Trust and Local Bias

Abstract

A lack of social trust may induce investors to seek close relationships with local businesses to guide their investment decisions, translating into greater local bias and local information advantages. Using survey measures of inter-personal trust across U.S. regions, we find that institutional investors located in low trust regions exhibit greater bias toward local stocks. Long-short portfolios sorted by local bias generate a significant 7% risk-adjusted annual return in low trust regions, but an insignificant 1% in high trust regions. Using distance to local golf courses as a proxy for the convenience of establishing business ties, we find that low trust investors proximate to prestigious state golf courses experience the greatest local information advantages. We further exploit an exogenous feature that golf is dependent upon weather conditions. The pattern of outperformance accrues only during times of good weather (i.e., low precipitation), consistent with the relationship building channel.

I Introduction

Social trust is the general amount of trust we have in other members of society. Since Arrow (1972, 1974), economists have argued that trust is an essential element of economic transactions.[1] Social trust is related to economic growth (Knack and Keefer, 1997), judicial efficiency and corruption (La Porta et al., 1997), international trade (Guiso, Sapienza, and Zingales, 2008), and organizational structure (Bloom, Sadun, and Van Reenen, 2012). Trust also affects financial decisions such as informal borrowing (Karlan, Mobius, Rosenblat, and Szeidl, 2009), the usage of checks (Guiso, Sapienza, and Zingales, 2004), stock market participation (Guiso, Sapienza, and Zingales, 2009), and the choice of delegated asset management (Gennaioli, Schleifer, and Vishny, 2014).

However, little attention has been paid to how trust affects investment decisions and portfolio allocations. This is an important consideration because investors' preferences – potentially driven by trust – may affect valuations, risk premiums, and consequently the cost of capital for corporations. In this paper, we take a step towards understanding this relation by empirically examining the impact of trust on a well-documented behavior in asset management: the local bias of institutional investors.[2]

To understand how trust affects investment decisions, we rely on the established sociology research finding that relationship and commitment formation helps to resolve social uncertainty in low trust societies (Yamagishi and Yamagishi, 1994; Yamagishi, Cook,

[1] Arrow (1972) argues that "virtually every commercial transaction has within itself an element of trust.", and Arrow (1974) calls trust "an important lubricant of a social system."
[2] We focus on institutional asset managers who are employed to *participate* in the market. These investors are major market participants, and own the majority of the U.S. equity market. Therefore, it is important to examine the behavior of such investors who directly influence financial outcomes.

and Watabe, 1998).[3] A lack of general trust causes people to seek connections and build relationships through repeated interactions with friends, acquaintances, or business associates, in order to reduce uncertainty. In a similar vein, investors in low trust environments have strong incentives to build personal connections or business ties to guide their investment decisions, even if this process is costly. Such relationships are more likely to form with local business associates, potentially providing investors with information advantages on local stocks. This should translate into greater local bias in their portfolio allocations. We call this the *relationship building hypothesis*.

Another possibility is that investors that have a low level of trust hold skeptical priors of all firms. To avoid excessive exposure to individual stocks and protect against idiosyncratic shocks, investors may eschew stock picking entirely, preferring to passively hold a diversified market portfolio. This would result in lower local bias in their portfolios. We refer to this as the *passive investment hypothesis*.

We test these competing hypotheses using a measure of inter-personal trust based on World Values Survey[4] respondent answers to the question: "*Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people*?" Our study departs from the existing literature in that we measure trust across regions of the United States. There are two benefits of the U.S. setting. First, firms in our sample face practically identical regulatory and accounting standards. This allows us to

[3] Yamagishi, Cook, and Watabe (1998) argue that "General trust and commitment formation are considered alternative solutions to the problems caused by social uncertainty."

[4] This is a well-established survey used by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997), Sapienza, Toldra, and Zingales (2007), Guiso, Sapienza, and Zingales (2008), Aghion, Algan, Cahuc, and Shleifer (2010) among others to measure differences in trust across countries. The U.S. is the country in the World Value Survey that contains information on the geographical location and detailed personal characteristics of survey respondents, and is conducted approximately every 5 years from 1995 to 2006.

focus on the economic channel of trust while ruling out confounding institutional differences (e.g., language, culture, accounting rules, disclosure requirements, and insider trading regulations etc.) that arise from the international context. Second, there is significant variation in trust across different U.S. regions. These differences are comparable to the differences in trust across Western Europe.[5]

To measure institutional local bias, we analyze the portfolio holdings of institutional investors located across different U.S. regions. Following Baik, Kang, and Kim (2010), the local region is defined at the state level, although our findings are robust when using distance to the institutional investor's headquarter. Local bias is defined as the actual local investment in excess of a benchmark, assuming that every investor holds the market portfolio following the methodology in Coval and Moskowitz (1999). We assume that institutional investors are likely to exhibit trust attitudes that are similar to those of residents in their headquarter region – an assumption that we further address with the help of survey respondent characteristics.

Our first finding is that institutional investors located in low trust regions exhibit greater local bias than their counterparts located in high trust regions. A one standard deviation increase in the trust measure reduces institutional local bias by 21% relative to the unconditional mean. The difference is significant and persistent throughout our sample period – even as the average level of local bias falls in recent years (Bernile, Kumar, and Sulaeman, 2013). The difference is not due to firm characteristics (e.g., size, profitability, liquidity, institutional ownership, and stock volatility) and remains with the inclusion of

[5] In Western Europe, Greece has the lowest level of trust at 20% and Sweden has the highest level of trust at 57%. In our U.S. sample, the lowest level of trust is 22% (East South Central, 2000) and the highest level of trust is 53% (Northwest, 2006).

industry fixed effects and firm fixed effects.

We perform a series of tests to rule out alternative explanations related to regional characteristics. Our baseline tests include state fixed effects to capture time-invariant state characteristics (e.g., regional industry clusters). We augment our baseline specifications with time-varying state characteristics including demographic characteristics (e.g., gender, age, education), economic conditions (e.g., GDP, unemployment rate, household income), and security conditions (e.g., violent and property crime rates). Our findings are unchanged using these richer empirical specifications. Together, the evidence is inconsistent with the *passive investment hypothesis*.

Our second set of findings carefully considers possible reasons for the greater local bias of institutional investors located in low trust regions. As previously discussed, their choice to overweight local stocks could be due to information advantages from close relationships with local businesses (*relationship building hypothesis*). Alternatively, investors that have low levels of trust may feel more comfortable with local firms that are more visible and familiar (Huberman, 2001), and skeptical of distant firms (Zingales, 2011). While these two effects are not necessarily mutually exclusive, an information advantage should be revealed in the better performance of their local holdings. We examine this prediction by tracking the performance of portfolios sorted by institutional local bias across low and high trust regions.

The portfolio return results are striking. In low trust regions, a long-short portfolio of stocks sorted by institutional local bias generates a significant 7% Fama-French 3-factor risk-adjusted annual return. In contrast, the long-short portfolio returns in high trust regions are an insignificant 1%. The results are similar after orthogonalizing our trust measure by other state characteristics, allying concerns that our results are spuriously related to regional factors. These findings point towards the *relationship building hypothesis* and away from the familiarity explanation. Better yet, identifying a direct social connection channel may help to reveal the source of the informational advantage.

Unfortunately, social interactions are informal and generally unobservable to researchers. Instead, we proxy for *potential* social interactions by calculating investor proximity to prestigious golf courses using rankings published by Golflink.com. While golf is a leisure activity, it is also regarded as the sport of the business world. Peter Lynch, the long-time manager of Fidelity Magellan Fund, recalled of his golf caddying experience: "*Those years on the golf course were a great education, the next best thing to being on the floor of the exchange.*" [6] Golf courses are popular social venues among business elites, capturing the types of informal social connections that we wish to measure. Since it is more convenient to play nearby, the distance to prestigious state golf courses may proxy for the amount of social interactions with local business associates.

When we confine our sample to only institutional investors located near prestigious state golf courses, the effect of trust on local bias increases substantially.[7] A one standard deviation increase in the trust measure is related to 32% lower institutional local bias relative to the unconditional mean. Using only institutional investors located near

[6] Anecdotal evidence suggests that the golf course is an important venue for asset managers to interact with business partners. Jim Kennedy, president of Marathon Capital Management LLC in Hunt Valley, Maryland, argues that "*A fair amount of business does get done on the golf course, but you don't need to be a real good golfer, just good enough to not embarrass yourself.*" John Spooner, a Boston wealth manager, says that "*The truth is a tremendous amount of business gets done on the golf course*" and "*You have a captive audience for five hours. Tongues get loosened with the sport and the camaraderie.*"

[7] For each institutional investor, we calculate the "distance-to-golf" as the average distance between the investor and the top 20 ranked state golf courses. Then, we select the subsample of investors if its distance-to-golf is below the median among all investors in the same state.

prestigious state golf courses, the Fama-French 3-factor alpha reaches nearly 10% per annum for the long-short portfolio of stocks sorted on institutional local bias in low trust regions. A similar portfolio in high trust regions exhibits no significant abnormal returns, averaging less than 1% per annum.

