed end fund discount detailed in Figure 2 as the Shanghai market peaked during 2007.

Many other factors besides sentiment could play a role in explaining such discounts, however. Changing exchange rate expectations must be taken into account because the different share listings are denominated in different currencies. Investors have, on average, expected the renminbi to appreciate against the U.S. dollar since 2002.⁸ The expected appreciation increased after 2005 as China allowed more flexibility in its currency and the dollar began weakening worldwide (see Figure 3). Arquette, Brown and Burdekin (2008) found an important role for this factor combined with significant effects associated with indirect sentiment measures – as represented by relative price-earnings ratios and firm specific factors. Other factors likely affecting the discounts are liquidity and turnover levels for the different share classes (Chen, Lee and Rui, 2001; Mei, Scheinkman and Xiong, 2005).⁹

⁸ The RMB/\$US forward market is non-deliverable as capital controls prevent conversion into renminbi.

⁹ Although information asymmetries between local and foreign investors potentially play a role as well, evidence on this point remains mixed and generally inconclusive (Chui and Kwok, 1998; Gao and Tse,

B-share, H-share and ADR Data, 2003-2007

A negative graphical relationship between investor sentiment and the H-share and ADR discounts can be observed in Figures 4 and 5.¹⁰ In both graphs, when local investor sentiment fell in 2004, the discounts shrank, and when sentiment started to rise rapidly in 2006, the discounts began to expand, suggesting a testable, negative relationship between sentiment and the discount. Figure 6 shows an apparently positive relationship between investor preferences and the B-share discount, however. This could be explained by other factors influencing the discount, such as the rapid growth of the Shanghai B Index. Figures 7 and 8 show the historical prices and trading volumes for the Shanghai A- and B-share indices. The rapid growth in the B-share index after 2005 should have a positive influence on the discount, i.e. making the discount smaller, because securities are often highly correlated with the market in which they trade.¹¹

We utilize stock price data drawn from Bloomberg in order to empirically examine the factors determining the B-share, H-share and ADR discounts over the 2003-2007 sample period for which we have the People's Bank's investor sentiment series. Although A- and B-shares are traded in both Shanghai and Shenzhen, our empirical analysis of the A-share discounts focuses entirely on the much larger Shanghai market.

2001; Chen, Lee and Rui, 2001). The existence of capital controls limiting mainland Chinese investors' ability to access offshore markets is yet another factor. It is not obvious how great a barrier this has been in practice – with Girardin and Liu (2007, p. 368) arguing, for example, that “[c]apital flight is already used by Chinese residents to buy shares in Hong Kong ...”

¹⁰ A larger discount implies a more negative number.

¹¹ It is also important to note the drastic difference in trading volumes between the A-share market and the B-share market. While trading volumes for the B-shares spiked in June 2001 and June 2007 around 18 billion shares, trading volumes for the A-shares spiked around 870 billion shares in June 2007 and A-share volumes were generally over 50 times that of B-Shares throughout the sample. These drastic differences in trading volumes could also affect the B-share discount so they need to be controlled for before any definitive relationship between the discount and investor sentiment can be established.

The set of Chinese ADRs included in this study builds upon those employed by Suh (2003) and Arquette, Brown, and Burdekin (2008)¹² Although the latest lists of Chinese ADRs are extensive, with over 90 firms on US exchanges by 2008, many of these firms had only been listed since 2007 – and their often being traded only over-the-counter limited data availability on Bloomberg. These limitations restrict the sample to only 13 Chinese ADRs.

The Shanghai B-share Index is comprised of 54 firms, all of which have corresponding A-share listings. Since B-shares are traded less frequently than A-shares, the lowest weighted firms in the B-share index were not included in order to minimize the effect of extreme lack of liquidity on B-share discounts. Also, some firms had limited data availability on Bloomberg or were not listed on both exchanges for the whole sample period; therefore, only 34 firms from the B-share index are included. The 13 ADRs used also have corresponding H-share listings and are included in the H-share sample. Additional H-shares listed in previous studies were added to the sample along with some of the top weighted firms in the Hang Seng China Enterprises Index. Altogether 29 Chinese firms are included in the H-share sample. Four of these 29 firms were listed in the last 18 months, however, thereby overweighting the second half of the sample. In an effort to control for this potential bias, those four firms are excluded from the H-share regression analysis. Table 2 provides a full list of the firms included in the empirical testing.

¹² A Google search for “Chinese ADRs” returned two sites that had extensive lists of Chinese ADRs: http://stocksabroad.com/modules.php?name=China_ADR and http://www.site-by-site.com/adr/asia/adr_chn.htm. Following Kutan and Zhou (2006), we also utilized www.adr.com.

A-share, B-share, H-share, and ADR historical monthly prices for each company were obtained from Bloomberg from September 30, 2003 through December 31, 2007. The data range and frequency were both limited by the availability of the People's Bank's investor sentiment surveys. Data were also collected on trading volumes, shares outstanding, dividends, market capitalization, bid-ask spreads, and P/E ratios for each company. These factors all potentially affect the pricing of the securities and have been used in previous studies as determinants of the discount. The discount for each security was calculated as follows:

$$\text{Discount} = (\text{Price in Foreign Market} / \text{Implied Price of Underlying Security}) - 1$$
where the "implied price" is the A-share price converted into the foreign currency.¹³

Persistent discounts or premiums should be expected when considering transaction costs, exchange rate expectations, and convertibility restrictions. The 12 month non-deliverable RMB/\$US forward contract and current RMB/\$US exchange rates were collected from Bloomberg. Throughout the sample period, the RMB/\$US forward rate was less than the current exchange rate, indicating that investors expected the renminbi to appreciate. Even though the RMB/\$US dollar forward market is "non-deliverable," prices still represent the difference between the forward rate and the expected future spot rate. The expected exchange rate change is calculated as $(\text{Spot Rate} - \text{Forward Rate}) / (\text{Spot Rate})$. As shown in Figure 3, expected appreciation first peaked in 2005 around 6%, just before China changed its currency regime to a managed float. In

¹³ In the case of ADRs, we also adjust for the fact that they often represent a claim on more than one underlying A-share. Some of the ADRs are actually claims on the firm's H-shares and not the A-shares. Given that H-shares derive their value from A-shares and US investors cannot convert ADRs into A-shares due to capital controls, we still calculate the ADR discount relative to the A-shares, however (as in Arquette, Brown and Burdekin, 2008).

November 2007, the expected degree of appreciation peaked at 10.3% as the dollar weakened world-wide. When investors expect currency appreciation, they would likely place more value on the security trading in US dollars as it represents a claim on increasingly valuable RMB-denominated assets – thereby tending to shrink the discount.

Differences in liquidity can also lead to discounts or premiums. When a security is less liquid, fewer investors will be available to absorb any sales and, therefore, sellers are not as likely to receive a fair price for their shares. As a result, investors demand a higher return on less liquid securities and this exerts a negative effect on prices. Trading volumes and equity shares outstanding allow us to calculate turnover rates for each security. Unfortunately, turnover is not always the best measure of liquidity. Mei, Scheinkman and Xiong (2005) find that turnover, while statistically significant in predicting B-share discounts, could also be considered a measure of speculation, so market capitalization and the bid-ask spread are considered as additional liquidity measures.¹⁴ Finally, whereas H-shares and ADRs derive their fundamental values from the risks and cash flows of the Chinese company alone, past research has found their prices to also be affected by the performance of other assets in their markets. Data on the Hang Seng Index, Shanghai A and B indexes, and the S&P 500 index, again drawn from Bloomberg, control for each security's exposure to market specific risk.

