Individual Investors and Portfolio Choice

Mark S. Seasholes
HKUST

Mingzhu Tai
Harvard University

Zhishu Yang
Tsinghua University

This Version: 21-Sep-2011*

Abstract

We exploit four features of Chinese equity markets to first show that investors tilt their portfolios toward companies with a) local headquarters; b) local business operations; c) similar cultural backgrounds; and d) locally traded stocks. Effects coexist and the location-of-trade effect is the strongest of the four factors for most of our sample period. We next test and reject the hypothesis that information-based trading explains the portfolio holdings. Using the location of a company's IPO investment bank as an instrument, we find that an increase in familiarity leads investors to overweight local stocks by 1.29 more than normal. Finally, stocks with a local ownership measure one standard deviation above the mean sell for 10.2% less than stocks whose local ownership is one standard deviation below the mean. This result is consistent with incomplete risk-sharing affecting prices.

Keywords: Portfolio Choice, Location, Home Bias
JEL Number: G11, G15, D1
Note: All referenced appendices are in the associated Internet Appendix.
http://dl.dropbox.com/u/6555606/ChinaPortfoliosInternetAppendix.pdf

*We thank Bing Liang, Toby Moskowitz, and Hong Zhang for helpful comments. We thank the original authors of Feng and Seasholes (2004b) for sharing their data, methodologies, and results. The earlier paper benefited from seminar discussions at UC Berkeley, Duke, HKUST, BGI, the PBFA Conference, and the NBER Asset Pricing meetings. The current paper expands Feng and Seasholes (2004b) and has been presented at the 2011 Five-Star Conference in Beijing and the SAIF Summer Institute in Kunming 2011. Contact information: **Mark S. Seasholes**, HKUST Dept of Finance (Rm 2413), Clear Water Bay, Kowloon Hong Kong, HK Tel: +852.2358.7668, USA Tel: +1.510.931.7531, Email: Mark.Seasholes@gmail.com; **Mingzhu Tai**, Doctoral Student, Business Economics, Harvard University, USA Tel: +1.617.230.1126, Email: mtai@hbs.edu; **Zhishu Yang**, Department of Finance, School of Economics and Management, Tsinghua University, Beijing, 100084 P.R. China, PRC Tel: +86.10.6277.1769, Fax: +86.10.6278.4554, Email: yangzhsh@sem.tsinghua.edu.cn.

Individual Investors and Portfolio Choice

This Version: 21-Sep-2011

Abstract

We exploit four features of Chinese equity markets to first show that investors tilt their portfolios toward companies with a) local headquarters; b) local business operations; c) similar cultural backgrounds; and d) locally traded stocks. Effects coexist and the location-of-trade effect is the strongest of the four factors for most of our sample period. We next test and reject the hypothesis that information-based trading explains the portfolio holdings. Using the location of a company's IPO investment bank as an instrument, we find that an increase in familiarity leads investors to overweight local stocks by 1.29 more than normal. Finally, stocks with a local ownership measure one standard deviation above the mean sell for 10.2% less than stocks whose local ownership is one standard deviation below the mean. This result is consistent with incomplete risk-sharing affecting prices.

Keywords: Portfolio Choice, Location, Home Bias

JEL Number: G11, G15, D1

Note: All referenced appendices are in the associated Internet Appendix.
http://dl.dropbox.com/u/6555606/ChinaPortfoliosInternetAppendix.pdf

1 Introduction

It is well known that investors tilt their equity portfolios toward local companies (either locally-headquartered companies or those with local business operations). In fact, a search for the term "home bias" on EconLit, JSTOR, and SSRN yields over 1,300 citations. About half of the papers are dated within the last five years. In addition, investors exhibit "cultural affinity" and tilt their portfolios toward companies led by CEOs from similar cultural/linguistic backgrounds. Finally, a company's "location of trade" (i.e., where the stock is listed) appears to influence who holds shares.[1]

Despite the wealth of research studying home bias, cultural affinity, and location of trade, it remains difficult to disentangle these effects. Do Japanese investors overweight Sony stock because the company is headquartered in Japan? Because the management speaks Japanese? Or because the stock trades in Tokyo? If the data were available, it would be nice to study the holdings of overseas Japanese citizens and others of Japanese heritage. Do these investors also overweight Sony stock? If Japanese citizens living in New York City invest heavily in Sony, is it for the same reasons as their counterparts in Japan or because the stock also trades in New York?

Portfolio tilting may have asset pricing implications. Do individual investors tilt their portfolios toward stocks for which they have value-relevant information? Or, do they choose stocks with which they are familiar, but for which they have no value-relevant information? Finally, financial economists want to know whether there is a link between asset prices and the degree to which a stock is held by local investors. Testing for such a link is motivated predictions in the Merton (1987) model. When investors do not "recognize" all stocks in a market (i.e., when they focus exclusively on a subset of stocks) there is incomplete risk sharing. The incomplete risk sharing leads prices to be lower than they would have been in cases of complete risk sharing.[2]

[1] On 26-Dec-2010, we typed the term "home bias" into the three electronic databases. EconLit yielded 460 citations (273 since 2005). JSTOR yielded 409 citations (160 since 2005). SSRN yielded 444 citations. See Massa and Simonov (2006) and Bernile, Kumar, and Sulaeman (2010) for papers on portfolio tilting and local business operations. Grinblatt and Keloharju (2001) show that "investors are more likely to hold, buy, and sell the stocks of Finnish firms that are located close to the investor, that communicate in the investor's native tongue, and that have a chief executives of the same cultural background." There are two well-known papers that study the location-of-trade effect: Froot and Dabora (1999) and Chan, Hameed, and Lau (2003).

[2] The Merton (1987) model presents results such that incomplete risk sharing leads to expected returns being higher, rather than to prices being lower. Given an expected dividend, there is a direct mapping between prices and expected returns. Section 6 of our paper discusses the advantages of using (normalized) prices directly rather than

To answer the questions posed above, our research follows four steps based on the following four questions:

1. Do individual investors tilt their portfolios toward locally headquartered companies, companies with local business operations, companies from similar cultural backgrounds, and/or locally-listed companies?
2. Does value-relevant information explain the observed holding patterns?
3. Does familiarity (in the absence of information) explain the observed holding patterns?
4. Do stocks with a high amount of local holdings sell for lower prices than other stocks?

To answer these four questions, a financial economist needs an experimental design or dataset in which the locations of investors and assets are well defined. For example, and as hinted at earlier, it would be nice to track the investments of overseas Japanese living in New York City. Unfortunately, we do not know of such a dataset. A financial economist would also like an instrument that is correlated with increased investor-stock familiarity, but not with the stock's information environment. Finally, researchers need a valuation model or methodology that enables one to judge whether a stock's price is higher or lower than the prices of other stocks.

This paper exploits features of the Chinese equity markets in order to answer the four questions above. The first feature is that investors who open a brokerage account at a given brokerage branch office in China must place all their trades through that office. Also, investors must be physically present at the brokerage offices when opening their accounts. Thus, investors open accounts at offices near where they live. By knowing where a brokerage office is located, we can identify the region of the country where an investor currently lives. Armed with an investor's current location, we can test if s/he has a preference for locally-headquartered companies and/or companies with local business operations (referred to as "traditional home bias").