We further exploit an exogenous feature that the opportunity to play golf is dependent upon good weather (i.e., low precipitation). We expect that relationship-building is likely to occur during good weather, but recede when bad weather keeps golfers off the greens. The results show that the pattern of outperformance accrues only during times of good weather, evaporating when the weather is poor. Because this test relies on exogenous weather variation, it provides perhaps the strongest causal evidence of a relationship-building channel.

A remaining concern with our identification strategy is that we measure the inter-personal trust attitudes of average local residents rather than the trust attitudes of actual investors. To address this issue, we create separate trust indices based on participant demographic characteristics, focusing on demographic groups that are likely to be stock market participants.[8] Local bias should be more strongly related to the trust attitudes of these demographic groups. Our tests confirm this assertion. The relation between local bias and trust is driven by the trust attitudes of likely stock market participants (e.g. male, white, older age (30+), high education attainment, high financial wealth, and chief wage earners in a household), and are unrelated to the trust attitudes of other demographic groups.[9]

[8] See: Bertaut and Starr-McCluer (2002), Vissing-Jorgensen (2002), and van Rooij, Lusardi, and Alessie (2011).

[9] This suggests that we could potentially sharpen our main tests using only responses from respondents that

We perform additional tests to address alternative interpretations and to ensure that our results are robust. Our findings may potentially be explained by investors in low trust regions receiving selective information disclosure from their relationship-building endeavors. However, our tests based on the passage of Regulation Fair Disclosure (Reg FD) suggests this is unlikely, as institutional investors located in low trust regions continue to exhibit significant outperformance in the post–Reg FD period (6% per annum). We find that the effects of trust on institutional local bias are stronger in smaller stocks and non–S&P 500 members, consistent with the idea that local investors are more likely to gain information advantages in less known and less widely held firms. The value of local information is also likely to be greater in stocks with more information opacity. Consistent with this conjecture, our results are stronger in stocks without a credit rating, that do not pay dividends, and with higher return volatility.

Our study primarily relates to the literature on local bias along two dimensions. First, we identify that trust is an economically important determinant of local bias. This provides a new potential explanation for the home bias puzzle (French and Poterba, 1991; Baxter and Jermann, 1997). Second, we find that local bias confers information advantages to institutional investors in low trust regions, but not to their counterparts in high trust regions. This suggests that proximity does not naturally entitle investors to information advantages. Rather, information is attained through investor actions (Van Nieuwerburg and Veldkamp, 2009), such as active social interactions and relationship building with local businesses.

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are likely to be stock market participants. However, this approach may require subjective selection decisions and reduces the representativeness of survey respondents. Those issues are avoided with our parsimonious measure.

Second, our results contribute to our understanding of the role of culture on investment and portfolio choice. Portfolio decisions of mutual fund managers are affected by local word-of-mouth effects (Hong, Kubik, and Stein, 2005) and religious beliefs (Shu, Sulaeman, and Yeung, 2013). Trust also affects venture capital investment and performance (Bottazzi, Da Rin, and Hellmann, 2012) and may explain the fee structure of the money management industry (Gennaioli, Shleifer, and Vishny, 2014). To the best of our knowledge, this is the first study to provide evidence that local trust attitudes affect the investment decision of institutional investors and the information content of their portfolios.

The next section describes the data and variable construction. Section III examines the relation between trust and local bias. In Section IV, we perform portfolio-based tests to highlight the role of information. Section V proposes a social connection channel through the proximity to golf courses, and tests for the potential privileged access to information. We conclude in Section VI.

II Data and Main Variables

Our measure of trust is collected from the World Values Survey 1981–2008 Integrated Questionnaire. Three waves of surveys with trust related questions are conducted in the U.S. (1995, 2000, 2006). Thus, our sample period starts in 1996 and ends in 2007.

In total, there are approximately 4000 survey respondents in the three waves of surveys. The survey identifies the locations of respondents by ten geographical regions: New England (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut), Middle Atlantic (New York, Pennsylvania, New Jersey), East North Central

(Wisconsin, Michigan, Illinois, Indiana, Ohio), West North Central (Missouri, North Dakota, South Dakota, Nebraska, Kansas, Minnesota, Iowa), South Atlantic (Delaware, Maryland, Washington D.C., Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida), East South Central (Kentucky, Tennessee, Mississippi, Alabama), West South Central (Oklahoma, Texas, Arkansas, Louisiana), Rocky Mountain (Montana, Wyoming, Nevada, Utah, Colorado, Arizona, New Mexico), Northwest (Oregon, Washington, Idaho), and California.

In each region, we calculate the *Trust Index* as the percentage of respondents answering "*Most people can be trusted*" to the survey question: "*Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?* ". We estimate the value of the *Trust Index* in the years between two consecutive surveys by linear interpolation.[10] This follows the methodology developed in Wei and Zhang (2014).

We also collect the following respondent characteristics: sex (male, female), race ("White/Caucasian White", "Non-White/Caucasian White"), age (15-29, 30-49, more than 50), the level of education (high education levels including "University-preparatory type/Full secondary, maturity level certificate", "Some university without degree/Higher education" and "University with degree/Higher education", and low education levels otherwise), the financial health of family (high: "Save money" versus low: "Just get by" and "Spent some savings and borrowed money") and whether the respondent is the chief

[10] The origins of social trust are beyond the scope of our paper, but we present means and correlations of the *Trust Index* with individual and community characteristics in Table 1. Prior studies find that trust is related to both individual and community characteristics (e.g., Glaeser, Laibson, Scheinkman, and Soutter, 2000; Alesina and La Ferrara, 2002).

wage earner in the household (yes, no).

Firm headquarter location data is gathered from Compact Disclosure. We obtain firm level accounting information from COMPUSTAT and security return information from CRSP. Regional variables such as population, male fraction, senior fraction, household income, GDP, unemployment rate, state coincident index, and crime statistics are gathered from the U.S. Census Bureau, Bureau of Labor Statistics, Federal Reserve Bank of Philadelphia, and the FBI's Uniform Crime Reports, respectively. Please see the Appendix for full details of variable construction and data sources.

Quarterly equity holdings of institutional investors are from Thomson Reuters CDA/Spectrum (13F) institutional holdings database. The SEC requires the quarterly filing of equity positions for institutional investment managers with over $100 million in equity assets under management. Since CDA/Spectrum does not provide data on investor locations, we collect the information on locations (city, state and zip code) of institutional investors from their 13F filings. The corresponding values of latitude and longitude are obtained from the Gazetteer Files of Census 2000.

An institutional investor is defined as a local investor if it is located in the same state as the headquarter state of the stock, following the definition in Baik, Kang, and Kim (2010).[11] We follow similar methodology as in Coval and Moskowiktz (1999) and calculate local bias at the stock level. For a given stock, we define local bias as the difference between the actual local investment of local investors in excess of a benchmark investment,

[11] Throughout our study, we categorize a local investment as an equity position in a company headquartered in the same state as the institutional investor. To ensure that our results are robust, we also calculate direct distances between the institutional investor's headquarter and the company's headquarter. Our results are robust to defining the local region when the company's headquarter is located within 300, 400, or 500 miles of the institutional investor's headquarter. Those results are available upon request.

assuming that every investor is holding the market portfolio. Specifically, for each stock j, suppose I is the entire institutional investor universe, $H_{i,j,t}$ is the holdings of stock j by investor i at quarter t, and $A_{i,t}$ is the total dollar holdings of investor i at quarter t, then the local bias is calculated as:

$$Local\ Bias_{j,t} = \sum_{i \in I:\ \text{Same State as Stock j}} H_{i,j,t} \Big/ \sum_{i \in I} H_{i,j,t} - \sum_{i \in I:\ \text{Same State as Stock j}} A_{i,t} \Big/ \sum_{i \in I} A_{i,t} .$$

Table I, Panel A reports summary statistics of the main variables used in the study. There are 38,138 firm-year observations in our sample. Our main variable, *Trust Index*, has an average and median value of 37.6% and 39.2%, with a standard deviation of 6.9%. The average and median local bias is 5.4% and 0.5%, with a standard deviation of 15.0%.