Our panel of firms yields 52 observations in total. Owing to missing observations for certain series, we have an unbalanced panel with the number of observations varying

¹⁴ The bid-ask spreads were not included in the regressions, however, because (as seen in Table 3) some of the spreads from Bloomberg were negative. While a negative spread for a brief period of time is possible, the frequency of negative spreads calls the accuracy of this data into question. When the bid-ask spreads were included for test purposes (not shown), the results did not change and their coefficients were never significant.

depending on which explanatory variables are included in each regression. Firm specific P/E ratios were often unavailable or periodically missing from Bloomberg. Accordingly, when this variable is included, it greatly reduces the number of observations. Most ADRs included in the sample have limited data. Bloomberg typically only reports the price, turnover, and market capitalization for each ADR. Although some heavily-traded ADRs have greater data availability, these are often companies with only very recent listings (like PetroChina). As a result this study is largely limited to less liquid ADRs that span the entire 2003-2007 period. Table 3 provides summary statistics on the ADRs and the observations available for each variable.

The median B-share discount over the period was -47%, with individual companies ranging from a discount of -78% to a premium of 52%. The median discount itself fluctuated considerably over the sample period, starting at -57% on September 30, 2003 and eventually shrinking to -38% by December 2007. The median H-share discount throughout the whole sample was -37%, with minimum and maximum values of -90% and 38%, respectively. The median ADR discount throughout the sample was -28%, expanding to -56% by the end of the sample period. The ADR discount has an overall -.35 correlation with investor sentiment, while the B and H shares had .24 and -.086 correlations, respectively. Table 4 shows the correlation coefficients for all variables included in the empirical work.

The basic regression equation for the B-share discount is as follows (with the equations for the H-share and ADR discounts being analogous):

$$B_Discount_{it} = \alpha_i + \beta_1 Growth_of_Shanghai_A_i + \beta_2 Growth_of_Shanghai_B_i + \beta_3 Growth_of_Market_Cap_A + \beta_4 Growth_of_Market_Cap_B +$$

$$\beta_i \text{Turnover_A} + \beta_i \text{Turnover_B} + \beta_i \text{Log(Exchange_Rate_Expectations)} + \\ \beta_i \text{Log(Investor_Sentiment)} + \beta_i \text{Log(US_Market_Sentiment_index)} + \\ \beta_i \text{Lagged_Dependent_Variables} + \beta_i \text{Company_Fixed_effects} + \\ \beta_i \text{Time_Trend}$$

The Shanghai A, Shanghai B, S&P 500 and Hang Seng Indexes are all converted into log growth rates to assure stationarity. The turnover ratio for each security is calculated as in Mei, Scheinkman and Xiong (2005), where $\text{Turnover} = \log(1 + \text{Volume/shares outstanding})$. The relative market P/E ratio is the P/E ratio for the Shanghai A Index divided by the P/E ratio for the Shanghai B index and the relative firm P/E ratio is the P/E ratio for the firm's A-shares divided by the P/E ratio for the Shanghai A index. The relative P/E ratios are included to test whether the investor sentiment index remains significant when included alongside other commonly used proxies for investor sentiment (cf, Arquette, Brown and Burdekin, 2008). Autoregressive terms are also included in each regression, with the number selected based upon minimization of the Bayesian Schwartz information criterion (BIC).¹⁵ A US market sentiment index is also included to allow for the possible effects that variations in US sentiment could have on these discounts.¹⁶ All regressions are run with and without fixed effects. Fixed effects allow us to control for unobserved variables that vary across companies in the panel but remain constant throughout the sample period. We also allow for an exchange rate regime binary variable, set equal to 0 before July 2005 and 1 after, in order to control for the shift to a managed float for the renminbi.

¹⁵ This criterion selects four lags in the case of the B-shares regression – whereas only two lags are selected for the H-share and DR regressions. A constant and a time trend are also included in all the regressions.

¹⁶ The US sentiment index is calculated by UBS and reported on Bloomberg.

Regression Results

B-share Discounts

Table 5 depicts the empirical results for the B-share discount. A negative relationship between Chinese investor sentiment and the B-share discount emerges across all specifications regardless of which other control variables are included in the regression. This confirms that, as investor sentiment in China increases, the discount between A-shares and B-shares also grows, *ceteris paribus*. Column (1) represents our basic regression equation for the B-share discount. Investor sentiment has a negative coefficient significant at the 99% level. The other determinants generally also have statistically significant coefficients with the expected signs. Growth in the Shanghai A-share index has a positive effect on the individual A-share prices, and this China-specific effect also tends to increase the discounts attached by foreign investors, i.e., exert a negative effect on the dependent variable. Conversely, growth in the Shanghai B index tends to raise B-share prices relative to A-share prices, thereby shrinking the discount, i.e., exerting a positive effect on the dependent variable. Both such effects are significant at better than the 99% confidence level.¹⁷

Adding growth of market capitalization and share turnover for both A- and B-shares controls for varied levels of speculative trading and liquidity across the markets. The growth of B-share market capitalization has a positive effect, significant at the 99% level. This indicates that firms with higher market capitalizations tend to have lower

¹⁷ This finding that the discount is significantly influenced by market specific risk factors is consistent with Wang and Jiang (2003). The S&P 500 index is not significant, however, and its influence remains inconsistent across the subsequent regressions.

discounts, which is consistent with larger firms having more liquid securities and, therefore, higher prices. On the other hand, as the size of the A-share portion of the market cap increases, the size of the discount increases. This finding is seemingly inconsistent with traditional theory that larger firms should have smaller price discrepancies across markets – but given the non-tradable nature of many of the shares, the larger A-share market cap does not necessarily mean that the actual float is larger (see also Mei, Scheinkman and Xiong, 2005). Meanwhile, the A-share and B-share turnover levels are both significant at the 99% level. The negative effect of higher A-share turnover and positive effect of higher B-share turnover is consistent with increased liquidity of A-shares boosting A-share prices (raising the discount) and increased liquidity of B-shares boosting B-share prices (lowering the discount).

Increasing expectations of RMB/\$US exchange rate appreciation would be expected to lower the discount insofar as foreign investors now place more value on the B-shares that have their underlying value based on renminbi. The actual relationship is inconsistent and often insignificant in Table 5, suggesting that sentiment and liquidity effects may be more important than exchange rate expectations in driving the B-share discount. Indeed, the US investor sentiment index included in the regression always has a positive and significant coefficient at the 99% level. So as sentiment in the United States rises, the discount tends to narrow. This indicates that sentiment in both the United States and China has a statistically significant effect on the discount between A-shares and B-shares.

Most results remain quite robust to the inclusion of additional controls. When adding market P/E and firm specific P/E ratios, another possible proxy for varied levels

of investor sentiment, the effects of US market sentiment remain significant at the 99% level in columns (4)-(6). Chinese investor sentiment also remains significant at the 99% level other than in column (4), where the significance level falls to 90%. All other factors remain significant at the same level and in the same direction as in column (1).

Consistent with Arquette, Brown and Burdekin (2008), the relative market and firm P/E ratios both have negative, and statistically significant, effects on the discount. This suggests that when Chinese investors bid up A-share prices to a greater degree relative to their earnings, the discount rises to the extent that foreign investors fail to follow suit. These effects remain statistically significant regardless of whether company fixed effects and the exchange rate regime binary variable are also included in the model (columns (5) and (6)).¹⁸

H-share Discounts

The regression analysis of the H-share discounts appears in Table 6.¹⁹ Once again we see a persistent and significant negative relationship between Chinese investor sentiment and share discounts. The coefficient on investor sentiment is negative and significant at the 99% level and remains so both with and without company fixed effects and regardless of whether we include relative market and firm P/E ratios and the exchange rate regime binary variable. Growth in the Shanghai A index has a negative effect, i.e., raises the discount, as before and this effect remains significant at the 99%

¹⁸ The binary variable specified for the shift in exchange rate regime is itself negative and significant in the regression – as is generally the case in the subsequent H-share and ADR regressions. The interpretation of this result is complicated by the fact that the move away from a fixed exchange rate in July 2005 was followed only months later by the beginning of the bull run in Chinese stocks.