The second feature of Chinese equity markets is that investors use their internal identity cards when opening accounts. An individual's identity number is coded with information about birthdate, gender, and the geographic region where the person is registered. For this paper,

estimating expected returns.

we divide China into 31 regions. A region can be a province (e.g., Fujian), municipality (e.g., Shanghai), or autonomous region (e.g., Xinjiang). Figure 1 show the 31 regions in China.[3]

[Insert Figure 1]

When an individual moves in China, typically for work, it is common not to update the identity card. Therefore, an investor who lives in Guangdong may have an identity card indicating that s/he is from Sichuan, for example. People from Sichuan initially learn a different dialect (and eat different food) than people in Guangdong reflecting different (sub)cultural identities. Thus, we can take advantage of the fact that China is a vast country with many local subcultures to test the "cultural affinity effect." That is, armed with an investor's birth region, we can test whether s/he has a preference for companies with either headquarters or business operations in his/her birth region.

A third advantageous feature is that China has two stock exchanges. Companies may list on one or the other but cannot list on both. We have each investor's current location and we know each stock's listing location in China. Armed with these data, we can test the "location-of-trade effect" by measuring whether an investor living near one of the exchanges has a preference for locally listed companies regardless of where the companies' headquarters or business operations may be located.

Fourth and finally, Chinese companies can have multiple share classes and cross-list shares. Shares are not fungible across classes. In addition to the locally listed "A-shares" that are available to domestic investors, some Chinese companies also list "H-shares" in Hong Kong. The H-shares are denominated in Hong Kong dollars (HKD) and available to foreigners and Hong Kong residents. Unlike other share classes, the H-shares trade heavily. Under some simple assumptions (see Section 6) we can use the ratio of a company's A-share price to its H-share price to evaluate whether its stock price in China is high or low.[4]

The research value of the first three features of the Chinese equity markets may best be

[3]The identity cards give geographic information down to the city level. For this paper, our geographic unit of analysis is a region. The chosen level of granularity ensures each that unit of analysis contains both investors and companies. Appendix A gives the geographic distribution of company headquarters. All appendices can be found in the associated Internet Appendix, which provides supplementary materials and robustness checks. The Internet Appendix can be downloaded at: *http://dl.dropbox.com/u/6555606/ChinaPortfoliosInternetAppendix.pdf*.

[4]The well-known "B-shares" are listed in China and were originally available to foreign investors only. However, a company's B-shares are typically extremely illiquid and may turnover many times less often than the A-shares. The Hong Kong-listed H-shares trade heavily and do not have this problem.

understood by way of example. Consider four young men, two born in Sichuan province and two born in Shaanxi province. All four leave home for job-related reasons. Two men (one from each province) settle in Shanghai and the other two settle in Shenzhen in Guangdong province. Each opens a brokerage account in his new location. We can test whether any of these investors has a preference for Shanghai-headquartered or Guangdong-headquartered stocks. We can also test whether the two investors from Sichuan prefer Sichuan-headquartered companies while the two investors from Shaanxi prefer companies from their home province.

We expand the above example by considering stocks of two companies that are both headquartered in an unrelated province (say Yunnan.) If one company is listed in Shanghai and the other in Shenzhen, we can test for the location-of-trade effect. The holdings of our four young men, specifically because they are not from Yunnan, allow us to disentangle the location-of-trade effect from cultural affinity.

1.1 Preview of Results

The results in this paper are based on extensive brokerage data from one securities firm. Our holdings data start in year 2000 and end in 2009. Overall, there are 475,975 individuals for whom we have personal information. As of 31-Dec-2009, our securities firm has 42 branch offices. The branch offices are located in 17 of the 31 regions in China. Investors were born and companies are located in all 31 regions. On a single date (31-Dec-2009) investors in our data hold RMB 53.7 billion of stock which equals USD 7.9 billion. Studying such an extensive dataset helps assuage worries about small sample biases and selection biases.

Taking advantage of a large sample and the unique characteristics of China and its equity markets, we obtain the following results:

1 We find that all three portfolio tilting effects coexist (traditional home bias, cultural affinity, and location-of-trade.) Using multivariate regression analysis, we show that no one effect "drives out" other effects.

2 We find that, surprisingly, the location-of-trade effect is at least as strong as traditional home bias. We believe this is the first study to link portfolio *holdings* (as opposed to prices) to a location-of-trade effect. We estimate that the location-of-trade effect is up to 2.3 times stronger than the traditional home bias effect and up to 10 times stronger than the cultural affinity effect.

3 We find no evidence that information-based trading explains observed holding patterns. This result confirms recent findings from the USA, see Seasholes and Zhu (2010), and we do not claim to make a contribution in this regard.

4 We find that holdings reflect long-lived familiarity with a stock. We use the location of an IPO investment bank as an instrument for increased investor familiarity with a company. Many IPOs took place over ten years ago and the location of the investment bank that ran an IPO is not linked with the company's current economic environment. Increased familiarity increases portfolio tilting by 29%.

The idea that familiarity explains individuals' portfolio holdings is put forth in Huberman (2001). Our contribution is to show that the effect is long-lived. In addition, we use the location of the IPO investment bank as an instrument for an increase in an investor's exposure to a given stock.

5 We find that stocks with high degrees of local ownership sell for lower prices other stocks. A stock with a local ownership measure one standard deviation above the mean is estimated to have a price 10.2% below a stock with a local ownership measure one standard deviation below the mean. This result is consistent with a model of incomplete risk sharing affecting prices and complements a recent working paper by Garcia and Norli (2010).

In the year 2008, Chinese (mainland) stock markets became the second largest in the world when ranked by equity market capitalization. Chinese stock markets fell sharply during the financial tsunami, but again passed Japan in mid-2009 to regain the number two ranking. Our paper contributes to a better understanding of the world's second largest equity market.

The remainder of our paper is structured as follows. Section 2 describes our data and reports overview statistics. Section 3 tests for different types of location-based biases. Section 4 tests whether investors have value-relevant information about local stocks. Section 5 tests whether a stock's IPO process has a long-term effect on holdings. Section 6 tests the relationship between a stock's price and the degree of local ownership. Section 7 concludes.

2 Data and Overview Statistics

We study a new, large, and comprehensive set of brokerage records from the People's Republic of China. The records come from a single securities firm with multiple branch offices around the country. As of 31-Dec-2009, our data come from 42 branch offices located in 17 different regions across China. A "region" can be either a province (e.g., Fujian), municipality (e.g., Shanghai), or autonomous region (e.g., Xinjiang). Table 1 provides definitions of the terms and variables used in this paper.

[Insert Table 1]

Figure 1 is a map of China showing the 17 regions where our 42 branch offices are located. In the figure's key, the same 17 regions are marked with asterisks. Table 2, Panel A lists the locations and numbers of regional branch offices in our dataset. Column 3 of Panel A shows the date of the first transaction or holding. The date indicates when at least one of the branch offices in a region was open for business. The first transaction in our records is 04-Jan-2000 and the last date is 31-Dec-2009.

[Insert Table 2]

In China, individuals open brokerage accounts using internal identity cards. Thus, a single "brokerage account" can be linked to a single person. It is possible for one individual to control multiple brokerage accounts by gathering identity cards from neighbors and opening brokerage accounts in their names. To control for this possibility, we consider only "fund accounts" which are internal securities-firm codes that link a single individual to one or more brokerage accounts. Throughout this paper, our unit of analysis is a single individual who may control one or more underlying brokerage accounts.