Panel B presents the *Trust Index* by region for each of the three survey vintages, 1995, 2000, and 2006. Figure 1 presents plots of the *Trust Index* by region and year. It shows that the relative rankings of the *Trust Index* in each region remain fairly stable. For example, the Northwest region (Oregon, Washington and Idaho) has the highest average *Trust Index* with a value between 46.9% to 53.1% during our sample period. The lowest *Trust Index* region is the East South Central (Kentucky, Tennessee, Mississippi, Alabama) with a value between 21.9% and 26.9%.

Interestingly, there is also considerable variation in the *Trust Index* over time across different U.S. geographical regions. For instance, the *Trust Index* in the Rocky Mountain region increases from 28.2% in 1995 to 38.8% in 2000 and continues to increase to 43.9% in 2006, while the index in the Middle Atlantic region increases from 37.1% in 1995 to 40.5% in 2000 but decreases to 38.9% in 2006. The *Trust Index* in California remains stable between 35.5% and 35.1% from 1995 to 2000 and increases to 43.4% in 2006. Both the cross-sectional and time-series variation across regions makes it feasible for us to identify the link between trust and the local bias of institutional investors.

Panel C reports the correlations between the *Trust Index* and other regional measures related to demography, wealth, education, economic growth and crime. Consistent with the findings in Alesina and La Ferrara (2002), the *Trust Index* is positively correlated with measures of wealth and economic activity: Household income (0.39), Per capita GDP (0.35), and the Coincident economic index (0.34), while negatively correlated with unemployment (–0.27) and violent crime (–0.34). Later analyses provide additional robustness tests verifying that our results are not driven by these and other regional factors.

Panel D presents a summary of the personal characteristics of survey respondents and their overall level of trust. The survey captures six demographic dimensions: gender, race, age, education, household financial health, and chief wage earner status. Casual inspection suggests that the respondent sample offers a representative slice of the U.S. population.[12] For each demographic group, we report the fraction of respondents who answer *"Most people can be trusted"* to the trust survey question. Female and male respondents have similar levels of trust (female=38%, male=37.2%). White/Caucasian White participants are more trusting than non–White/Caucasian White respondents (41.2% vs. 25.1%). Trust increases with age, education level, and financial health.[13] These patterns

[12] Among the survey respondents, 48% of respondents are male, 76% are White/Caucasian White, 19% are between the ages 15–29, 40% are between the ages of 30–49 and 40% are aged 50+, 46% are well educated, 41% are in good financial health, and 57% are the chief wage earner in a household.
[13] The *Trust Index* is the highest among oldest respondents (43.4% for respondent age above 50), respondents with high education (46.6%), and households with good financial health (45.5%). The fraction among chief wage earners is slightly higher than that of non-chief wage earners (Chief=38.3%, Non–Chief=37%).

are broadly consistent with the results in Alesina and La Ferrara (2002) and the experimental findings of Glaeser, Laibson, Scheinkman, and Soutter (2000), further confirming the quality of our trust measure.

III Trust and Local Bias

This section examines the relation between trust and local bias. We first provide univariate tests and then present our main multivariate regression results.

We start by presenting the overall sample average of local bias in Panel A of Table II. Across all firms, the average stock–level local bias is 5.4%. It is significantly different from 0. Splitting the sample based on the beginning of the year market capitalization shows that local bias is greater amongst small stocks compared to large stocks. The local bias of large stocks is 2.2% compared to 8.6% for small stocks. This is consistent with findings in previous studies that the local bias of institutional investors is more prominent among small stocks (e.g., Coval and Moskowitz, 1999; Baik, Kang, and Kim, 2010).

Panel B in Table II reports the average local bias across low and high trust regions. The average local bias is significantly higher in low trust regions (5.8%) compared to high trust regions (4.8%). The difference is statistically significant using both the t-test and Wilcoxon test. The difference is primarily due to small stocks as the difference in average local bias between low and high trust regions is 2% (9.4% versus 7.4%), whereas the difference for large stocks is only 0.3% (2.3% versus 2.0%).

Panel A of Table III presents results from regression tests to confirm that the univariate findings hold in the multivariate setting. Model 1 presents the baseline specification results. We regress local bias on the *Trust Index* and include the following firm characteristics as control variables: firm size, market-to-book, book leverage, profitability, and cash holdings. The regression includes year fixed effects and state fixed effects. Standard errors are clustered at the firm level. The parameter estimate on the *Trust Index* is negative and statistically significant (–0.254, t=–7.39). Model 2 controls for additional stock characteristics such as institutional ownership, past one year return, stock return volatility, and the Amihud ILLIQ measure. The next two models present alternative econometric specifications. Model 3 includes industry fixed effects based on two-digit SIC codes. Model 4 includes firm fixed effects. Across all four specifications, the parameter estimate on the *Trust Index* remains negative and statistically significant.

The results are not only statistically significant but also economically important. A one standard deviation increase in *Trust Index* is associated with a 21% decrease in local bias relative to the unconditional mean. The results are similar using different regression specifications, suggesting that the relation between the *Trust Index* and local bias is robust to the inclusion of various firm or industry characteristics and different regression models.

Panel B in Table III presents regression results that include time-varying state characteristics. Since state-fixed effects absorbs time-invariant qualities, this augmented specifications intends to address concerns that our results are due to other regional factors. To capture demographic characteristics, we include population size, fraction of male population, fraction of junior population, fraction of senior population, and fraction with college degrees. For economic conditions, we include median household income, per capital GDP, unemployment rate, and state coincident index. Security conditions are measured using the violent crime rate and property crime rate. Across all specifications, the parameter estimate on the *Trust Index* remains both quantitatively and qualitatively similar after controlling for these regional characteristics. Since the results remain after the inclusion of state fixed effects and time-varying regional economic and social conditions, it is unlikely that alternative regional factors can explain our findings.

Next, we tackle a key assumption of our identification strategy, that local institutional investors exhibit trust attitudes similar to the populace in their local region. This assumption is used in previous studies that argue that CEOs and money managers exhibit cultural similarities with their local region (Hilary and Hui, 2008; Kumar, Page, and Spalt, 2012; Shu, Sulaeman, and Yeung, 2012). We argue that this identification approach is particularly reasonable for social trust as well. Trust represents a social relationship, reflecting a cultural attitude between members of a social community. To the extent that institutional investors are members of the local community, their cultural attitudes should be related to those of their neighbors.

Nonetheless, we bring additional evidence to support this claim by re-building the *Trust Index* to more closely represent the trust attitudes of local institutional managers. We expect that professional money managers are likely to share similar demographic characteristics of individuals that participate in the stock market. Stock market participants tend to be male, older in age, wealthier, and better educated (Bertaut and Starr-McCluer, 2002; Vissing-Jorgensen, 2002; van Rooij, Lusardi, and Alessie, 2011). Blau and Graham (1990) and Hong, Kubik, and Stein (2005) find that White/Caucasian Whites are more likely to participate in the stock market in the United States.

We decompose the composite *Trust Index* into indices within the six demographic dimensions. Then, we re–estimate our baseline regressions (used in Table III) using the demographic–based trust indices. We expect that our previous results are mostly driven by the trust indices of demographic groups that are more likely to participate in the stock market.

Table IV presents our findings. Model (1) uses the demographic *Trust Index* based on male/female responses, and shows that the relation between the *Trust Index* and local bias is due to the trust attitudes of Male respondents. Model (2) shows that the relation between the Trust Index and local bias is driven by the trust level of White/Caucasian White respondents. Model (3) shows that link between trust and local bias is only significant amongst respondents greater than the age of 29. Models (4) though (6) show that the previous results are driven by trust levels of higher educated respondents, respondents in good financial health, and chief wage earners in the household.

This series of tests show that the relation between trust and local bias is strongest amongst respondents that are more likely to be stock market participants, and are likely to reflect the demographic characteristic of professional money managers. We may potentially improve our primary, composite *Trust Index* by filtering participants based on personal characteristics associated with the likelihood of stock market participation. However this approach may inadvertently introduce selection bias. Our general measure is parsimonious and avoids data mining concerns. The simplicity of our measure may introduce noise, but that will likely bias against discovery of results.

Our final set of tests in this section considers the types of stocks where a lack of trust induces greater local bias. We expect these effects to be concentrated among stocks with relatively low national attention. To test this prediction, we split our sample based on stock characteristics that proxy for national attention including market capitalization, S&P 500 index inclusion, dividend payment, and S&P credit ratings. Then, we re-estimate our baseline regression model, as used in Table III, for each separate subsample.

Table V presents the sub-sample results. Comparing Model (1) and Model (2), we find that the effect of trust on local bias is much stronger for the small stocks in our sample. The parameter estimate on the *Trust Index* for small stocks is nearly three times larger than for large stocks (–0.352, t=–5.48 versus –0.121, t=–4.59). The Chi-Square test of the difference between the two parameter estimates is statistically significant. The results are similar when examining S&P500 index inclusion, dividend payment, and the existence of an S&P credit rating. We may also expect that the effects of trust on local bias are enhanced for stocks with high information opacity. Using stock volatility to measure information opacity, we find that the effect of trust on local bias is greater among stocks with high return volatility.