¹⁹ This analysis only includes the 25 firms with data spanning the full 2003-2007 sample period because including all 29 firms available from Bloomberg would seriously overweight the last 12 months.

level in all cases. Conversely, the growth of the Hang Seng index has the expected positive effect on the H-share discount and also remains above the 99% significance level in all scenarios. These results seem to confirm that, when the A-share market grows more quickly, the discounts tend to get larger, and when the foreign market expands, the discounts tend to shrink.²⁰ The US market sentiment index has a positive influence, i.e., lowers the discount, and is significant at the 99% level in every regression. This result suggests that H-shares maintain some responsiveness to US factors even though H-shares are traded in Hong Kong and denominated in Hong Kong dollars. Since foreigners do not have ready access to the A-share market and H-shares are commonly purchased by Americans and other foreign investors as a way of gaining exposure to the Chinese market, some sensitivity to US market risks is not surprising.

The H-share discounts are also positively affected by the turnover rate of H-shares, which is significant in every equation at, or near, the 99% level. Since the H-share market is less liquid than the corresponding A-share market, this reduced liquidity affects the price investors are willing to pay. As liquidity, and subsequently turnover, increase, the risks associated with the H-shares subside and prices rise, shrinking the discount. The turnover of A-shares is never significant at any level, however. Another proxy for liquidity and speculation is market capitalization. The growth of H-share market capitalization has a strong positive influence on the discount that is always significant at the 95% level or better. On the other hand, the growth of A-share market capitalization has a highly significant negative relationship with the discount as before – and likely again reflects the role played by non-tradable shares.

²⁰ Such effects are limited to growth in the Hang Seng index in this case, however. The effects of S&P 500 growth are found to be positive, but not statistically significant.

The H-share discount shows some signs of being more significantly influenced by exchange rate expectations than was true in the case of the B-share discount. Although the coefficient is insignificant in columns (1) and (4), it is significant at the 99% level in the remaining regressions that allow for company fixed effects. Meanwhile, the relative market and firm P/E ratios are not themselves significant in any of the H-share regressions – suggesting that these possible proxies for sentiment effects are less important than the direct sentiment measures, which remain strongly significant throughout.

ADR Discounts

The regression results for the ADR discount are presented in Table 7. Consistent with the findings for the B-shares and H-shares, rising local Chinese investor sentiment significantly exacerbates the ADR discount. This relationship once again remains negative and significant throughout all equations tested. Although the addition of relative market and firm P/E ratios in column (4) reduces the significance level to 90%, investor sentiment is otherwise always significant at the 95% level or better. The market P/E ratio itself never enters the equations significantly or with the correct sign. Whereas the firm specific P/E ratios are seen to have a significant negative effect in columns (4)-(6), the coefficients are always smaller than then the coefficient for the Chinese investor sentiment measure. US market sentiment has a consistently significant positive influence, lowering the discount, similar to the B- and H-share cases. Indeed, the significance level for US market sentiment never falls below 99%.

Changes in the expected RMB/\$US exchange rate have a consistently significant influence on the ADR discount, attaining the 95% confidence level or better in each case. The negative sign is contrary to the view that greater expected appreciation would shrink the discount by making investors willing to pay more to acquire renminbi-based assets. The seemingly-perverse coefficient may well simply reflect the strong co-movement between expected appreciation and the ADR discount observed during 2006-2007, however – with expected appreciation peaking in November 2007 and rising in close correspondence with the overall upsurge in the A-share market.²¹ Otherwise, the growth of the Shanghai A index and the growth of the S&P 500 index both have significant influences on the ADR discount. The S&P 500 index has the larger economic influence on the ADR discounts and, as expected, when the foreign (S&P 500) market is performing well, the discounts tend to be smaller. Conversely, when the local Shanghai A market is performing well, the discounts expand.

The ADR and A-share market capitalizations have a consistent negative influence on the ADR discount and are significant at the 99% level in every regression in Table 7. The negative coefficients on the A-share market capitalizations are in line with our previous findings for the B-shares and H-shares. The negative coefficients on the ADR market cap are not consistent with prior findings, however, and a positive effect on the discount would have been expected insofar as larger companies tend to feature more liquidity and hence enjoy smaller price discrepancies across markets. The consistent and strongly negative coefficients imply that the ADR market reacts differently than the other two markets. The largely insignificant role played by ADR and A-share turnover rates

²¹ A longer sample would be required to shed more light on the underlying relationship between exchange rate expectations and the discount (cf, Arquette, Brown and Burdekin, 2008).

further suggests that liquidity effects may matter less for the ADR discount than for the B-share and H-share discounts. Whether this implies more speculative trading here (cf, Mei, Scheinkman and Xiong, 2005) must remain a matter of conjecture.

Conclusions

The results suggest that rising investor sentiment in China played an independent role in negatively impacting the growth of savings deposits and heightening A-share discounts. Thus, changing preferences by investors are relevant not only for the flow of funds within China but also the relative price of Chinese company shares around the world. The impact of investor sentiment remains consistent and significant in the B-share, H-share, and ADR markets, even after controlling for changing exchange rate expectations, liquidity, and market specific risks. Unlike other studies of these markets, this paper not only uses a direct measure of Chinese investor sentiment but also takes into account a direct measure of US market sentiment. The discounts are found to be consistently, and significantly, affected by the US sentiment measure as well, offering further evidence that sentiment is an important factor in the pricing of securities across markets. On the downside, this points to the danger that large and rapid shifts in sentiment, not necessarily justified by market fundamentals, could potentially lead to market inefficiencies and imbalances. Further study is needed on the impact of such shifts in investor preferences. It would also be valuable to re-examine the importance of sentiment effects over a longer sample period, taking advantage both of additional survey data points and any changes in investor psychology that may have emerged in the face of the sharp downturn in Chinese A-shares that ensued in 2008.

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Table 1: Regression Results for Chinese Savings Deposit Growth

	Dependent Variable = Growth in Savings Deposits			
	(1)	(2)	(3)	(4)
Independent Variables				
Growth rate of M0	0.1556*** (4.54)	0.1545*** (4.65)	0.1648*** (4.73)	0.1561*** (4.74)
Growth Rate of Per-Capita Monthly Income	0.0220 (1.50)	0.0209 (1.34)	0.0315 (1.56)	0.0210 (1.35)
Real One-year Interest Rate on Savings Deposits	0.0003 (0.26)	-0.0004 (-0.20)	0.0008 (0.55)	0.0002 (0.17)
Growth rate of Shanghai A Index			-0.0321 (-0.75)	
Stock Propensity	-0.0456** (-2.02)	-0.0591* (-1.75)	-0.0396** (-2.02)	-0.0535** (-2.03)
Price Satisfaction				-0.0002 (-0.62)
Time Trend		0.0001 (0.48)		
Lagged Growth of Savings Deposits	0.0932 (0.54)	0.1051 (0.60)	0.0902 (0.50)	0.0957 (0.55)
Observations	45	45	45	45
Adjusted R-squared	0.872	0.868	0.872	0.869

Notes: Regressions include 11 seasonal dummies and constant (not shown); t-statistics are in parentheses (based on robust standard errors); * denotes significance at 90% level, ** denotes significance at 95% level, *** denotes significance at 99% level