Identification of an individual's current location is based on the location of the branch office. In China, an investor must place trades through the branch office in which he originally opened the account. Chinese investors usually open accounts close to where they live. Feng and Seasholes (2004a) exploit this feature of Chinese markets to study trading patterns.

The internal Chinese identity number is encoded with an individual's date of birth, gender, and "*hukou*" location. The "*hukou*" system is a method of registering people to live in certain regions. Under the old ID card system, the *hukou* number tells where an individual originally applied for the card. After s/he moves, the ID number is not changed, meaning we can identify an individual's birth region (with noise). Under the new ID card system, the *hukou* number also tells an individual's first *hukou* location making identification more precise.

[Insert Figure 2]

We have birth date for 475,975 investors who are active at some point in time between 2000 and 2009 (see Table 2, Panel A, Column 4). The highest number of investors are in Liaoning, where our securities firm was founded. Figure 2A shows the evolution of our dataset over time. On 31-Dec-2000, there are only five branch offices and a total of 15,329 individuals. By 2003, there are 24 brokerage offices and 71,269 individuals. When we use panel data, we mainly consider dates from 2003 to 2009. On 31-Dec-2009, there are 42 branch offices and 317,855 individuals.

2.1 Portfolio Overview Statistics

Table 2, Panel B overviews holdings data on a specific date (31-Dec-2009). On this date, our dataset contains 317,855 individuals with holdings in 1,661 different stocks. The median number of stocks held by a given investor is two. The average investor's portfolio value varies between RMB 109,688 in Hebei to RMB 964,242 in Zhejiang. This wide range is emblematic of the wealth dispersion in China: Costal areas such as Zhejiang, Shanghai, and Guangdong are considerably more wealthy than interior areas such as Hebei, Hunan, and Sichuan. The approximate exchange rate on 31-Dec-2009 is RMB 6.82 per USD.

Portfolio values are positively skewed and median portfolio values range from RMB 26,157 (Hebei) to RMB 78,488 (Shanghai). On 31-Dec-2009, the overall median is RMB 35,557.

Column 6 of Panel B shows the total equity value held by all investors in each region. Our dataset contains RMB 53.7 billion on 31-Dec-2009, or USD 7.9 billion.

Figure 2B shows the evolution of our total portfolio holdings over time. On 31-Dec-2000, there is only RMB 814 million held in stocks. By 2003, there is a jump to RMB 3.2 billion. The growth of the Chinese stock markets and the result of the financial tsunami are clearly visible in the figure. Total holdings reach RMB 48.0 billion in 2007, fall to RMB 21.1 billion in 2008, and then rebound to RMB 53.7 billion by 2009. For comparative purposes, the figure also plots the Chinese aggregate stock market capitalization (free float shares). Appendix B provides portfolio overview statistics on three other dates: 31-Dec-2003, 31-Dec-2005, and 31-Dec-2007.

2.2 Additional Data Sources

In addition to the brokerage account data, we obtain closing stock prices and shares outstanding from the CSMAR database. We use the prices to value the investors' portfolios at the end of each year. Free-float shares outstanding and prices are used to calculate market capitalizations.

There are 1,680 listed stocks (A-shares only) as of 31-Dec-2009. Of these stocks, 819 are listed on the Shanghai Stock Exchange and 861 are listed on the Shenzhen Stock Exchange in Guangdong province. On same date, investors in our dataset hold 1,661 listed stocks (812 are Shanghai-listed and 849 are Shenzhen-listed). Appendix A provides a geographic overview of Chinese stocks.

We obtain details related to initial public offerings (IPOs) in China from the Resset database. We have IPO investment bank data for all of the 1,680 listed stocks as of 31-Dec-2009. The timing of the IPOs is as follows, 164 of the IPOs took place in 1993 or earlier; 597 of the IPOs took place between 1994 and 1998; 438 took place between 1999 and 2003; the remaining 481 took place in 2004 or later.

Finally, we obtain the location(s) of the companies' business operations. We record a company's primary, secondary, and tertiary regions ranked by revenues. The data are available from the Resset and Wind databases. Because we have data for only 590 companies, tests involving the location of business operations are used primarily for robustness checks.

3 Portfolio Tilting

We first test whether individual investors prefer locally headquartered stocks, culturally similar companies, and/or locally traded companies. The test procedure consists of five steps: *i*) We consider holdings on four dates: 31-Dec-2003, 31-Dec-2005, 31-Dec-2007, and 31-Dec-2009. *ii*) For each investor i on each of the four dates t, we calculate the portfolio weights of all stocks from a region *reg* that trade on exchange e and denote the quantity $\omega_{i,t}^{reg,e}$. Given that the median portfolio has only two stocks, most of these weights are zero. We address the possibility of overstating the statistical significance of our results due to all the zero-observations and make necessary corrections at the end of this section. *iii*) For the aggregate market portfolio, we calculate the weights of all the stocks from each of the 62 region-exchange combinations and denote the quantity $\omega_{m,t}^{reg,e}$. There are 31 regions and two stock exchanges, giving 62 region-exchange combinations. *iv*) We calculate the difference between each investor's region-exchange weight and the market's region-exchange weight. *v*) We then regress the over/under weight measures on a series of indicator variables. Note that the regressions contains 47,262,290 observations which comes from multiplying 762,295 investor-year observations × 31 regions × 2 exchanges.

$$\begin{aligned} \omega_{i,t}^{reg,e} - \omega_{m,t}^{reg,e} \quad = \quad & \beta_1 \cdot D[Livs_i = HQ_j] \quad + \quad \beta_2 \cdot D[Born_i = HQ_j] \\ & + \quad \beta_3 \cdot D[Born_i = HQ_j | Lives_i \neq Born_i] \quad + \quad \beta_4 \cdot D[Lives_i = Exch_j] \\ & + \quad \beta_5 \cdot D[Lives_i = Exch_j | HQ_j \neq Exch_j] \quad + \quad \epsilon_{i,t}^{reg,e} \end{aligned} \tag{1}$$

The indicator variable $D[Lives_i = HQ_j]$ takes a value of one if investor i lives in the same region as stock j's headquarters. The indicator variable $D[Born_i = HQ_j]$ takes a value of one if investor i was born in the same region as stock j's headquarters. The indicator variable $D[Born_i = HQ_j | Lives_i \neq Born_i]$ is similar to the preceding variable but only takes a value of one if investor i currently lives in a region that is different from his birth region. This indicator variable allows us to focus on "movers." The indicator variable $D[Lives_i = Exch_j]$ takes a value of one if investor i lives in the same region as where stock j is traded. Finally, the indicator variable $D[Lives_i = Exch_j | HQ_j \neq Exch_j]$ is similar to the preceding one but only takes a value of one if company j's headquarters are not in the same region as the exchange where its stock is listed.

[Insert Table 3 and Figure 3]

Table 3 shows the regression results related to Equation (1). Regression (1) shows that investors overweight locally headquartered stocks. A coefficient value of 2.91 indicates investors hold 5.82% more locally-headquartered stocks than market capitalization weights predict.[5] To show the pervasiveness of this effect, Figure 3 plots the overweighting measure for each year between 2000 and 2009. The measure ranges between 5.30% and 8.24%.