In sum, the results in this section show evidence of a consistently strong negative relation between social trust and institutional local bias. This is at odds with the *passive investment hypothesis*. Rather, it shows that institutional investors in low trust regions prefer to overweight local stocks, perhaps due to local information advantages (*relationship building hypothesis*) or familiarity. We distinguish between these two explanations in the next section.

IV Trust, Local Bias, and Information

This section examines possible reasons for the strong negative relation between social trust and institutional local bias that we document in Section III. Institutional investors may overweight local stocks could be due to information advantages from close relationships with local businesses (*relationship building hypothesis*) or familiarity. While these two effects are not mutually exclusive, the *relationship building hypothesis* has the added prediction that information advantages should be revealed in better portfolio performance.

To examine this prediction, we form portfolios of stocks sorted by institutional local bias across low and high trust regions. Prior studies argue that mutual funds managers and institutional investors earn higher returns on their local investments due to their local information advantages (Coval and Moskowitz, 2001; Baik, Kang, and Kim, 2010). We use a similar methodology to examine the performance of stock portfolios formed on the basis of local bias separately across low and high trust regions.

We first confirm that higher institutional local bias is associated with better performance in our sample.[14] Our procedure is as follows. At the beginning of each month, we sort stocks into five portfolios based on the previous quarter-end institutional local bias. Then, we calculate the average return of stocks in each portfolio during the month. For each portfolio, we have 144 monthly return observations from 1996 to 2007. To adjust for risk, we use the CAPM market model, the Fama-French 3-factor model (Fama and French, 1993), and the Carhart 4-factor model that includes the momentum factor (Carhart, 1997) to estimate portfolio risk-adjusted returns (alphas) accordingly.

Panel A of Table VI reports the results from the portfolio tests. The spread in average institutional local bias is large. The lowest local bias portfolio (Portfolio 1) has an average local bias of –9.1% while the highest local bias portfolio (Portfolio 5) has an average local bias of 35.6%. The average monthly return increases from 100 basis points (bps) in Portfolio 1 to 132 bps in Portfolio 5. The difference between Portfolio 5 and Portfolio 1 is

[14] Our results in this section are quantitatively similar using fraction of local ownership.

32 bps per month (t=3.20), which translates to an annualized outperformance of about 4%. The results are similar using risk-adjusted returns across different factor models, and are in line with the findings in Baik, Kang, and Kim (2010).

Next, we focus on portfolio return differences across low and high trust regions. We first split stocks into high or low trust regions, then create five portfolios based on the previous quarter-end institutional local bias within each region. Our results are both quantitatively and qualitatively similar sorting independently on high or low trust regions and local bias. A geographic region is defined as high (low) trust if the *Trust Index* is above (below) the sample median at the beginning of each calendar year.

Panel B1 of Table VI shows striking return patterns for low trust region based portfolios. The long-short portfolio (long Portfolio 5 and short Portfolio 1) generates an average monthly return of 58 bps (t=3.33). This return spread is nearly double the size of the full sample return spread (32 bps). Risk adjusted returns show similar patterns across various factor models: the CAPM market model (59 bps, t=3.42), the Fama-French 3-factor model (58 bps, t=3.55), and the Carhart 4-factor model (54 bps, t=3.09). This translates to an average annualized abnormal return of nearly 7% using the Fama-French 3-factor model.

In stark contrast, Panel B2 of Table VI does not show abnormal return patterns for high trust region based portfolios. The raw return difference between Portfolio 5 and Portfolio 1 is 8 bps per month and statistically insignificant (t=0.53). The results for risk-adjusted returns remain small and insignificant across different factor models, e.g., the CAPM market model (15 bps, t=1.09), the Fama-French 3-factor model (10 bps, t=0.74), and the Carhart 4-factor model (16 bps, t=1.11). The average annualized abnormal return from the Fama-French 3-factor model is an insignificant 1%.

Panel A of Figure II presents plots of the time-series cumulative raw returns of long-short portfolios sorted by institutional local bias for the overall sample, the low trust subsample, and the high trust subsample. From January 1996 to December 2007, the cumulative long-short portfolio return reaches more than 120% for the low trust subsample, but is close to 0 for the high trust subsample. The visual trend appears fairly stable over time, but in Section V we consider the consequences of regulatory changes that occur during our sample period.

In sum, these findings indicate that the information content of local bias portfolios is considerably different in low trust regions compared to high trust regions. Our evidence shows that the previously documented return predictability of institutional local bias portfolios only exist in low trust regions. Overall, the results of the portfolio return tests support the *relationship building hypothesis* suggesting an information component to the local bias of institutional investors in low trust regions.

We provide an additional robustness test to address the potential issue is that our *Trust Index* may be correlated with other regional factors.[15] The concern is that our identification of high and low trust regions may be influenced by state characteristics. Therefore, we re-estimate our portfolio returns using an orthogonalized *Trust Index* to sort stocks. We orthogonalize our *Trust Index* as follows. Based on 571 state-year observations, in each year, we regress the raw *Trust Index* on various state characteristics including state population characteristics (i.e. population size, fraction of male population,

[15] We addressed this issue with regards to the effect of trust on local bias by including additional state characteristics such as demographic variables, economic indicators, and crime conditions as control variables in our panel regressions.

fraction of junior population, fraction of senior population, fraction with college degrees), state economic conditions (i.e. median household income, per capita GDP, unemployment rate, state coincident index), and state security conditions (i.e. violent crime rate and property crime rate), using the regression residual as the orthogonalized *Trust Index*. Then, like the earlier sorting procedure, we split the sample into high and low trust regions based on annual median using the orthogonalized *Trust Index*.

Table VII shows quantitatively and qualitatively similar results based on the orthogonalized *Trust Index*. Panel A shows that in low trust regions, the long-short portfolio sorted by institutional local bias generates a Fama-French 3-factor adjusted return of 59 bps (t=3.31) per month. This is in direct contrast to the high trust region results in Panel B that find an insignificant –3 bps (t=–0.21) return per month. The patterns are similar based on the raw returns and the other factor model adjusted returns.

We conduct additional robustness checks by excluding penny stocks (stocks with prices less than $1), as well as dropping micro-cap stocks with market capitalization less than $50 million or less than $100 million in unreported tests (available upon request). We find consistent patterns that the outperformance of local bias portfolios only exist in low trust regions. Our results are also robust to omitting the month of January, suggesting that tax-loss selling effects are unlikely to explain our findings.

V Information Channels

The previous findings show that investors in low trust regions exhibit greater local bias because of local information advantages. We interpret these results to be most consistent with the *relationship building hypothesis*. Next, we attempt to better understand the source of this informational advantage in low trust regions.

A. Measuring Social Connections: Proximity to Golf Courses

The *relationship building hypothesis* proposes that relationships and social interactions with local businesses provide an information advantage for institutional investors in low trust regions. The empirical challenge is that social interaction is informal and therefore difficult for researchers to observe. To measure the *potential* for institutional investors to form social connections, we use the proximity to nearby golf courses in the state. Golf courses are popular social activity centers especially among the business elite. While golf is a leisure activity, it is also said that '*good business is done on the golf course.*' Golf is a popular sport amongst U.S. CEOs. Since 1999, Golf Digest regularly publishes rankings of the top 200 U.S. CEO golfers. CEOs play golf for both business and pleasure, and often conduct business on the golf course.[16]

Anecdotal evidence suggests that the golf course is an important venue for asset managers to interact with business partners. Peter Lynch, long-time manager of Fidelity Magellan Fund, recalled of his golf caddying experience: "*Those years on the golf course were a great education, the next best thing to being on the floor of the exchange.*" Jim Kennedy, president of Marathon Capital Management LLC, says that "*A fair amount of business does get done on the golf course, but you don't need to be a real good golfer, just good enough to not embarrass yourself.*" John Spooner, a Boston wealth manager, says that "*The truth is a tremendous amount of business gets done on the golf course... You*

[16] The CEOs surveyed report that 35 percent of their golf rounds are with business associates and 71 percent said they have done business with someone they met playing a round of golf (http://money.cnn.com/2006/09/07/news/funny/ceo_golf/).

have a captive audience for five hours. Tongues get loosened with the sport and the camaraderie."