Table 2: Chinese Companies Included in the Empirical Work

Company Name	ADR	B-Share	H-share	A-share	Start	End
ADRs		# of firms	13			
Aluminum Corp of China Ltd.	ACH		2600	601600	4/30/2007	12/30/2007
China Eastern Airlines Co	CEA		670	600115	9/30/2003	12/30/2007
China Life Insurance Co Ltd.	LFC		2628	601628	1/31/2007	12/30/2007
China Petroleum & Chemical Corp	SNP		386	600028	9/30/2003	12/30/2007
China Shipping Development Co Ltd.	CSDXF		1138	600026	9/30/2003	12/30/2007
China Southern Airlines Co	ZNH		1055	600029	9/30/2003	12/30/2007
Guangshen Railway Company Ltd.	GSH		525	601333	12/29/2006	12/30/2007
Huaneng Power International, Inc.	HNP		902	600011	9/30/2003	12/30/2007
Jiangsu Expressway Co Ltd	JEXYF		177	600377	9/30/2003	12/30/2007
Jiangxi Copper Co Ltd	JIXAF		358	600362	9/30/2003	12/30/2007
Sinopec Shanghai Petrochemical Co Ltd	SHI		338	600688	9/30/2003	12/30/2007
Tsingtao Brewery Company Limited	TSGTF		168	600600	9/30/2003	12/30/2007
Yanzhou Coal Mining Company Limited	TZC		1171	600188	9/30/2003	12/30/2007
B-Shares		# of firms	34			
China First Pencil Co Ltd.			900905	600612	9/30/2003	12/31/2007
China Textile Machinery			900906	600610	9/30/2003	12/31/2007
Danhua Chemical Technology Co Ltd			900921	600844	9/30/2003	12/31/2007
Dazhong Transportation Group Co Ltd.			900903	600611	9/30/2003	12/31/2007
Double Coin Holdings Ltd.			900909	600623	9/30/2003	12/31/2007
Eastern Communications Co Ltd.			900941	600776	9/30/2003	12/31/2007
Huadian Energy Co Ltd.			900937	600726	9/30/2003	12/31/2007
Huangshan Tourism Development Co Ltd.			900942	600054	9/30/2003	12/31/2007
Huaxin Cement Co Ltd.			900933	600801	9/30/2003	12/31/2007
Inner Mongolia Eerduosi Cashmere Product			900936	600295	9/30/2003	12/31/2007
Jinshan Development & Construction Co Ltd.			900916	600679	9/30/2003	12/31/2007
SGSB Group Co Ltd			900924	600843	9/30/2003	12/31/2007
Shanghai Automation Instrumentation Co L			900928	600848	9/30/2003	12/31/2007
Shanghai Baosight Software Co Ltd			900926	600845	9/30/2003	12/31/2007
Shanghai Chlor-Alkali Chemical Co Ltd.			900908	600618	9/30/2003	12/31/2007
Shanghai Dajiang Group			900919	600695	9/30/2003	12/31/2007
Shanghai Diesel Engine Co Ltd.			900920	600841	9/30/2003	12/31/2007
Shanghai Dingli Technology Development Group Co Ltd.			900907	600614	9/30/2003	12/31/2007
Shanghai Erfang Co Ltd.			900902	600604	9/30/2003	12/31/2007
Shanghai Friendship Group Inc Ltd			900923	600827	9/30/2003	12/31/2007
Shanghai Haixin Group CO			900917	600851	9/30/2003	12/31/2007
Shanghai Highly Group Co Ltd.			900910	600619	9/30/2003	12/31/2007
Shanghai Jinjiang International Investment Holdings Co			900914	600650	9/30/2003	12/31/2007
Shanghai Jinqiao Export Processing Zone Development Co Lt			900911	600639	9/30/2003	12/31/2007
Shanghai Lianhua Fibre Corp			900913	600617	9/30/2003	12/31/2007
Shanghai Material Trading Co Ltd			900927	600822	9/30/2003	12/31/2007
Shanghai Mechanical and Electrical Indus			900925	600835	9/30/2003	12/31/2007
Shanghai Sanmao Enterprise Group Co Ltd			900922	600689	9/30/2003	12/31/2007
Shanghai Waigaoqiao Free Trade Zone Development Co Ltd.			900912	600648	9/30/2003	12/31/2007
Shanghai Wingsung Data Technology Co Ltd.			900904	600613	9/30/2003	12/31/2007
Shanghai Yaohua Pilkington Glass Co Ltd			900918	600819	9/30/2003	12/31/2007
Shanghai Zhenhua Prot Machinery Co			900947	600320	9/30/2003	12/31/2007
SVA Electron Co Ltd.			900901	600602	9/30/2003	12/31/2007
Zhonglu Co Ltd.			900915	600818	9/30/2003	12/31/2007
Shanghai Potevio Co Ltd			900930	600680	9/30/2003	12/31/2007
H-Shares		# of firms	25			
Angang New Steel Co		ANGGY		347	000898	9/30/2003 12/31/2007
Anhui Conch Cement Co Ltd.				914	600585	9/30/2003 12/31/2007
Anhui Expressway				995	600012	9/30/2003 12/31/2007
Beiren Printing Machinery				187	600860	9/30/2003 12/31/2007
China Eastern Airlines Co		CEA		670	600115	9/30/2003 12/31/2007
China Petroleum & Chemical Corp		SNP		386	600028	9/30/2003 12/31/2007
China Shipping Development Co Ltd.		CSDXF		1138	600026	9/30/2003 12/31/2007
China Southern Airlines Co		ZNH		1055	600029	9/30/2003 12/31/2007
Dongfang Electrical Machine				1072	600875	9/30/2003 12/31/2007
Guangzhou Pharmaceuticals				874	600332	9/30/2003 12/31/2007
Guangzhou Shipyard Intl Co				317	600685	9/30/2003 12/31/2007
Huaneng Power International, Inc.		HNP		902	600011	9/30/2003 12/31/2007
Jiangsu Expressway Co Ltd		JEXYF		177	600377	9/30/2003 12/31/2007
Jiangxi Copper Co Ltd		JIXAF		358	600362	9/30/2003 12/31/2007
Jingwei Textile Machinery				350	000666	9/30/2003 12/31/2007
Luoyang Glass Company Ltd.				1108	600876	9/30/2003 10/31/2006
Maanshan Iron & Steel Ltd.				323	600808	9/30/2003 12/31/2007
Nanjing Panda Elec Co Ltd.				553	600775	9/30/2003 12/31/2007
Shandong Xinhua Pharmaceutical Co Ltd.				719	000756	9/30/2003 12/31/2007
Shenzhen Expressway Co Ltd.				548	600548	9/30/2003 12/31/2007
Sinopec Shanghai Petrochemical Co Ltd		SHI		338	600688	9/30/2003 12/31/2007
Sinopec Yizheng Chemical				1033	600871	9/30/2003 12/31/2007
Tianjin Capital Environmental Protection				1065	600874	9/30/2003 12/31/2007
Tsingtao Brewery Company Limited		TSGTF		168	600600	9/30/2003 12/31/2007
Yanzhou Coal Mining Company Limited		TZC		1171	600188	9/30/2003 12/31/2007

Table 3: Summary Statistics for the Share Discounts and Explanatory Variables

	Observations	Median	Mean	Min	Max	St Dev
Growth in Shanghai A	51	3.29%	2.65%	-20.12%	24.38%	8.06%
Growth in Shanghai B	51	1.76%	2.56%	-19.00%	33.29%	10.83%
Growth in S&P	51	1.20%	0.76%	-4.50%	5.35%	2.28%
Growth in Hang Sang Index	51	2.12%	1.78%	-9.22%	14.42%	4.55%
Change in renminbi/USD exchange rate expectations	52	4.46%	4.56%	1.38%	10.28%	1.53%
U.S. investor sentiment Index	52	74.0	73.4	34.0	108.0	17.0
China Investor Sentiment Survey	52	9.7%	15.2%	5.1%	44.3%	12.3%

B Share Sample	Observations	Median	Mean	Min	Max	St Dev
Discount	1755	-48.4%	-45.3%	-83.6%	51.8%	19.9%
B Share Turnover	1806	7.3%	13.0%	0.0%	139.1%	17.1%
A Share Turnover	1807	6.1%	12.6%	0.0%	911.6%	26.6%
B Share Bid-Ask Spread	1793	0.001	0.000	-0.255	0.033	0.016
A Share Bid-Ask Spread	1754	0.001	-0.006	-0.706	0.046	0.049
B Share Market Cap (Millions of dollars)	1799	360	540	24	11,770	818
A Share Market Cap (Millions of Renminbi)	1773	2,951	4,317	218	87,953	6,217
Relative Market P/E	1820	0.71	0.72	0.34	1.17	0.23
Relative Firm P/E	1260	1.99	6.25	0.33	185.88	14.44
U.S. Market Sentiment	1820	74.0	73.4	34.0	108.0	17.0
China Investor Sentiment	1820	9.7%	15.2%	5.1%	44.3%	12.3%