Regression (2) shows that investors overweight stocks headquartered where the investors were born by 5.64% (= 2.82 × 2) more than market capitalization weights predict. Regression (3) considers only the holdings of investors who live in a region that is different from their birth region. The overweighting coefficient is only 1.14% (= 0.57 × 2) and significantly smaller than the coefficient in Regression (2). We wait until Regression (6) to evaluate the difference between the traditional home bias effect and the cultural affinity effect.

Regression (4) shows that investors overweight stocks that trade on nearby exchanges by 13.95% more than market capitalization weights predict.[6] In Regression (5), we consider only holdings of locally-listed companies that are not headquartered in the same region as an exchange. The location-of-trade effect is now 5.89% (= 0.19 × 31) and thus comparable to the traditional home bias effect.

As noted on Table 3, there are 47,262,290 total observations. Of these, $\omega_{i,t}^{reg,e}$ is non-zero for 2,344,278 observations, while the vast majority of observations are associated with "zero" positions. To calculate statistical significance, we consider the number of independent observations to be only 2,344,278 even though investors could have actively chosen to assign zero weight to stocks from certain regions. To be conservative, we consider zero weights do not count as active portfolio decisions. Regardless, results are statistically significant at all conventional levels.

Before turning to the multivariate regressions, we point out that Table 3 contains one of this paper's contributions. The institutional set-up in China allows us to study portfolio holdings along three different dimensions. We document that individual investors have a tendency to hold locally-listed stocks (the location-of-trade effect). This tendency is at least of strong as the traditional home bias effect and can be up to 2.40 times as strong.[7]

[5] We get the value of 5.82% by multiplying 2.91 × 2. An investor in a given region can hold both Shanghai- and Shenzhen-listed local stocks. Therefore, we multiply the coefficient by 2.

[6] We get the value of 13.95% by multiplying 0.45 × 31. An investor in from Shanghai (for example) can hold Shanghai-listed stocks from each of the 31 regions. Therefore, we multiply this coefficient by 31.

[7] We get 2.40 = 13.95% ÷ 5.82%.

3.1 Economic Significance

We test whether all three effects exist together using multivariate regressions. Table 3, Regressions (6) and (7) each test three indicator variables at the same time. From Regression (6), we immediately see that all three effects coexist because all coefficients are statistically significant. No single effect "drives out" another.

We estimate economic significance using Table 3, Regression (6). The unit of analysis in the regressions is an investor's holdings in one of 62 region-exchange combinations. There are approximately 1,500 listed stocks on each of the four dates used in the regression. Dividing by 31 implies an average of approximately 50 listed companies per region, so we can think of the 2.39% coefficient on $D[Lives_i = HQ_j]$ as affecting a group of 50 stocks on average.

A similar calculation can be used for the $D[Born_i = HQ_j]$ coefficient. Therefore, the first two coefficients relate directly (and roughly) to similar numbers of stocks. If we divide 2.39 by 0.54, we can say that the home bias effect is roughly 4.43 times the magnitude of the cultural affinity effect.

The location-of-trade coefficient $D[Lives_i = Exch_j]$ is approximately $1/7^{th}$ as large as the home bias coefficient (0.36 vs. 2.39). For an investor living in Shanghai, however, there are more than 750 locally listed stocks. This means that the coefficient on $D[Lives_i = Exch_j]$ is relevant for 750/50 stocks, or about 15 times as many stocks as the other two coefficients. If we multiply the 0.36 coefficient by 15, we get 5.40, meaning that the location-of-trade effect is 2.26 times the economic magnitude of the traditional home bias effect ($2.26 = 5.40 \div 2.39$). The location-of-trade effect is 10 times the economic magnitude of the cultural affinity effect ($10.0 = 5.40 \div 0.54$).

If we make similar economic calculations using coefficients from Regression (7), many of the qualitative conclusions do not change, except that the location-of-trade effect is roughly the same magnitude as the traditional home bias effect. One contribution of this paper, then, is the finding that the location-of-trade effect is at least the same order of economic magnitude as the traditional home bias effect.[8]

[8]Since the original draft of Feng and Seasholes (2004b) and our update, a working paper has appeared that studies location-of-trade effects in China. After confirming our findings related to the location-of-trade effect, Liao et al. (2010) study trading and return comovement.

3.2 Robustness Checks

The associated Internet Appendix provides numerous robustness checks. For example, Appendix C shows results for traditional home bias for each of the 17 regions in our dataset on each of four dates: 31-Dec-2003, 31-Dec-2005, 31-Dec-2007, and 31-Dec-2009. We note that investors overweight locally headquartered stocks for all regions and all dates.

The measure of overweighting used in the main text is: $\omega_{i,t}^{reg,e} - \omega_{m,t}^{reg,e}$. To control for the fact that some regions have higher fractions of market capitalization than other regions, the Internet Appendix introduces two alternative measures of overweighting. The second measure is $(\omega_{i,t}^{reg,e}/\omega_{m,t}^{reg,e}) - 1$. The third measure is $ln(\omega_{i,t}^{reg,e}/\omega_{m,t}^{reg,e})$. Appendix C shows results for both of the alternative measures, as well as a figure plotting all three of our measures for the period from 2000 through 2009.

Appendix D shows results for the cultural affinity effect for each of the 17 regions in our dataset and on four dates: 31-Dec-2003, 31-Dec-2005, 31-Dec-2007, and 31-Dec-2009. We note that investors overweight stocks from their birth regions for all regions and all dates.

Appendix E shows results for the location-of-trade effect and portfolio tilting. In this appendix only, we focus on investors from the two regions with exchanges (Shanghai and Guangdong). The location-of-trade effect is particularly strong in 2003 (+19.5%) and declines by 2009 (+6.8%). We note that the effect is negative in Shanghai for 2009 only (-5.7%).

Appendix F shows the results for primary business operations and portfolio tilting. We show that investors tilt their portfolios toward stocks with local primary business operations. The magnitude of the tilting is 3.6% in 2003 and falls to 2.0% in 2009.

Appendix G shows that the tilting effect (toward local business operations) falls to zero if we consider a company's secondary and tertiary operations.

4 Information

We test whether investors have value-relevant information about the stocks they hold. Brennen and Cao (1997) present a multi-asset model in which local investors have a cumulative

information advantage about stocks in their home region.[9] Broadly, our approach focuses on implications regarding holdings while the original paper mainly tests implications regarding trading.

We test the hypothesis from p.1863 of Brennen and Cao (1997) that "home bias will be greater for [stocks] whose payoffs have a high covariance with the payoff of the expected market portfolio." This hypothesis is not tested in their 1997 paper, though it is an implication of a model with better informed local investors. As a robustness check, Appendix H also checks whether portfolios of local stocks generate positive alphas.

Our stock-level measure of home bias is based on the (normalized) concentration of local ownership using our dataset. The formula is shown below. It is important to note that we do not have the complete holdings of each listed company. Therefore, $\Omega_{j,t}$ is a noisy estimate of the fraction of stock j's shares held by local investors on date t. Any noise in this measure should bias results against our findings.

$$\Omega_{j,t} = \frac{\text{Shares held by local investors} \div \text{Number of local investors}}{\text{Shares held by all investors} \div \text{Number of all investors}} \tag{2}$$

We calculate $\Omega_{j,t}$ for all possible stocks on four dates: 31-Dec-2003, 31-Dec-2005, 31-Dec-2007, and 31-Dec-2009. We then regress $\Omega_{j,t}$ on stock j's covariance with the market portfolio. For a given date, such as 31-Dec-2009, the covariance is calculated using daily data from that entire calendar year, in this case, from Jan-2009 to Dec-2009.

$$\Omega_{j,t} = \beta_0 + \beta_1 Cov[r_j, r_m] + \epsilon_{j,t} \tag{3}$$

Table 4 presents the results from the regression shown in Equation (3). From Regression (1), we see that there is not a positive relationship as predicted by the Brennen and Cao (1997) model. In fact, the relationship between $\Omega_{j,t}$ and $Cov[r_j, r_m]$ is significantly negative with a -2.9 t-stat.