We expect that institutional investors located near prestigious golf courses are more likely to build social ties with local businesses. We measure proximity to golf course as follows. In each state, we obtain the location of the top 20 ranked state golf courses from Golflink.com[17] and obtain their geographical coordinates from the Gazetteer Files of Census 2000. For each institutional investor, we calculate the "distance-to-golf" as the average distance between the investor and the 20 state golf courses. Then, we select the subsample of institutional investors (i.e., "close-to-golf" investors) whose distance-to-golf is below the median among all the institutional investors in the same state. As calculated in our earlier tests, we define the "close-to-golf" local bias as the difference between the local investment and the benchmark investment by the local close-to-golf investors.

First, we verify that being close to prestigious golf courses results in greater local bias in low trust regions. We re-estimate our local bias regressions using the subsample of institutional investors located near golf courses. Panel A of Table VIII shows that the coefficient on the *Trust Index* for the "close-to-golf" sample is twice as large as compared to the local bias of all institutional investors (Panel A, Table III), and is relatively similar across the various econometric specifications. The economic significance is also greater. A one standard deviation increase in the *Trust Index* is related to a 32% lower local bias relative to the unconditional mean, which is much larger than the previously documented magnitude of 21% in Table III based on the overall institutional local bias.

[17] These rankings are available at: http://www.golflink.com/top-golf-courses/.

Next, we calculate portfolio returns based on stocks sorted by the close-to-golf local bias using the same methodology as before. Panel B of Table VIII presents portfolio returns of stocks sorted by close-to-golf local bias for stocks in low trust regions (Panel B1) and for stocks in high trust regions (Panel B2). Portfolio 1 has the lowest close-to-golf local bias. Portfolio 5 has the highest close-to-golf local bias. "Long Portfolio 5 & Short Portfolio 1" is the difference in the returns between Portfolio 5 and Portfolio 1. For brevity, only the returns of Portfolio 1, Portfolio 5, and the Long-Short portfolio are reported, respectively.

The results are striking. The long-short portfolio (long Portfolio 5 and short Portfolio 1) generates an average monthly return of 84 basis points (t=3.77) in low trust regions. The risk adjusted returns are similar across different factor models, e.g., the CAPM market model (91 bps, t=4.28), the Fama-French 3-factor model (86 bps, t=3.84), and the Carhart 4-factor model (75 bps, t=3.23). This implies a 10% annualized average risk-adjusted return from the Fama-French 3-factor model, higher than the previous 7% annualized long-short portfolio returns based on institutional local bias in low trust regions. Similarly, these return patterns do not exist for portfolio returns based on stocks in high trust regions. The raw return of the long-short portfolio is –6 bps per month and statistically insignificant (t= –0.37). A possible reason for this finding is that investors in high trust regions may play golf for leisure and recreation rather than business purposes. Likewise, the risk-adjusted returns remain close to 0 and insignificant across different factor models. Panel B in Figure 2 shows that the cumulative long-short portfolio returns over the sample period is over 200% for low trust region stocks, but around 0% for high trust region stocks.

Our assertion is that golf courses foster social connections between investors and businesses. But the indirect nature of our tests leaves room for omitted variable concerns. While it is not obvious what these may be, our portfolio sorting procedure may not be able to address this issue directly. Instead, we provide additional evidence to support our conjecture. Since golf is a weather dependent activity, golf courses are particularly popular when the weather is good. Poor weather, especially heavy rainfall, keeps golfers off the links. Thus, we expect that the golf channel should occur during times of good weather, and recess when the weather is bad.

We test this prediction by splitting the five "close-to-golf" local bias portfolios in low trust regions into good and bad weather periods based on precipitation. Precipitation is measured using the raw level of state precipitation (PCPN) and the standardized state precipitation index (SP01) from the National Climatic Data Center (NCDC).[18] The standardized index allows for comparison between locations with markedly different climates because it adjusts for median weather conditions. Each month, we define "good/bad" weather if the state precipitation index is below/above the sample median. Rainfall is exogenous, provides time-series variation, and is out of investors' control. Therefore, we employ weather conditions to construct a compelling test to rule out alternative explanations of the omitted variable nature.

Panel C of Table VIII provides evidence that the outperformance of the "close-to-golf" investors-low trust region portfolio mostly occurs during "good" weather periods. Panel C1 uses the raw state precipitation index, while Panel C2 presents findings using

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[18] Full details of the construction of SP01 is available at
ftp://ftp.ncdc.noaa.gov/pub/data/cirs/drd/divisional.README.

the standardized state precipitation index described above. Panel C1 shows that during "good" weather, the monthly raw return of the long-short portfolio is 116 bps (t=3.74), but 14 bps (t=0.52) during "bad weather." The results are similar after adjusting for the CAPM, Fama-French, and Carhart -factor models. Panel C2 shows similar economic magnitudes using the standardized precipitation index, suggesting that our findings are not due to static geographical differences in precipitation.

Panel C of Figure 2 shows that over the sample period 1996 to 2007, the cumulative "good weather" portfolio return reaches nearly 400%. This finding provides additional support for our assertion that golf courses act as an important venue for building social connections and business ties in low trust areas.

This set of golf-based results support the idea that social connections are a likely information channel for institutional investors in low trust regions. This is consistent with *relationship-building hypothesis* that a lack of trust incentivizes investors to actively seek relationships and social ties to help with their investment decisions. It is important to note that it is costly to build such social connections. Memberships to prestigious golf courses are expensive and often exclusive. Building social connections and relationships require time and energy that may be productively allocated elsewhere (for instance, analyzing profitable trading strategies published in top finance journals). These costs may potentially explain why investors in high trust regions do not have equally strong incentives to develop these types of valuable social connections. As our weather results show, there by exogenous factors outside the investors' control that impede the foster of relationship building. It is also worth mentioning that higher local information advantage does not necessarily imply better overall performance of institutional investors in low trust regions. Overweighting local stocks implies a lack of portfolio diversification and sacrifices diversification benefits.[19]

B. Privileged Access? Evidence from Regulation Fair Disclosure

We argue that social connections may offer information advantages on local firms through social interaction. However, an alternative story is that local institutional investors in low trust regions may be receiving privileged access, perhaps in unobservable quid per quo arrangements. Certainly the exclusivity of golf courses may provide a convenient venue for such agreements to occur. The *relationship building hypothesis* – that investors with low trust will seek to build business connections to gain access to information – is silent on whether the information is privileged. However, it is may be useful to clarify the mechanism behind their information advantage.

To test for privileged access, we assess the impact of the implementation of Regulation Fair Disclosure (Reg FD) on our results. Reg FD was adopted by the SEC on August 2000 to curb the selective disclosure of material nonpublic information by firms to analysts and institutional investors. Reg FD is intended to prohibit potential quid per quo arrangements that may be the source of privileged information.

First, we analyze the univariate change in local bias in the pre- and post- Reg FD periods (i.e., before and after year 2001). Panel A of Table IX shows that the overall level of local bias falls after the implementation of Reg FD, consistent with Bernile et al. (2013). This occurs in both high and low trust regions, but the reduction in local bias appears to be greater in high trust regions. Next, we confirm that the patterns are similar in a

[19] Unreported results show that institutional investors in low trust regions have more concentration in their portfolios.

multivariate setting. Panel B presents the regression results. We use the panel regression specification in Table III, and include a post–Reg FD dummy that is equal to 1 if the year is after 2001 and 0 (pre–Reg FD) otherwise. The interaction term, post–Reg FD dummy * *Trust Index*, is negative and statistically significant across our four models. This confims that Reg FD is associated with a greater decrease in local bias in high trust regions.

Panel C presents the main tests on long-short portfolio returns sorted by local bias during the sample periods both before and after Reg FD. We report the results for low trust regions in Panel C1 and high trust regions in Panel C2. During both sample periods, the return patterns are consistently stronger in low trust regions. Institutional investors located in low trust regions continue to benefit from their information advantage after Reg FD. Based on the risk adjusted return from the Fama-French 3-factor model, a long–short portfolio of stocks sorted on local bias exhibit significant outperformance in both the pre–Reg FD period (9% per annum) and post–Reg FD period (6% per annum) in low trust regions.

This result suggests that the information advantage of institutional investors in low trust regions is not driven by selective disclosure of material information. Instead, institutional investors in low trust regions continue to exhibit better performance in their local portfolios, suggesting that the source of their information advantage is unaffected by Reg FD. This provides further support for the *relationship building hypothesis* that the information advantage of investors in low trust regions is achieved through social ties and repeated relationships.

VII Conclusion

The origins of local and home bias have long puzzled economists (French and Poterba, 1991; Baxter and Jermann, 1997). Leading explanations include structural market frictions, local information advantages, and investor biases (i.e., familiarity). We identify social trust as a new determinant of local bias, which implies that social attitudes affect investor behavior. This is an important consideration because investors' preferences may affect valuations, risk premiums, and consequently the cost of capital for corporations.