Notes: This data is from 35 firms, with 52 monthly observations for each from Sept 30, 2003 to Dec. 31, 2007

H Shares Sample	Observations	Median	Mean	Min	Max	St Dev
Discount	1339	-37.1%	-37.1%	-90.3%	38.5%	24.4%
H Share Turnover	1476	15.7%	19.8%	0.0%	168.6%	16.9%
A Share Turnover	1351	5.8%	9.7%	0.0%	83.0%	11.0%
A Share Bid-Ask Spread	1351	0.010	-0.007	-3.820	1.000	0.212
H Share Bid-Ask Spread	1335	0.025	0.040	0.000	1.000	0.060
A Share Market Cap (Millions of Yuan)	1467	13,568	59,140	1,031	1,993,339	184,754
H Share Market Cap (Millions of HKD)	1349	14,211	61,494	511	2,067,388	183,848
Relative Market P/E	1508	0.55	0.57	0.38	0.82	0.11
Relative Firm P/E	1204	0.96	2.06	0.22	62.36	5.27

Note: This data is for all 29 firms with 52 monthly observations for each from Sept 30, 2003 to Dec. 31, 2007

Table 3 (continued)

ADRs	Observations	Median	Mean	Min	Max	St Dev
Discount	549	-28.5%	-28.7%	-98.9%	25.4%	20.0%
ADR Turnover	671	2.2%	3.6%	0.0%	59.5%	5.2%
A Share Turnover	556	4.5%	7.6%	0.0%	42.9%	7.8%
ADR Bid-Ask Spread	62	0.500	1.566	0.150	19.750	3.388
A Share Bid-Ask Spread	546	0.010	-0.004	-1.890	0.300	0.162
ADR Market Capitalization (Millions of Renminbi)	650	5,288	206,456	949	115,000,000	4,507,795
A Share Market Capitalizations (Millions of Renminbi)	555	31,478	141,702	7,538	5,404,439	415,965
Relative Market P/E	728	1.32	1.44	0.88	2.49	0.45
Relative Firm P/E	469	0.81	1.24	0.22	15.66	1.73

Note: This data is for all 13 firms with 52 monthly observations for each from Sept 30, 2003 to Dec. 31, 2007

Table 4: Correlation Matrices

B Share Sample

	Discount	A Share Mkt Cap	B Share Mkt Cap	Shanghai A Index	Shanghai B Index	Δ Exchange Rate Expectations	A Share Turnover	B Share Turnover	Relative Firm P/E	Relative Market P/E	Chinese Investor Sentiment	U.S. Investor Sentiment
Discount	1											
A Share Mkt Cap	0.06	1										
B Share Mkt Cap	0.07	0.77	1									
Shanghai A Index	0.11	0.51	0.44	1								
Shanghai B Index	0.15	0.57	0.53	0.66	1							
Expectations	0.16	0.10	0.09	0.08	0.09	1						
A Share Turnover	0.32	0.31	0.27	0.33	0.30	0.22	1					
B Share Turnover	0.15	0.26	0.23	0.28	0.44	0.19	0.57	1				
Relative Firm P/E	-0.23	-0.01	-0.02	0.03	0.05	-0.02	-0.03	0.03	1			
Relative Market P/E	0.24	0.19	0.17	0.34	0.28	0.55	0.49	0.49	-0.02	1		
Sentiment	0.25	0.18	0.16	0.28	0.28	0.55	0.56	0.58	-0.01	0.93	1	
U.S. Investor Sentiment	0.12	0.15	0.14	0.31	0.31	-0.11	0.11	0.30	-0.01	0.16	0.06	1

H Share Sample

	H Share Discount	A Share Mkt Cap	H Share Mkt Cap	Shanghai A Index	S&P 500 Index	Δ Exchange Rate Expectations	A Share Turnover	H Share Turnover	Relative Firm P/E	Relative Mkt P/E	Chinese Investor Sentiment	U.S. Investor Sentiment	
Discount	1												
A Share Mkt Cap	0.02	1											
H Share Mkt Cap	0.02	0.96	1										
Shanghai A Index	0.05	0.48	0.45	1									
S&P 500 Index	0.01	0.20	0.20	0.25	1								
HSI Index	0.03	0.18	0.18	0.39	0.57	1							
Expectations	-0.02	-0.25	-0.24	-0.33	0.11	-0.15	1						
A Share Turnover	-0.08	0.26	0.25	0.29	0.01	0.09	-0.42	1					
H Share Turnover	-0.06	0.20	0.22	0.09	0.09	0.11	-0.13	0.22	1				
Relative Firm P/E	0.03	0.06	0.05	0.07	-0.01	0.02	-0.09	-0.03	0.23	1			
Relative Mkt P/E	0.17	-0.25	-0.24	-0.39	0.06	-0.09	0.68	-0.40	-0.22	-0.07	1		
Sentiment	-0.10	0.22	0.21	0.27	-0.12	0.20	-0.91	0.46	0.19	0.07	-0.77	1	
U.S. Investor Sentiment	-0.13	0.19	0.17	0.31	0.14	0.13	0.07	0.13	0.18	0.01	-0.33	0.06	1

ADR Sample

	ADR Discount	A Share Mkt Cap	ADR Mkt Cap	Shanghai A Index	S&P 500 Index	Δ Exchange Rate Expectations	ADR Turnover	A Share Turnover	Relative Firm P/E	Relative Mkt P/E	Chinese Investor Sentiment	U.S. Investor Sentiment
Discount	1											
A Share Mkt Cap	-0.15	1										
ADR Mkt Cap	-0.11	0.22	1									
Shanghai A Index	-0.03	0.60	0.15	1								
S&P 500 Index	0.07	0.30	0.02	0.28	1							
Expectations	-0.24	0.08	0.13	0.03	-0.14	1						
ADR Turnover	-0.33	0.15	0.00	0.08	-0.03	0.32	1					
A Share Turnover	-0.17	0.32	0.04	0.33	0.03	0.15	0.13	1				
Relative Firm P/E	-0.20	0.01	-0.01	0.05	0.04	0.01	-0.05	0.09	1			
Relative Mkt P/E	-0.47	0.28	0.14	0.33	-0.07	0.60	0.47	0.40	0.08	1		
Sentiment	-0.41	0.27	0.12	0.29	-0.11	0.59	0.43	0.44	0.09	0.07	1	
U.S. Investor Sentiment	-0.09	0.29	0.00	0.31	0.12	-0.19	0.06	0.20	-0.02	-0.21	0.11	1