[Insert Table 4]

[9] The Brennen and Cao model considers worldwide equity markets divided by national borders. Our paper considers only China and divides the country in the 31 regions shown in Figure 1. While not exactly analogous situations, the Brennen and Cao (1997) framework is potentially reasonable for our study because the Chinese A-share market is by-and-large self-contained (note, China is partially segmented from the rest of the world's equity markets.)

Regression (2) includes time fixed-effects. Regression (3) uses clustered standard errors clustered by stock ticker. The conclusions are not changed by the alternative specifications.

Appendix H provides two robustness checks. First, we use $ln(\Omega_{j,t})$ as the dependent variable in Equation (3). Second, we form holdings-based calendar time portfolios as in Seasholes and Zhu (2010). We show that portfolios of local stocks do not generate positive alphas. The calendar-time results do not lack power as they are based on over 5,000 observations.

We conclude that there is no evidence that investors have value-relevant information about the local stocks they hold. Our results are primarily based on a new test implied by the Brennen and Cao (1997) model. Not only do we reject the implication of the model, but our results show a significantly negative relationship, while the existence of informed local trading predicts a positive relationship.

5 Familiarity

We test whether past events affect investors' present holdings. In particular, we are interested in events that are unlikely to give investors relevant information about a company's current outlook. Our tests involve studying the location of the investment bank that ran a given company's initial public offering (IPO). We test whether investors who lived near the investment bank and were (presumably) more exposed to marketing materials about a company during its IPO process, are more likely to hold the company's stock today.

Our test involves a cross-sectional regression at a single point in time (31-Dec-2009). On that date, investors in our dataset held 1,661 different stocks. For each of these companies, we estimate the amount of local ownership using the formula shown in Equation (2). In total we have sufficient data to calculate $\Omega_{j,t}$ and estimate the regression for 1,184 companies. One can think of our test as follows: given that home bias exists, we are interested in testing for cross-sectional differences (if any) across listed stocks.

We regress our degree of local ownership measure (Ω_j) on a constant, an indicator variable ($D[Lives_i = Ibank_j]$), and the company's market capitalization. The indicator variable, $D[Lives_i = Ibank_j]$, takes a value of one if the region where investors live is the same as

where the investment bank that managed the IPO is located:

$$\Omega_{j,t} \quad = \quad \alpha + \beta_1 \cdot D[Lives_i = Ibank_j] + \beta_2 ln(MktCap) + \epsilon_{j,t} \tag{4}$$

Table 5 reports the main results. In Regression (1) we see the degree of local ownership is 29% above normal levels when the investment bank is headquartered in the same region where the investor lives. To see this 29% increase, notice that Ω_j is 3.31 when the investment bank is not local and 4.26 (= 3.31 + 0.95) when the investment bank is local. Regression (2) includes the natural log of a firm's market capitalization as a control variable.

[Insert Table 5]

Our results show that investors have a preference for locally-headquartered companies in China. This preference increases by 29% if a local company was taken public by a local investment bank, *even if the IPO took place many years ago.* Therefore, investors' holdings appear to be influenced by events and factors that are not associated with today's economic environment.

6 Price Effects

Our final test studies the relationship between the degree of local ownership for a given stock and its price. In a world similar to the one described in Merton (1987), investors do not consider all stocks when forming their portfolios. Instead, investors "recognize" only a subset of available securities. Note that the Merton (1987) framework does not specify exactly why investors consider only a subset of securities.

In equilibrium, investors choose portfolios, markets clear, and prices of securities are observed by financial econometricians. In the Merton (1987) world, stocks that are largely unknown by investors have high expected returns (low prices), while stocks that are widely known have low expected returns (high prices). Holdings and prices are co-determined in equilibrium and prices reflect the degree of risk sharing for each stock.

We test the intuition of the Merton (1987) model by measuring the relationship between the degree of local ownership and prices. We use our $\Omega_{j,t}$ as a proxy for the degree that investors

focus narrowly on a given stock. If $\Omega_{j,t}$ is high, we assume that many local investors focus on stock j and that overall risk-sharing is low. Table 2, Panel B shows that the typical individual investor holds only two stocks in his portfolio. In a retail-dominated market such as China, it is not inconceivable that incomplete risk sharing is prevalent.

For our test, we measure prices directly. We believe our approach is preferable to measuring future realized returns and assuming that average realized returns are noisy proxies for expected returns. In general, the value of our approach increases as the total length of one's dataset decreases. Under the assumption that Hong Kong-listed shares are unbiased estimates of companies' true values, we use the ratio of a company's China-listed A-share price to its Hong Kong-listed H-share price as a normalized measure of price ($AH_{j,t} = P^A_{j,t}/P^B_{j,t}$). If a company j's relative price is high in China, the ratio $P^A_{j,t}/P^H_{j,t}$ will be high. If its relative price is low, the ratio will be low. We can calculate $AH_{j,t}$ for 63 different stocks in our data.

$$AH_{j,t} = \beta_0 + \beta_1 \cdot \Omega_{j,t} + \epsilon_{j,t} \tag{5}$$

It must be emphasized that Regression (5) does not imply any causality. Prices and holdings are co-determined in equilibrium. We could very well put the $\Omega_{j,t}$ on the left. An implication of the incomplete risk-sharing model is that there should be a negative relationship between $AH_{j,t}$ and $\Omega_{j,t}$.

[Insert Table 6]

Table 6 presents our results. We consider five different regression specifications with different combinations of fixed effects and clustered standard errors. To have any power, we use monthly observations for this table only. There are 120 total months in our dataset. As with most asset pricing tests, one worries about cross-sectional dependence. Therefore, Regressions (4) and (5) use clustered standard errors (clustered by month).

Economic Significance: To be conservative, we focus on Regression (5). The main coefficient is -1.73 with a -2.5 t-stat. The standard deviation of $\Omega_{j,t}$ is 2.97. Therefore, a stock with a value of $\Omega_{j,t}$ that is one standard deviation above the mean, sells for 10.2% less than a stock with a value of $\Omega_{j,t}$ that is one standard deviation below the mean (10.2% = 2 * 2.97 * 1.73/100). The price difference represents the final contribution of this paper.

7 Conclusions

This paper studies how individual investors' portfolio choices are influenced by geography, culture, and location of trade. We exploit four features of Chinese stock markets to disentangle three effects. First, investors overweight locally-headquartered stocks and stocks with local business operations (traditional home bias). Second, investors overweight stocks headquartered from the region of the country where the investor was born (cultural affinity). Third, investors overweight stocks listed on nearby exchanges (location of trade).

We find that the three effects mentioned above coexist. No one effect drives out either of the other two when using a multi-variate regression analysis. In terms of economic significance, the location-of-trade bias is particularly important in explaining shifts away from a passive (market-cap weighted) benchmark.

Applying a new test based on the Brennen and Cao (1997) model, we find no evidence that investors tilt their portfolios away from the market portfolio because they have or use value-relevant information.