Our main finding is that institutional investors located in low trust regions exhibit significantly greater local bias. The evidence is most consistent with a relationship-building explanation. These investors build relationships with local companies, earning significant abnormal returns on their local holdings. Their high trust counterparts do not possess local information advantages, suggesting a familiarity motive for their local holdings. Our explanation based on social trust helps to separate instances where local bias relates to information or familiarity reasons.

Our second contribution is a new test of social connections using prestigious golf courses as a venue for social gatherings. Using the distance to local golf courses as a proxy for the convenience of establishing local business ties, we find that long-short portfolios sorted by the local bias of investors located close to state golf courses exhibit the highest outperformance. We further exploit an exogenous feature that golf is dependent upon good weather. The pattern of outperformance accrues only during times of good weather (i.e., low precipitation), consistent with the relationship building channel.

Our findings should extend to the international setting, and possibly influence other portfolio decisions such as risk-taking and diversification. We leave this for future research.

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Table I
Summary Statistics

Panel A: Summary Statistics of Main Variables

This table presents summary statistics of the main variables used in the subsequent analysis. We report the number of observations, the mean, the median and the standard deviation. Our data come from multiple sources. The data on state-level Trust Index come from the World Values Survey from 1995 to 2006. The data on state population characteristics come from the U.S. Census Bureau population estimates program. The data on state median household income comes from the U.S. Census Bureau SAIPE datasets. The data on unemployment rate come from the Bureau of Labor Statistics. The data on education level of population come from the Economic Research Service in the U.S. Department of Agriculture. The data on state coincident index comes from the Federal Reserve Bank of Philadelphia. The data on violent crime rate and property crime rate come from the FBI Uniform Crime Reports. The data on stock returns, trading volumes and firm accounting information are from Compustat and CRSP. The data on quarterly stock holdings of institutional investors come from Thomason CDA/Spectrum (13F) from 1996 to 2007. The holdings data are name-matched with the data on institutional investor locations obtained from their SEC filings.

	Frequency	Mean	Median	Std. Dev.	N
Firm level variables					
Local Bias	Year	0.054	0.005	0.150	38138
log (Firm size)	Year	5.880	5.762	2.007	38138
Market-to-book	Year	2.171	1.331	3.288	38138
Book leverage	Year	0.207	0.162	0.207	38138
Profitability	Year	0.060	0.109	0.310	38138
Cash holding	Year	0.211	0.103	0.243	38138
Institutional ownership	Year	0.458	0.454	0.270	38138
Yearly stock return	Year	0.195	0.084	0.678	38138
Stock return volatility	Year	0.036	0.031	0.021	38138
Amihud illiquidity	Year	0.300	0.125	0.457	38138
State level variables					
Trust Index	Year	0.376	0.392	0.069	571
log (Population)	Year	15.128	15.252	0.982	571
Male fraction	Year	0.488	0.486	0.010	571
Junior fraction	Year	0.110	0.094	0.032	571
Senior fraction	Year	0.143	0.140	0.024	571
College fraction	Year	0.181	0.166	0.050	571
log(Household income)	Year	10.480	10.462	0.185	571
log(Per capital GDP)	Year	10.862	10.861	0.164	571
Unemployment rate	Year	0.053	0.052	0.014	571
State coincident index	Year	1.408	1.391	0.192	571
Violent crime rate	Year	0.044	0.042	0.021	571
Property crime rate	Year	0.371	0.374	0.097	571

Table I (Continued)

Panel B: Trust Index by Region and Survey Year

This table reports the value of Trust Index by region and year. The World Values Survey conducted three waves of surveys in the United States in year 1995, 2000 and 2006. The survey identifies the locations of Survey Respondents by ten geographical regions: New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Rocky Mountain, Northwest and California. In each region, the Trust Index is calculated as the percentage of Survey Respondents answering "Most people can be trusted" to the survey question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?".

Region	States	1995	2000	2006
New England	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut	0.339	0.432	0.425
Middle Atlantic	New York, Pennsylvania, New Jersey	0.371	0.405	0.389
East North Central	Wisconsin, Michigan, Illinois, Indiana, Ohio	0.398	0.403	0.389
West North Central	Missouri, North Dakota, South Dakota, Nebraska, Kansas, Minnesota, Iowa	0.322	0.469	0.407
South Atlantic	Delaware, Maryland, Washington D.C., Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida	0.250	0.327	0.385
East South Central	Kentucky, Tennessee, Mississippi, Alabama	0.269	0.219	0.231
West South Central	Oklahoma, Texas, Arkansas, Louisiana	0.425	0.324	0.381
Rocky Mountain	Montana, Wyoming, Nevada, Utah, Colorado, Arizona, New Mexico	0.282	0.388	0.439
Northwest	Oregon, Washington, Idaho	0.526	0.469	0.531
California	California	0.355	0.351	0.434

Table I (Continued)

Panel C: Correlation Matrix of State-level Variables

This panel presents the correlation matrix of state-level variables among 571 state-year observations. We report the correlations between the Trust Index, the log value of state population, the fraction of male population, the fraction of junior population (age below 18), the fraction of senior population (age above 65), the fraction of population with college degrees, the log value of median household income, the log value of per capita state GDP, the unemployment rate, the state coincident index, the violent crime rate and the property crime rate.

	Trust Index	Popul ation	Male fraction	Junior fraction	Senior fraction	College fraction	Household Income	Per capita GDP	Unemp rate	Coincident index	Violent crime	Propert y crime
Trust Index	1.00											
Population	-0.13	1.00										
Male fraction	0.25	0.05	1.00									
Junior fraction	-0.35	0.02	-0.13	1.00								
Senior fraction	0.16	0.08	-0.09	-0.07	1.00							
College fraction	0.36	-0.15	-0.09	-0.17	-0.30	1.00						
Household income	0.39	0.05	-0.02	-0.45	-0.30	0.73	1.00					
Per capita GDP	0.35	0.31	0.02	-0.48	-0.12	0.66	0.80	1.00				
Unemployment rate	-0.27	0.33	0.07	0.29	-0.19	-0.33	-0.37	-0.34	1.00			
Coincident index	0.34	-0.05	0.38	-0.63	-0.27	0.15	0.40	0.25	-0.14	1.00		
Violent crime rate	-0.34	0.49	0.06	0.24	-0.12	-0.21	-0.18	-0.03	0.35	-0.10	1.00	
Property crime rate	-0.23	0.25	0.23	0.45	-0.05	-0.31	-0.41	-0.33	0.43	-0.16	0.65	1.00

Table I (Continued)

Panel D: Survey Respondent Characteristics

This panel presents personal characteristics of survey respondents as identified by the World Values Survey and respondent-characteristics-based measures of the Trust Index. Respondents are classified by sex (male versus female), race ("White/Caucasian White" versus Non-"White/Caucasian White"), age (15-29, 30-49, more than 50), the level of education (high education levels include "University-preparatory type/Full secondary, maturity level certificate", "Some university without degree/Higher education" and "University with degree/Higher education", and low education levels otherwise), the financial health of family (High: "Save money" versus Low: "Just get by", "Spent some savings and borrowed money", "Spent savings and borrowed money"), and whether the respondent is the chief wage earner in the household (yes, no). For each geographical region, within a respondent category, we calculate the percentage of respondents answering "Most people can be trusted" to the survey question "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". The first two columns report the number of respondents in each category and the percentage among all respondents. The next four columns report the summary statistics of the respondent -characteristics based Trust Indexes, based on an overall sample of 571 state-year observations. We report the number of observations, the mean, the median and the standard deviation.

Respondent Characteristics	Survey Respondents		Respondent-specific Trust Index			
	Number	Percentage	Mean	Median	Std. dev.	N
Male	1,899	47.6%	0.372	0.359	0.081	571
Female	2,092	52.4%	0.380	0.373	0.084	571
White/Caucasian White	3,008	75.9%	0.412	0.426	0.068	571
Non-"White/Caucasian White"	955	24.1%	0.251	0.254	0.084	571
Age (15-29)	764	19.2%	0.295	0.288	0.088	571
Age (30-49)	1,599	40.3%	0.359	0.379	0.082	571
Age (more than 50)	1,608	40.5%	0.434	0.449	0.111	571
Education: High	1,817	45.6%	0.466	0.461	0.098	571
Education: Low	2,165	54.4%	0.295	0.299	0.074	571
Family financial health: High	1,551	40.7%	0.455	0.459	0.085	571
Family financial health: Low	2,260	59.3%	0.320	0.328	0.063	571
Chief wage earner	2,220	56.8%	0.383	0.393	0.077	571
Non- "Chief wage earner"	1,688	43.2%	0.370	0.377	0.071	571

Table II
Trust and Local Bias: Univariate Results

This table reports univariate analyses on the relation between trust and local bias. An institutional investor is defined as a local investor if it is located in the same state as the headquarter state of the stock. For a given stock, "local bias" is defined as the difference between the actual local investment and the benchmark investment by local investors assuming that every investor is holding the market portfolio. Detailed definitions are provided in the appendix.