Table 5: B-share Regression Results

	Dependent Variable = B-Share Discount					
	(1)	(2)	(3)	(4)	(5)	(6)
Independent Variables						
Growth of Shanghai A Index	-0.166*** (0.045)	-0.159*** (0.043)	-0.145*** (0.043)	-0.132*** (0.051)	-0.126*** (0.048)	-0.120*** (0.048)
Growth of Shanghai B Index	0.361*** (0.042)	0.347*** (0.041)	0.344*** (0.041)	0.349*** (0.055)	0.334*** (0.055)	0.337*** (0.054)
Growth of S&P 500 Index	0.012 (0.047)	0.003 (0.045)	-0.003 (0.045)	-0.021 (0.050)	-0.036 (0.049)	-0.047 (0.051)
Growth of Market Cap A Share	-0.224*** (0.032)	-0.219*** (0.032)	-0.215*** (0.031)	-0.228*** (0.041)	-0.219*** (0.042)	-0.217*** (0.042)
Growth of Market Cap B Share	0.030*** (0.011)	0.030*** (0.011)	0.031*** (0.011)	0.027*** (0.010)	0.028*** (0.011)	0.028*** (0.011)
Log(1+A Share Turnover)	-0.060** (0.024)	-0.070** (0.033)	-0.069** (0.033)	-0.064** (0.012)	-0.090*** (0.015)	-0.093*** (0.016)
Log(1+B Share Turnover)	0.125*** (0.020)	0.134*** (0.023)	0.135*** (0.023)	0.118*** (0.022)	0.136*** (0.025)	0.137*** (0.026)
Change in Exchange Rate Expectations	-0.120* (0.069)	0.039 (0.061)	-0.161** (0.077)	-0.028 (0.070)	0.131** (0.062)	-0.031 (0.076)
Log(Investor Sentiment)	-0.019*** (0.003)	-0.007* (0.004)	-0.012*** (0.004)	-0.040*** (0.007)	-0.022*** (0.008)	-0.022*** (0.008)
Log(Market P/E)				-0.029*** (0.008)	-0.024*** (0.006)	-0.018** (0.007)
Log(Firm P/E)				-0.004*** (0.001)	-0.005** (0.002)	-0.005*** (0.002)
Log(US Market Sentiment)	0.033*** (0.008)	0.031*** (0.007)	0.029*** (0.007)	0.039*** (0.010)	0.036*** (0.009)	0.034*** (0.009)
Constant	-0.205*** (0.040)	-0.247*** (0.039)	-0.251*** (0.039)	-0.310*** (0.064)	-0.332*** (0.056)	-0.322*** (0.057)
Shift in Exchange Rate Regime			-0.024*** (0.004)			-0.019*** (0.006)
Trend	0.001*** (0.000)	0.001*** (0.000)	0.002*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.002*** (0.000)
Lagged Dependent Variables	Yes	Yes	Yes	Yes	Yes	Yes
Fixed Effects	No	Yes	Yes	No	Yes	Yes
Observations	1530	1530	1530	1106	1106	1106
Adjusted R Squared	0.947	0.949	0.949	0.954	0.956	0.956

Note: Robust standard errors are in parentheses; *** denotes 99% confidence, ** denotes 95% confidence, * denotes 90% confidence.

Table 6: H-Share Regression Results

	Dependent Variable = H Share Discount					
	(1)	(2)	(3)	(4)	(5)	(6)
Independent Variables						
Growth of Shanghai A Index	-0.311*** (0.032)	-0.268*** (0.031)	-0.243*** (0.031)	-0.329*** (0.033)	-0.282*** (0.032)	-0.270*** (0.032)
Growth of Hang Seng Index	0.514*** (0.050)	0.473*** (0.045)	0.450*** (0.048)	0.530*** (0.057)	0.480*** (0.056)	0.477*** (0.057)
Growth of S&P 500 Index	0.143 (0.104)	0.123 (0.095)	0.155 (0.096)	0.118 (0.113)	0.101 (0.103)	0.116 (0.103)
Log(1+A Share Turnover)	-0.019 (0.027)	-0.005 (0.040)	-0.002 (0.039)	-0.017 (0.027)	-0.015 (0.041)	-0.010 (0.040)
Log(1+H Share Turnover)	0.070** (0.028)	0.107** (0.043)	0.118*** (0.043)	0.074** (0.030)	0.133** (0.046)	0.142*** (0.045)
Growth of Market Cap A	-0.784*** (0.277)	-0.798*** (0.262)	-1.037*** (0.255)	-0.774*** (0.293)	-0.804*** (0.275)	-1.085*** (0.276)
Growth of Market Cap H	0.643** (0.280)	0.651** (0.264)	0.890*** (0.256)	0.645** (0.298)	0.670*** (0.280)	0.952*** (0.278)
Market P/E				-0.030 (0.020)	-0.026 (0.021)	-0.056 (0.021)
Firm P/E				-0.001 (0.003)	-0.001 (0.004)	-0.001 (0.004)
Log(Investor Sentiment)	-0.042*** (0.006)	-0.061*** (0.006)	-0.067*** (0.006)	-0.048*** (0.010)	-0.066*** (0.010)	-0.084*** (0.011)
Change in Exchange Rate Expectations	-0.111 (0.091)	-0.255*** (0.092)	-0.536*** (0.098)	-0.142 (0.087)	-0.315*** (0.100)	-0.673*** (0.109)
Log(US Market Sentiment)	0.060*** (0.010)	0.05*** (0.009)	0.052*** (0.009)	0.053*** (0.010)	0.047*** (0.010)	0.043*** (0.010)
Constant	-0.407*** (0.061)	-0.491*** (0.050)	-0.492*** (0.050)	-0.403 (0.063)	-0.483*** (0.057)	-0.524*** (0.059)
Shift in Exchange Rate Regime			-0.034*** (0.006)			-0.042*** (0.006)
Trend	0.002*** (0.000)	0.003*** (0.000)	0.004*** (0.000)	0.002 (0.000)	0.003*** (0.000)	0.004*** (0.000)
Lagged Dependent Variables	Yes	Yes	Yes	Yes	Yes	Yes
Fixed Effects	No	Yes	Yes	No	Yes	Yes
Observations	1206	1206	1206	1067	1067	1067
Adjusted R-squared	0.929	0.932	0.933	0.935	0.938	0.939

Note: This is a limited sample of 25 firms that have data over the whole sample period; robust standard errors are in parentheses; *** denotes 99% confidence, ** denotes 95% confidence, * denotes 90% confidence

Table 7: ADR Regression Results

	Dependent Variable = ADR Discount					
	(1)	(2)	(3)	(4)	(5)	(6)
Independent Variables						
Growth of Shanghai A Index	-0.182** (0.072)	-0.145** (0.066)	-0.137** (0.069)	-0.163** (0.080)	-0.136* (0.072)	-0.141** (0.071)
Growth of S&P 500 Index	0.637** (0.262)	0.543** (0.254)	0.544** (0.257)	0.511** (0.302)	0.465* (0.281)	0.455** (0.291)
Growth of A Market Cap	-0.225*** (0.086)	-0.213*** (0.076)	-0.215*** (0.077)	-0.230** (0.091)	-0.214*** (0.074)	-0.216*** (0.073)
Growth of ADR Market Cap	-0.038*** (0.009)	-0.035*** (0.010)	-0.035*** (0.010)	-0.038*** (0.009)	-0.036*** (0.010)	-0.036*** (0.010)
Log(1 + ADR Share Turnover)	-0.038 (0.009)	-0.203* (0.108)	0.077 (0.112)	-0.152 (0.096)	-0.290** (0.133)	-0.277** (0.128)
Log(1 + A Share Turnover)	0.009 (0.047)	0.068 (0.078)	0.077 (0.080)	-0.035 (0.067)	0.077 (0.069)	0.096 (0.067)
Log(Market P/E)				0.030 (0.036)	0.009 (0.041)	0.042 (0.048)
Log(Firm P/E)				-0.018*** (0.004)	-0.029** (0.012)	-0.028** (0.011)
Log(Investor Sentiment)	-0.040** (0.017)	-0.085** (0.036)	-0.088** (0.037)	-0.063* (0.034)	-0.097** (0.048)	-0.120** (0.060)
Log(US Market Sentiment)	0.057*** (0.013)	0.067*** (0.018)	0.065*** (0.018)	0.055*** (0.019)	0.066*** (0.024)	0.064*** (0.023)
Change in Exchange Rate Expectations	-0.411** (0.208)	-0.539** (0.260)	-0.691** (0.320)	-0.644** (0.330)	-0.759* (0.388)	-1.119** (0.564)
Shift in Exchange Rate Regime			-0.020** 0.010			-0.034 0.021
Constant	-0.390*** (0.099)	-0.614*** (0.187)	-0.613*** (0.187)	-0.468*** (0.178)	-0.656*** (0.256)	-0.713*** (0.288)
Trend	0.002*** (0.001)	0.004*** (0.001)	0.004*** (0.001)	0.003*** (0.001)	0.004** (0.002)	0.006** (0.003)
Lagged Dependent Variables	Yes	Yes	Yes	Yes	Yes	Yes
Fixed Effects	No	Yes	Yes	No	Yes	Yes
Observations	439	439	439	363	363	363
Adjusted R-squared	0.837	0.848	0.848	0.814	0.826	0.826

Note: Robust standard errors are in parentheses; *** denotes 99% confidence, ** denotes 95% confidence, * denotes 90% confidence.