We do, however, find evidence of long-lived familiarity effects. We use the proximity of the investment bank that managed a given IPO to the investor's home as an instrument for increased levels of investor familiarity with a stock. Securities firms can easily promote new issues to investors living nearby. But, it is difficult to argue that information released during the IPO process is relevant when evaluating a company's prospects years later. Nonetheless, our results indicate that increased familiarity with a stock's IPO is associated with portfolio tilting towards local companies that is 29% above baseline levels.

We show a link between local ownership and prices by studying Chinese dual-class shares. A stock with an amount of local ownership that is one standard deviation above the mean is estimated to have a price 10.2% below a stock with local ownership that is one standard deviation below the mean. This result is consistent with a model of incomplete risk sharing affecting prices.

The familiarity results in our paper suggest a number of avenues for future work. How do marketing efforts influence portfolio choice? How does the influence of marketing vary across investor age, gender, education, experience, or wealth? Can long-lived familiarity effects help financial economists estimate the magnitude of search costs faced by individual investors?

The price results also suggest a number of avenues for future work. Mainly, can we find an instrument that reflects a situation in which a large number of investors suddenly and exogenously learn about a stock? It is important that the instrument not be tied to value-relevant information about the stock. If we can find such an instrument, we can then ask whether prices go up when investors suddenly (and exogenously) learn about stocks?

References

Bernile, Gennaro, Alok Kumar, and Johan Sulaeman. 2010. "Home Away From Home: Economic Relevance and Local Investors." Unpublished working paper, Univ. of Miami.

Brennen, Michael J., and H. Henry Cao. 1997. "International Portfolio Investment Flows." *Journal of Finance* 52(5):1851–1880.

Chan, Kalok, Allaudeen Hameed, and Sie Ting Lau. 2003. "What If Trading Location is Different from Business Location? Evidence from the Jardine Group." *Journal of Finance* 58(3):1221–1246.

Feng, Lei, and Mark S. Seasholes. 2004a. "Correlated Trading and Location." *Journal of Finance* 54(5):2117–2144.

———. 2004b. "Portfolio Choice and Location of Trade." Unpublished working paper, U.C. Berkeley.

Froot, Kenneth A., and Emil M. Dabora. 1999. "How Are Stock Prices Affected by the Location of Trade?" *Journal of Financial Economics* 53:189–216.

Garcia, Diego, and Oyvind Norli. 2010. "Geographic Dispersion and Stock Returns." Unpublished working paper, UNC.

Grinblatt, Mark, and Matti Keloharju. 2001. "How Distance, Language, and Culture Influence Stockholdings and Trades." *Journal of Finance* 56(3):1053–1073.

Huberman, Gur. 2001. "Familiarity Breeds Investment." *Review of Financial Studies* 14(3):659–680.

Liao, Li, Zhisheng Li, Weiquiang Zhang, and Ning Zhu. 2010. "Does the Locaton of Stock Exchange Matter? A Within-Country Analysis." Unpublished working paper, UC Davis.

Massa, Massimo, and Andrei Simonov. 2006. "Hedging, Familiarity and Portfolio Choice." *Review of Financial Studies* 19(2):633–685.

Merton, Robert C. 1987. "A Simple Model of Capital Market Equilibrium with Incomplete Information." *Journal of Finance* XLII(3):483–510.

Seasholes, Mark S., and Ning Zhu. 2010. "Individual Investors and Local Bias." *Journal of Finance* 65(5):1987–2011.

Table 1: Variable Descriptions and Definitions

Panel A: Terms Used Throughout the Paper

Birth Region	Estimate of where an investor was born based on his/her *Hukou* number. Used interchangeably with *Cultural Background*. Investors in our dataset were born in 31 of 31 regions in China.
Branch Office	As of 31-Dec-2009, our dataset contains 42 branch offices all from the same securities firm. The branch offices are located in 17 of 31 regions in China.
Business Operations	The Internet Appendix classifies companies' locations based on their business operations (a breakdown of sales by region). For 590 / 319 / 209 companies, we can identify their primary / secondary / tertiary regions.
Company Location	The main text classifies companies' locations based on their headquarters. Companies are headquartered in 31 of 31 regions in China. The Internet Appendix presents results based on the locations of *Business Operations*.
Cultural Background	Based on the region identified by an investor's *Hukou* number. Used interchangeably with *Birth Region*. Investors in our dataset come from 31 of 31 regions in China.
Fund Account	One or more brokerage accounts controlled by a single individual.
Hukou System	System of registering people to live in areas of China.
Individual Investor	An individual in China that is identified by a unique *Hukou* number and unique *Fund Account* number.
Investor Location	Based on where an investor opens his/her brokerage account. This is where s/he places all trades. Investors in our dataset are located in 17 of 31 regions in China.
Region	Can be either a province (e.g., Fujian), municipality (e.g., Shanghai), or autonomous region (e.g., Xinjiang). We identify 31 different regions in China. Each region has a unique code and is shown in Figure 1.

Table 1: *Continued*

Panel B: Variables Used Throughout the Paper

$\omega_{i,t}^{reg,e}$	The weight of stocks from region *reg* that trade on exchange e in investor i's portfolio as of date t.
$\omega_{m,t}^{reg,e}$	The weight of stocks from region *reg* that trade on exchange e in the market portfolio as of date t.
$\Omega_{j,t}$	The fraction of stock j's shares owned by local investors, as of a single date t, and based on our data. The variable is defined as: $\Omega_{j,t} = \frac{\text{Shares held by local investors} \div \text{Number of local investors}}{\text{Shares held by all investors} \div \text{Number of all investors}}$
$AH_{j,t}$	The ratio of a company i's China (mainland) A-share price to its Hong Kong H-share price as of date t.
$D\left[Lives_i = HQ_j\right]$	Indicator variable that takes a value of one if investor i lives in the same region as stock j's headquarters.
$D\left[Born_i = HQ_j\right]$	Indicator variable that takes a value of one if investor i was born in the same region as stock j's headquarters.
$D\left[Born_i = HQ_j \vert Lives_i \neq Born_i\right]$	Similar to the above variable but only takes a value of one if investor i was born was born in a different region than where s/he currently lives.
$D\left[Lives_i = Exch_j\right]$	Indicator variable that takes a value of one if investor i lives in the same region as where stock j is traded.
$D\left[Lives_i = Exch_j \vert HQ_j \neq Exch_j\right]$	Similar to the above variable but only takes a value of one if stock j's headquarters is in a different region than the exchange where it trades.
$D\left[Lives_i = Ibank_j\right]$	Indicator variable that takes a value of one if the investment bank that managed a company's IPO is located in the same region as where the investor currently lives.

Table 2: Summary Statistics

The table presents summary statistics related to our brokerage data. Panel A shows that data come from 39 branch offices of a single securities firm. The offices are located in 17 different regions in China. Column (3) shows the date of the first transaction in each region. We count the number of different individuals who trade at some time during our sample period. Column (4) shows the number of individuals with birth data. Panel B provides overviews of individual investors' portfolios as of 31-Dec-2007.