Panel A. Local Bias: Full Sample

Panel A presents averages of local bias for the full sample of stocks, and large and small stock sub-samples. The table includes both t-tests and Wilcoxon tests to test whether the average local bias is significantly different from 0. A stock is classified as large if its beginning of the year market capitalization is above the sample median and is small otherwise. The number of observations is reported in parenthesis.

	Local Bias	T-test: Local Bias=0	Wilcoxon: Local Bias=0
All Firms	5.4% (38138)	69.79***	50.05***
Large Firms	2.2% (19067)	36.63***	24.03***
Small Firms	8.6% (19071)	62.03***	46.93***

Panel B. Local Bias: High versus Low Trust Regions

Panel B reports the level of local bias between stocks located in the high trust regions versus stocks located in the low trust regions. Each year, a stock is classified as High Trust (Low Trust) if the *Trust Index* in the previous year is above (below) sample median. Both t-tests and Wilcoxon tests are reported to test whether the average local investment is significantly different between the two groups. Large stock and small stock sub-samples are reported. The number of observations is reported in parenthesis.

Local Bias	Low Trust	High Trust	T-test: Low=High	Wilcoxon: Low=High
Full Sample	5.8% (22269)	4.8% (15869)	6.39***	9.05***
Large Firms	2.3% (11357)	2.0% (7710)	2.52**	2.44**
Small Firms	9.4% (10912)	7.4% (8159)	7.12***	10.06***

Table III
Trust and Local Bias: Multivariate Results

This table explores the effect of trust on local bias. All analyses are performed at the stock level. An institutional investor is classified as a local investor if it is located in the same state as the headquarter state of the stock. For a given stock, "local bias" is defined as the difference between the local investment and the benchmark investment by local investors assuming that every investor is holding the market portfolio. Our main variable of focus is the Trust Index at the state-year level, defined as the percentage of Survey Respondents answering "Most people can be trusted" to the survey question "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" from the World Values Survey.

Panel A: Baseline Result

Panel A presents our baseline results. The control variables for firm characteristics include firm size, market-to-book, book leverage, profitability, cash holding, institutional ownership, past stock return, Amihud illiquidity and stock return volatility. Year, state, and industry (2-digit SIC) fixed effects are included in different specifications from columns (1) to (3). Column (4) presents the specification with firm fixed effects. ***, ** and * represent significance levels at 1%, 5% and 10% respectively with heteroscedasticity-robust standard errors.

Dependent variable.: Local Bias	(1)	(2)	(3)	(4)
Trust Index	-0.254***	-0.238***	-0.237***	-0.219***
	(-7.39)	(-7.09)	(-7.03)	(-5.80)
Controls				
Firm size	-0.021***	-0.005***	-0.006***	-0.009***
	(-23.16)	(-6.20)	(-6.81)	(-3.54)
Market-to-Book	-0.002***	0.000	0.000	-0.000
	(-3.71)	(0.34)	(0.23)	(-0.91)
Book leverage	0.029***	0.003	0.005	0.010
	(3.99)	(0.41)	(0.73)	(1.04)
Profitability	-0.020***	-0.008	-0.010*	-0.011
	(-2.85)	(-1.40)	(-1.71)	(-1.35)
Cash holding	-0.049***	-0.029***	-0.028***	-0.010
	(-6.88)	(-4.31)	(-4.02)	(-0.97)
Institutional ownership		-0.050***	-0.045***	-0.018**
		(-8.96)	(-7.55)	(-2.09)
Yearly return		-0.011***	-0.011***	-0.009***
		(-8.53)	(-8.65)	(-7.16)
Stock return volatility		0.295***	0.332***	0.367***
		(2.99)	(3.23)	(3.52)
Amihud illiquidity		0.068***	0.066***	0.037***
		(13.23)	(13.07)	(5.97)
Year FE	Y	Y	Y	Y
State FE	Y	Y	Y	-
Industry FE (2-digit SIC)	-	-	Y	-
Firm FE	-	-	-	Y
Cluster	Firm	Firm	Firm	Firm
Number of Observations	38,138	38,138	38,138	38,138
R-squared	0.114	0.155	0.163	0.615

Table III (Continued)
Panel B: Control for Various State Characteristics

Panel B includes control for various (time-varying) state characteristics. Column (1) includes controls for state population characteristics (i.e. population size, fraction of male population, fraction of junior population, fraction of senior population, and fraction with college degrees. Column (2) includes controls for state economic conditions (i.e. median household income, per capita GDP, unemployment rate, and state coincident index. Column (3) includes controls for state security conditions (i.e. violent crime rate and property crime rate). Please see the appendix for detailed variable definitions. We include year, industry and state fixed effects in columns (1)-(3). Column (4) includes firm fixed effects.

Dependent variable.: Local Bias	(1)	(2)	(3)	(4)
Trust index	-0.310***	-0.245***	-0.213***	-0.229***
	(-7.60)	(-5.63)	(-4.90)	(-5.52)
Controls				
State population	0.190***	0.313***	0.248***	0.012*
	(5.36)	(5.16)	(4.07)	(1.76)
Male fraction	1.282	-0.737	-1.003	0.528
	(0.95)	(-0.54)	(-0.72)	(1.10)
Senior fraction	-3.929***	-0.873	0.275	0.082
	(-3.20)	(-0.71)	(0.22)	(0.31)
College population	1.199	2.533***	1.418	0.197
	(1.47)	(3.01)	(1.54)	(1.18)
Household income		-0.385***	-0.374***	-0.106***
		(-7.28)	(-6.99)	(-2.74)
Per capita GDP		0.003	0.027	-0.033
		(0.05)	(0.43)	(-0.68)
Unemployment rate		-0.707***	-0.292	-0.419**
		(-3.86)	(-1.54)	(-2.02)
State coincident index		-0.099***	-0.067**	-0.007
		(-2.96)	(-2.01)	(-0.28)
Violent crime rate			-0.080	-0.456**
			(-0.33)	(-2.08)
Property crime rate			-0.241***	-0.147***
			(-4.75)	(-3.51)
Firm size	-0.006***	-0.006***	-0.006***	-0.010***
	(-6.83)	(-6.84)	(-6.88)	(-3.68)
Market-to-Book	0.000	0.000	-0.000	-0.000
	(0.20)	(0.03)	(-0.03)	(-1.11)
Book leverage	0.005	0.006	0.006	0.011
	(0.74)	(0.89)	(0.87)	(1.21)
Profitability	-0.010*	-0.010*	-0.010*	-0.010
	(-1.74)	(-1.75)	(-1.69)	(-1.21)
Cash holding	-0.028***	-0.027***	-0.026***	-0.009
	(-3.99)	(-3.83)	(-3.79)	(-0.93)
Institutional ownership	-0.045***	-0.046***	-0.046***	-0.018**
	(-7.58)	(-7.69)	(-7.64)	(-2.15)
Yearly return	-0.011***	-0.011***	-0.011***	-0.009***
	(-8.69)	(-8.73)	(-8.70)	(-7.11)
Stock return volatility	0.328***	0.298***	0.292***	0.356***
	(3.20)	(2.90)	(2.83)	(3.42)
Amihud illiquidity	0.066***	0.066***	0.066***	0.036***
	(13.07)	(13.13)	(13.13)	(5.92)
Year FE	Y	Y	Y	Y
State FE, Industry FE	Y	Y	Y	-
Firm FE	-	-	-	Y
Cluster	Firm	Firm	Firm	Firm
Number of Observations	38,138	38,138	38,138	38,138
R-squared	0.164	0.166	0.167	0.616

Table IV
Respondent-Characteristics-Based Trust Index and Local Bias

This table presents regressions of local bias and the respondent-characteristics based Trust Indexes. The dependent variable is the local bias as previously defined. Column (1) reports results based on Trust Indexes by the sex of Survey Respondents. Column (2) reports results based on the Trust Indexes by the race of Survey Respondents. Column (3) reports results based on Trust Indexes by the age of Survey Respondents. Column (4) reports results based on Trust Indexes by the education level of Survey Respondents. Column (5) reports results based on Trust Indexes by the family's financial health of Survey Respondents. Column (6) reports results based on Trust Indexes by whether the survey respondent is the chief wage earner in a household. Firm controls (firm size, market-to-book ratio, book leverage, profitability, cash holding, institutional ownership, stock return, Amihud illiquidity and stock volatility) are included but are suppressed to conserve space. Year, state and industry fixed effects are included in all specifications. ***, ** and * represent significance levels at 1%, 5% and 10% respectively with heteroscedasticity-robust standard errors.