Figure 1: Investor Sentiment and Time Deposit Growth in Mainland China

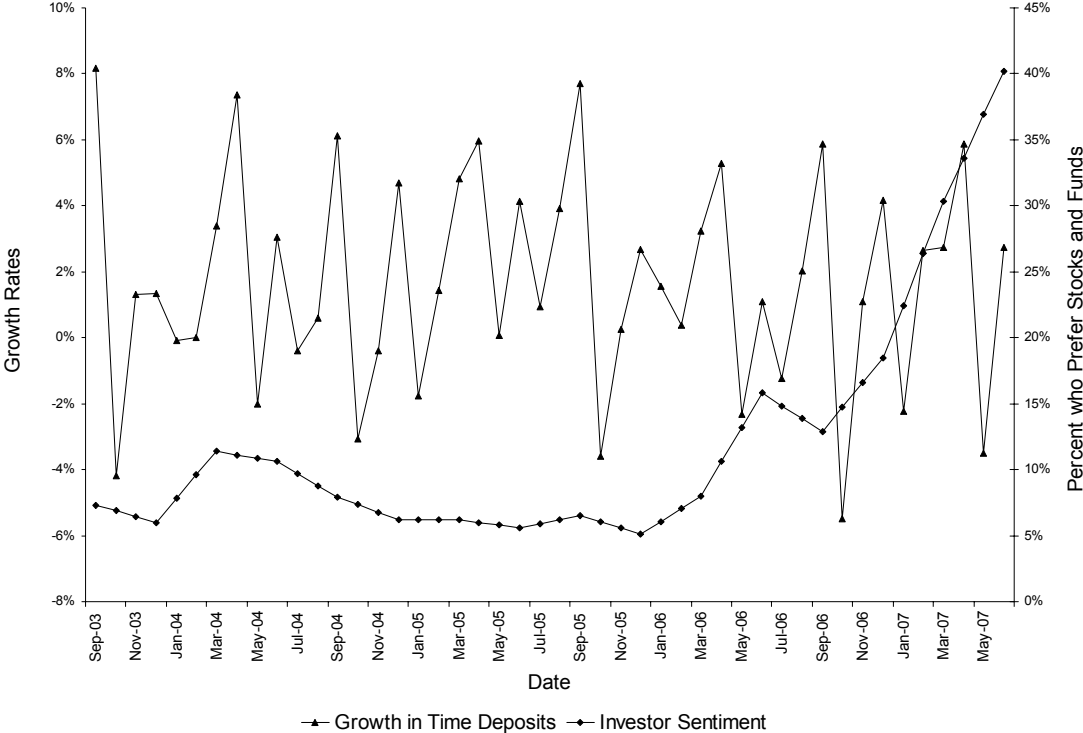


Figure 2: The Premium/Discount attached to the Morgan Stanley China A Share Fund

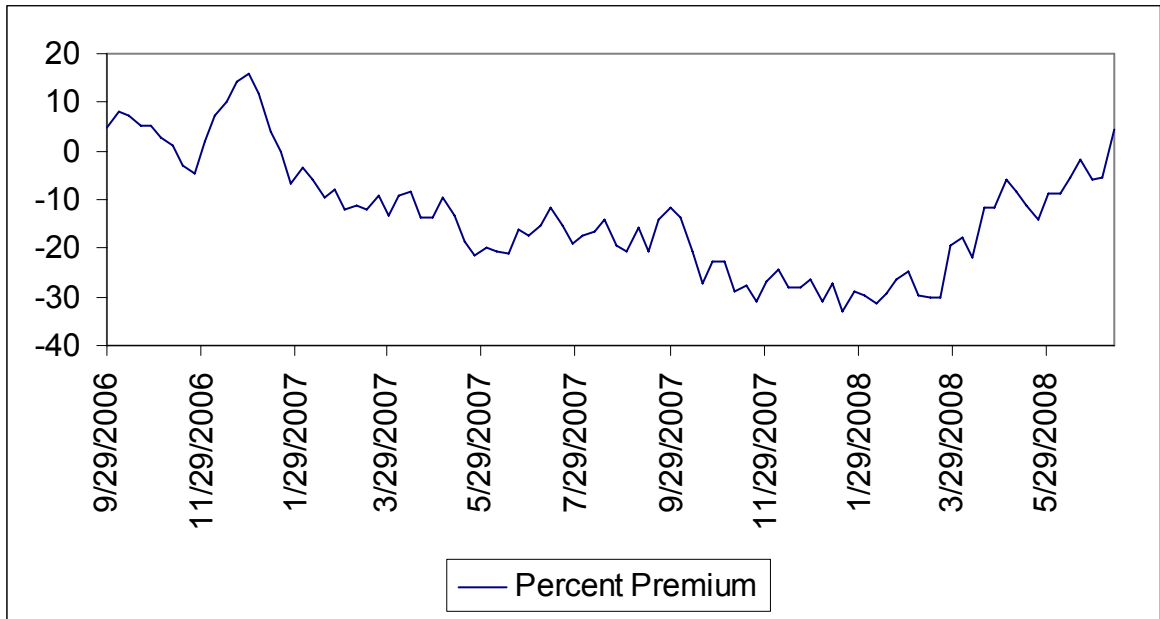


Figure 3: Expected RMB/\$US Appreciation

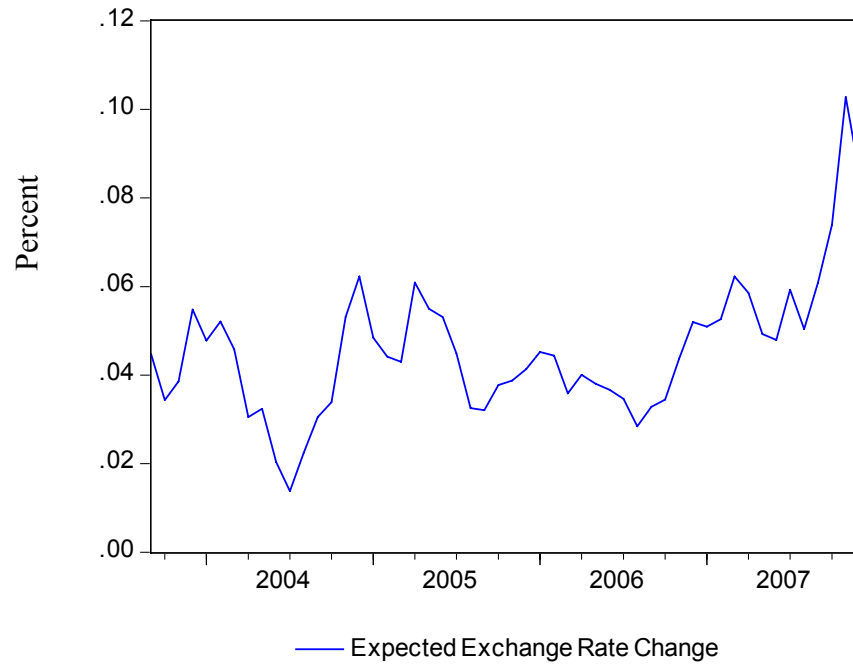


Figure 4: H-Share Median Discount and Investor Sentiment