Panel A: Overview Stats

(1) Location of Branch Offices (Region)	(2) Number of Branch Offices (Num)	(3) Date of the First Transaction (D-M-Y)	(4) Indivs with Birth Data (Num)
Fujian	1	23-Mar-2005	7,245
Guangdong	3	04-Jan-2000	12,514
Hebei	2	02-Jan-2003	32,096
Heilongjiang	1	02-Jan-2003	9,605
Hunan	2	02-Jan-2003	24,042
Jiangsu	2	02-Jan-2003	9,786
Jilin	6	02-Jan-2003	105,283
Liaoning	9	20-Oct-2000	151,699
Neimenggu	1	19-Feb-2003	6,362
Shaanxi	1	02-Jan-2003	6,040
Shandong	1	01-Apr-2005	4,089
Shanghai	3	02-Jan-2003	14,047
Sichuan	5	04-Jan-2000	58,786
Tianjin	1	02-Jan-2001	20,388
Xinjiang	1	02-Jan-2003	6,017
Yunnan	1	06-Jan-2003	2,236
Zhejiang	2	04-Mar-2005	5,740
Total	42	n.m	475,975

Table 2: *Continued*

Panel B: Portfolio Overview Stats as of 31-Dec-2009

(1) Location of Branch Offices (Region)	(2) Num of Indivs (Num)	(3) Median Num of Stocks Per Individual (Num)	(4) Average Portfolio Value (RMB)	(5) Median Portfolio Value (RMB)	(6) Total Value Held by All Investors (RMB mm)
Fujian	4,339	2	189,274	31,500	821
Guangdong	7,718	3	503,700	66,473	3,888
Hebei	21,617	2	109,688	26,157	2,371
Heilongjiang	6,733	3	178,695	41,634	1,203
Hunan	16,889	2	131,426	38,197	2,220
Jiangsu	6,501	3	282,637	58,800	1,837
Jilin	67,703	2	124,141	32,800	8,405
Liaoning	103,597	2	144,680	35,713	14,988
Neimenggu	3,828	2	240,165	37,859	919
Shaanxi	3,599	3	284,727	32,360	1,025
Shandong	2,042	3	306,029	31,703	625
Shanghai	10,134	3	433,867	78,488	4,397
Sichuan	39,187	2	119,483	31,968	4,682
Tianjin	14,965	3	113,789	29,010	1,703
Xinjiang	3,865	2	189,327	45,361	732
Yunnan	1,533	3	255,012	52,952	391
Zhejiang	3,605	3	964,242	62,985	3,476
Total	317,855	n.m.	n.m.	n.m.	53,683
Average	18,697	* 2	268,876	** 35,557	n.m.

* *Calculated as the median number of stocks across all individuals on this date.*

** *Calculated as the median portfolio value across all individuals on this date.*

Table 3: Portfolio Tilting

The table presents multi-variate regression results related to portfolio tilting. We regress investor-level over/under-weighting measures on a series of indicator variables. The left-hand side variable is $\omega_{i,t}^{reg,e} - \omega_{m,t}^{reg,e}$, where $\omega_{i,t}^{reg,e}$, is investor i's portfolio weight on date t of all stocks headquartered in region *reg* and that trade on exchange e. Also, $\omega_{m,t}^{reg,e}$, is the market portfolio weight of all stocks from the same region-exchange. On a given date t, each investor has 62 over/under-weighting measures which equals 31 regions $\times$ 2 exchanges. For this table, we measure holdings as of four dates: 31-Dec-2003, 31-Dec-2005, 31-Dec-2007, and 31-Dec-2009. The right-hand variables are a series of indicators that are defined in Table 1. Reported coefficients have been multiplied by 100. T-statistics are reported below the coefficients and reflect only the number of non-zero portfolio weights in our data.

Dependent Variable: $\omega_{i,t}^{reg,e} - \omega_{m,t}^{reg,e}$

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$D\left[Lives_i = HQ_j\right]$	2.91					2.39	2.91
t-stat	*(81.9)*					*(20.9)*	*(81.9)*
$D\left[Born_i = HQ_j\right]$		2.82				0.54	
t-stat		*(79.3)*				*(4.7)*	
$D\left[Born_i = HQ_j \vert Lives_i \neq Born_i\right]$			0.57				0.55
t-stat			*(3.6)*				*(3.4)*
$D\left[Lives_i = Exch_j\right]$				0.45		0.36	
t-stat				*(11.8)*		*(9.3)*	
$D\left[Lives_i = Exch_j \vert HQ_j \neq Exch_j\right]$					0.19		0.18
t-stat					*(4.7)*		*(4.6)*

Each regression has 47,262,290 total observations which
equals 762,295 investor-year obs $\times$ 31 regions $\times$ 2 exchanges.
Of these, $\omega_{i,t}^{reg,e} \neq 0$ for 2,344,278 obs while $\omega_{i,t}^{reg,e} = 0$ for 44,918,012 obs.

Table 4: Information

The table presents regression results related to home bias and information. We test the hypothesis from p.1863 of Brennen and Cao (1997) that "home bias will be greater for [stocks] whose payoffs have a high covariance with the payoff of the expected market portfolio." The stock-level measure of local ownership (home bias) is $\Omega_{j,t}$ and defined in Table 1. We measure $\Omega_{j,t}$ for each stock as of four different dates: 31-Dec-2003, 31-Dec-2005, 31-Dec-2007, and 31-Dec-2009. For each stock j and for each of the four dates, we estimate the covariance with the market portfolio using daily returns from the previous year. The return of the market is based on the MSCI China A Index. The coefficient on Cov[$r_{i,t}$, $r_{m,t}$] has been divided by 1,000. T-statistics are reported below the coefficient estimates. Regression 2 includes fixed effect (year) dummies. Regression 3 reports t-statistics based on clustered standard errors (clustered by stock ticker).

Dependent Variable: $\Omega_{j,t}$

	(1)	(2)	(3)
Cov[$r_{i,t}$, $r_{m,t}$]	-4.17	-4.29	-4.17
t-stat	*(-2.9)*	*(-1.6)*	*(-2.9)*
Constant	6.01		6.01
t-stat	*(11.0)*		*(8.3)*
D(2003)		5.03	
t-stat		*(7.5)*	
D(2005)		7.31	
t-stat		*(9.3)*	
D(2007)		6.17	
t-stat		*(4.1)*	
D(2009)		5.72	
t-stat		*(4.8)*	
Num of Clusters			1,226

Table 5: Familiarity

The table presents results related to familiarity and investor portfolios. We run a single, cross-sectional regression (across stocks) using data as of 31-Dec-2009. The left-hand side variable ($\Omega_{j,t}$) measures the degree of local ownership using our dataset and is defined in Table 1. The right-hand side variables include an indicator if the region where a investors live (and the company is headquartered) is the same as the investment bank that was responsible for the initial public offering.

Dependent Variable: $\Omega_{j,t}$

	(1)	(2)
$D\left[Lives_i = Ibank_j\right]$	0.95	0.79
t-stat	*(2.8)*	*(2.3)*
ln(MktCap)		0.38
t-stat		*(2.6)*
Constant	3.31	-2.21
t-stat	*(12.6)*	*(-1.0)*
# of Stocks	1,184	1,184

Table 6: Price Effects

The table presents results relating local bias and price effects. We regress an estimate of each stock's (relative) price on the degree of local ownership. The measure of (relative) price is the stock's $AH_{j,t}$ premium as defined in Table 1. The measure of local ownership ($\Omega_{j,t}$) is also defined in Table 1. The coefficient for $\Omega_{j,t}$ has been multiplied by 100. T-statistics are shown below the coefficient estimates. Regressions (4) and (5) use clustered standard errors (clustered by month).

Dependent Variable: $AH_{j,t}$

	(1)	(2)	(3)	(4)	(5)
$\Omega_{j,t}$	-10.54	-5.15	-1.73	-14.22	-1.73
t-stat	*(-4.7)*	*(-6.9)*	*(-2.1)*	*(-7.1)*	*(-2.5)*
Constant				3.29	
t-stat				*(19.9)*	
# of Stock Fixed Effects	63		63		63
# of Month Fixed Effects		120	120		120
# of Clusters				120	120

Figure 1: Map of the People's Republic of China

The figure shows the location of 31 regions within the People's Republic of China. The 17 shaded regions indicate where our brokerage offices are located. The 17 regions are also starred (*) in the key on the left-hand side. A "region" is defined as either a province (e.g., Jilin or 22), a municipality (e.g., Shanghai or 31), or an autonomous region (e.g., Xinjiang or 65).

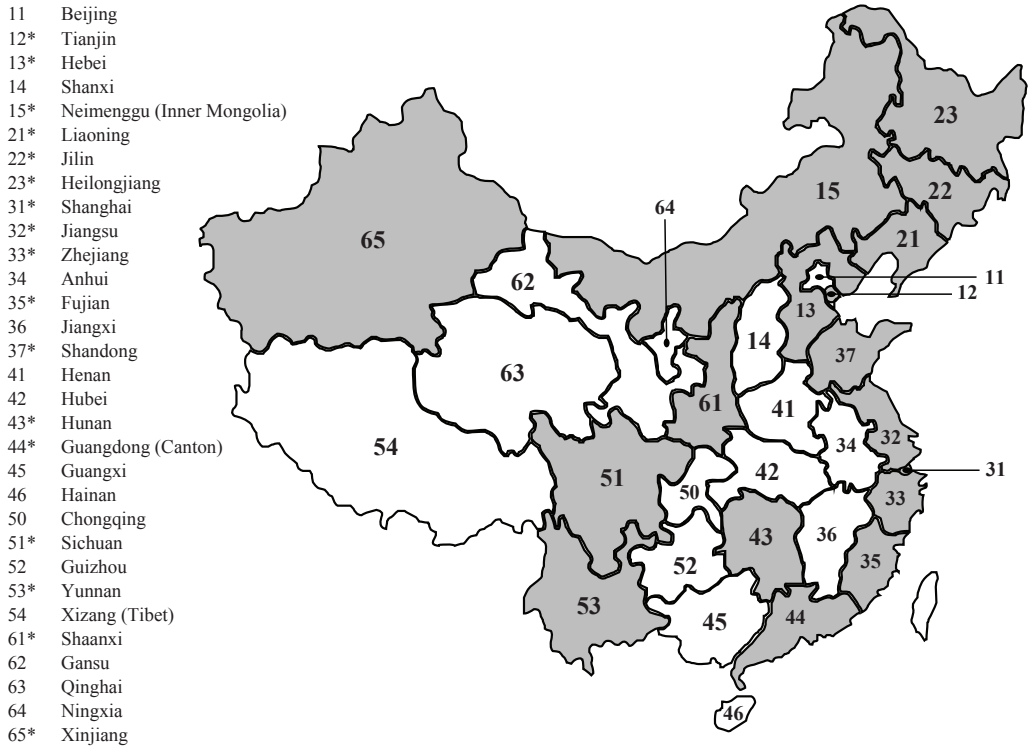
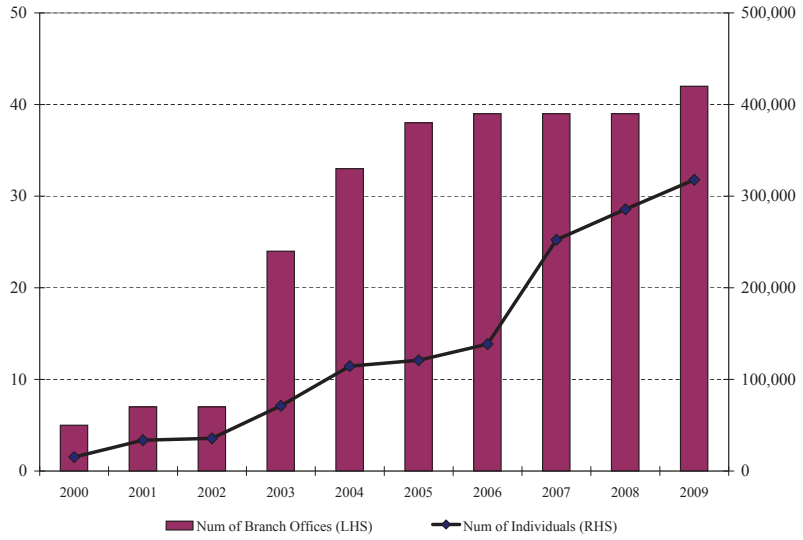


Figure 2: Overview of Brokerage Data

Panel A: Number of Branch Offices and Individuals

The figure shows the size of our dataset measured by the numbers of branch offices and investors. The number of branch offices is shown by the grey columns and read on the left-hand Y-axis (LHS). The number of individual investors with birth data is shown by the line and read on the right-hand Y-axis (RHS).



Panel B: Value of Holdings

The figure shows the size of our dataset measured by the value of holdings by individual investors. The total values of shares held are shown by the grey bars and are associated with the left-hand Y-axis (LHS). For, comparison, the line shows the aggregate market capitalization (free float) on the right-hand Y-axis (RHS).

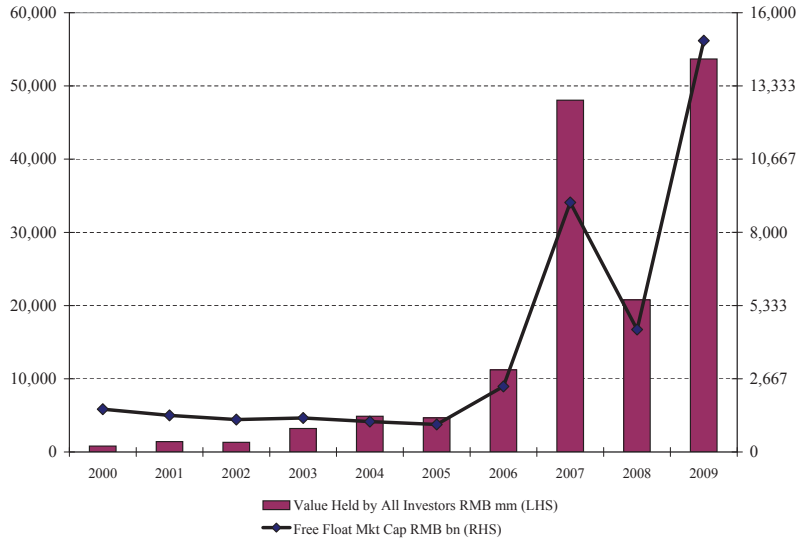


Figure 3: Company Headquarters and Portfolio Tilting

The figure shows the time series of our (aggregate) measure of portfolio tilting towards locally-headquartered stocks. Consider two quantities: (A) The average fraction of individuals' portfolios that is invested in stocks headquartered where the investors currently live; (B) The fraction of the total market located in the same region. Our overweight measure is the difference (A)-(B). Values greater than zero indicate a preference for locally headquartered stocks.