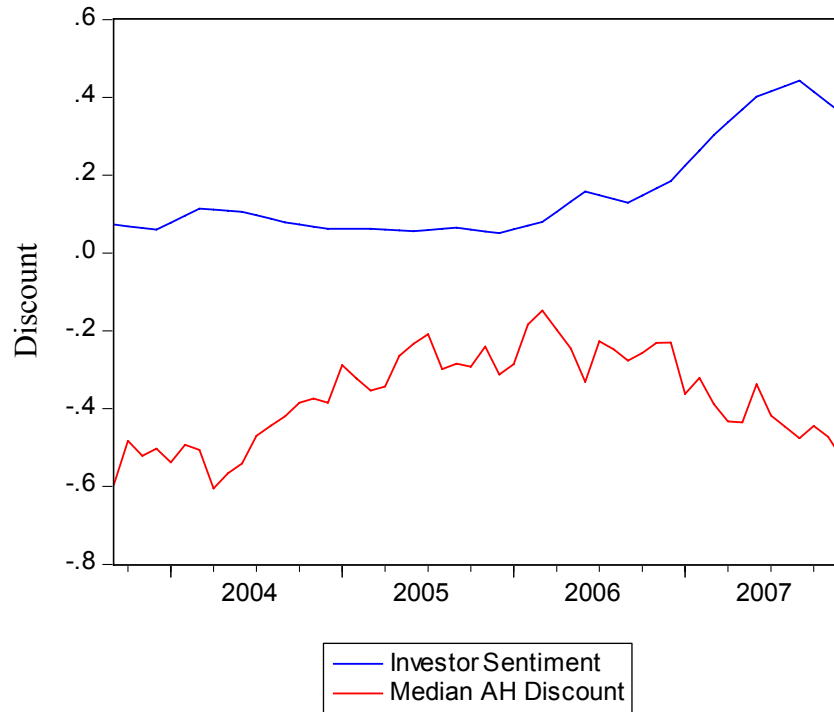


Figure 5: ADR Median Discount and Investor Sentiment

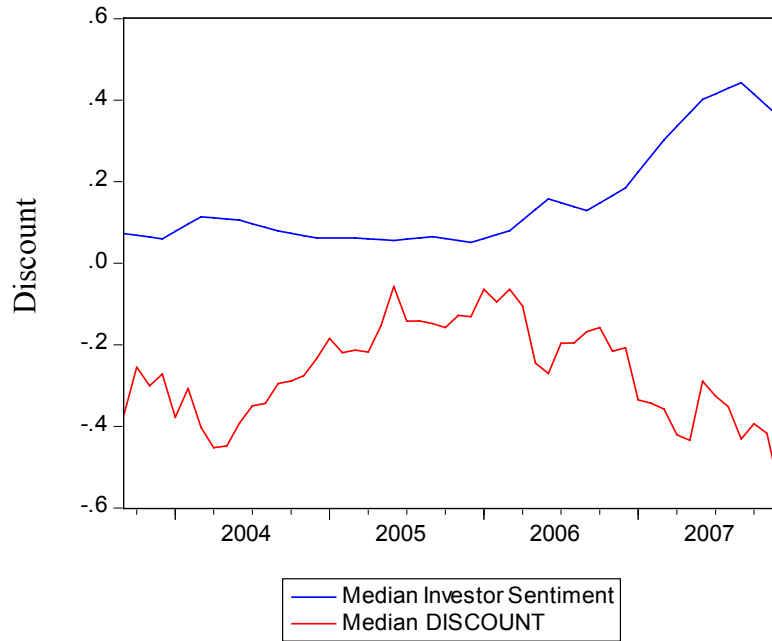


Figure 6: B-Share Median Discount and Investor Sentiment

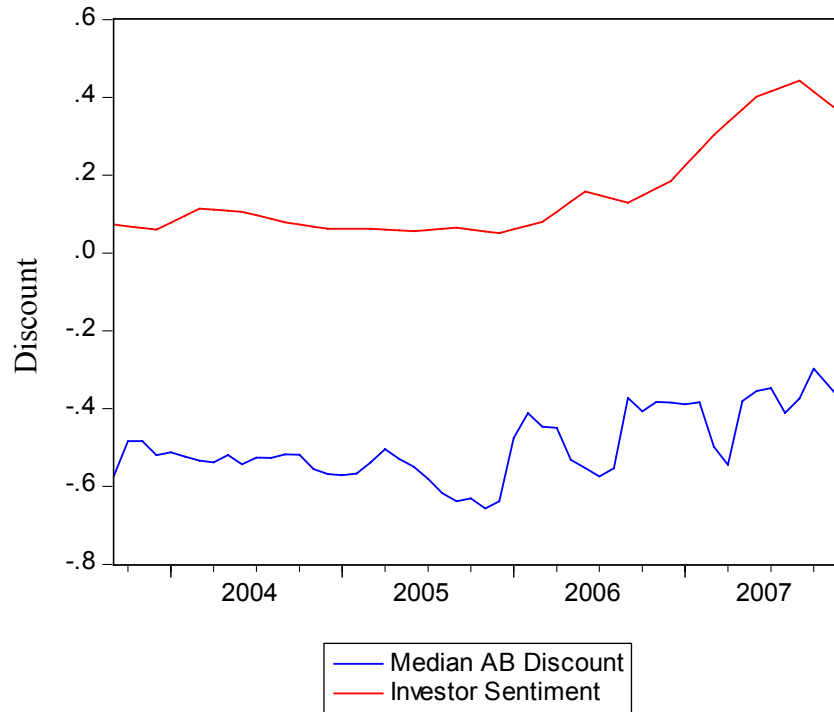


Figure 7: Shanghai A-share Index Prices and Trading Volume

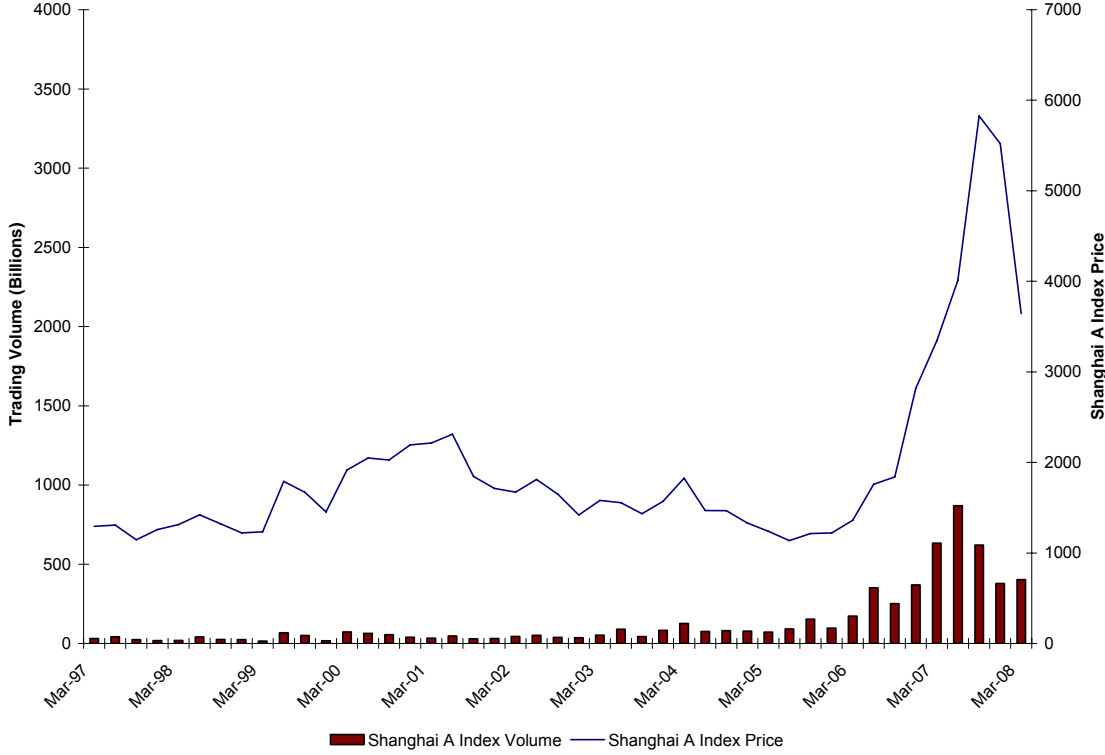


Figure 8: Shanghai B-share Index Prices and Trading Volumes