Dependent variable.: Local Bias	(1)	(2)	(3)	(4)	(5)	(6)
Trust Index: Male	-0.216***					
	(-7.97)					
Trust Index: Female	0.009					
	(0.36)					
Trust Index: "White/Caucasian White"		-0.351***				
		(-10.57)				
Trust Index: Non- "White/Caucasian White"		0.041**				
		(2.24)				
Trust Index: Age (15-29)			-0.013			
			(-0.65)			
Trust Index: Age (30-49)			-0.104***			
			(-4.43)			
Trust Index: Age (more than 50)			-0.099***			
			(-6.30)			
Trust Index: High education				-0.133***		
				(-6.21)		
Trust Index: Low education				-0.029		
				(-1.41)		
Trust Index: High family financial health					-0.229***	
					(-9.28)	
Trust Index: Low family financial health					-0.016	
					(-0.55)	
Trust Index: Chief wage earner						-0.288***
						(-9.90)
Trust Index: Non- Chief wage earner						0.045**
						(1.97)
Firm Controls	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
State FE, Industry FE	Y	Y	Y	Y	Y	Y
Clustering	Firm	Firm	Firm	Firm	Firm	Firm
Number of Observations	38,138	38,138	38,138	38,138	38,138	38,138

Table V
Trust and Local Bias: Subsample Analysis

This table presents subsample analyses by firm characteristics, using the baseline regressions in Table III, Panel A. Columns (1) and (2) separate the sample by the market value of assets (year-beginning market size, above median, large vs. below median, small). Columns (3) and (4) separate the sample by whether the firm is in the SP 500 index at the beginning of the year (yes vs. no). Columns (5) and (6) separate the sample by whether the firm pays dividends in the previous year (yes vs. no). Columns (7) and (8) separate the sample by whether the firm has a S&P long-term credit rating at the beginning of the year (yes vs. no). Columns (9) and (10) separate the sample by the stock return volatility in the previous year (high vs. low). All specifications include year, industry, and state fixed effects. We perform the Chi-square tests to test the differences in coefficients between subsamples. ***, ** and * represent significance levels at 1%, 5% and 10% with heteroscedasticity-robust standard errors.

Dependent variable: Local Bias	Firm Size		S&P 500		Dividend Payer		With Credit Rating		Stock Volatility	
	Large	Small	Yes	No	Yes	No	Yes	No	High	Low
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Trust index	-0.121***	-0.352***	-0.028	-0.266***	-0.086*	-0.317***	-0.065*	-0.295***	-0.326***	-0.131***
	(-4.59)	(-5.48)	(-0.76)	(-6.98)	(-1.96)	(-6.81)	(-1.91)	(-6.48)	(-5.49)	(-3.78)
Controls										
Firm size	-0.002*	-0.024***	-0.004**	-0.010***	-0.003**	-0.011***	-0.001	-0.013***	-0.012***	-0.005***
	(-1.88)	(-7.79)	(-2.26)	(-6.85)	(-2.36)	(-7.24)	(-1.09)	(-7.53)	(-7.26)	(-4.10)
Market-to-book	0.001**	-0.003***	-0.000	-0.000	0.000	-0.001*	-0.000	-0.000	-0.001**	0.003**
	(2.55)	(-3.24)	(-0.67)	(-0.53)	(0.10)	(-1.65)	(-0.16)	(-1.02)	(-2.45)	(2.05)
Book leverage	-0.013*	0.042***	-0.006	0.012	-0.007	0.015*	-0.002	0.012	0.014	0.005
	(-1.90)	(3.57)	(-0.65)	(1.56)	(-0.64)	(1.74)	(-0.19)	(1.26)	(1.45)	(0.50)
Profitability	-0.008	-0.001	-0.004	-0.009	0.004	-0.011*	-0.034**	-0.006	-0.006	-0.028
	(-1.05)	(-0.16)	(-0.25)	(-1.50)	(0.23)	(-1.87)	(-2.06)	(-0.98)	(-0.98)	(-1.52)
Cash holding	-0.007	-0.029***	-0.022	-0.028***	-0.030*	-0.027***	-0.003	-0.026***	-0.027***	-0.021*
	(-0.98)	(-2.94)	(-1.17)	(-3.86)	(-1.75)	(-3.43)	(-0.21)	(-3.38)	(-3.16)	(-1.77)
Institutional ownership	-0.017**	-0.059***	-0.028*	-0.042***	-0.025**	-0.042***	-0.016*	-0.045***	-0.054***	-0.022**
	(-2.16)	(-5.99)	(-1.82)	(-6.41)	(-2.09)	(-6.25)	(-1.87)	(-5.87)	(-6.82)	(-2.44)
Yearly return	-0.008***	-0.012***	-0.007***	-0.011***	-0.008***	-0.010***	-0.006***	-0.012***	-0.011***	-0.009***
	(-6.06)	(-5.93)	(-3.04)	(-7.89)	(-3.43)	(-7.65)	(-3.89)	(-7.67)	(-7.08)	(-4.74)
Stock Volatility	0.059	0.359***	0.028	0.324***	0.097	0.316***	-0.226	0.341***	0.395***	-0.516*
	(0.58)	(2.72)	(0.17)	(3.05)	(0.39)	(2.75)	(-1.27)	(2.97)	(3.09)	(-1.71)
Amihud illiquidity	0.113***	0.046***	-0.122	0.062***	0.081***	0.060***	0.105***	0.057***	0.056***	0.074***
	(3.26)	(8.05)	(-1.32)	(11.79)	(6.18)	(10.90)	(3.77)	(10.82)	(10.29)	(6.18)
Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry FE, State FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm
Number of Observations	19,059	19,078	4,941	33,197	12,659	25,479	11,067	27,071	19,065	19,073
Chi-Square Test: Diff in Trust Index	10.94***		20.17***		13.19***		16.71***		8.17***	

Table VI
Portfolio Returns Sorted by Local Bias

This table reports the returns of stock portfolios sorted by local bias as previously defined. At each month-beginning from January 1996 to December 2007, stocks are sorted into quintiles based on the previous quarter-end local bias. Portfolio 1 has the lowest local bias. Portfolio 5 has the highest local bias. Equally-weighted returns for the five portfolios are calculated over the month.

Panel A: Portfolio Returns Sorted by Local Bias

Panel A presents portfolio returns of stocks sorted by local bias for the full sample of stocks. For each portfolio, we report the average local bias, the raw average portfolio return, the abnormal return (i.e., alpha) from the CAPM 1-factor (market factor) model, the alpha from the Fama-French 3-factor (market factor, SMB, HML) model, and the alpha from the Carhart 4-factor (market factor, SMB, HML, and momentum factor) model. "Long Portfolio 5 & Short Portfolio 1" is the difference in the returns between the highest and lowest local bias portfolios. We report the raw return, the CAPM alpha, the Fama-French 3-factor alpha and the Carhart 4-factor alpha for the long-short portfolio accordingly. ***, ** and * represent significance levels at 1%, 5% and 10% respectively using robust standard errors with t-statistics given in parentheses. N denotes the number of total months.

Portfolio Sorted by Local Bias	Average Local Bias	Raw Return	CAPM Alpha	Fama-French Alpha	Carhart Alpha	N
Portfolio 1	-0.091	0.0100	0.0006	-0.0002	0.0029	144
			(0.20)	(-0.14)	(1.36)	
Portfolio 2	-0.014	0.0112	0.0024	-0.0006	0.0018*	144
			(1.11)	(-0.44)	(1.91)	
Portfolio 3	0.011	0.0105	0.0020	-0.0008	0.0009	144
			(1.05)	(-0.81)	(1.04)	
Portfolio 4	0.076	0.0122	0.0034	0.0013	0.0035***	144
			(1.44)	(1.00)	(3.04)	
Portfolio 5	0.356	0.0132	0.0046	0.0035	0.0064**	144
			(1.48)	(1.60)	(2.53)	
Long Portfolio 5 & Short Portfolio 1		0.0032***	0.0040***	0.0038***	0.0035***	144
		(3.20)	(4.99)	(4.54)	(3.87)	

Table VI (Continued)

Panel B: Portfolio Returns Sorted by Local Bias in Low/High Trust Regions

Panel B presents portfolio returns of stocks sorted by local bias in the same way as in Panel A, but separately consider stocks located in the low and high trust regions to calculate portfolio returns (dependent sorting). We define a high trust dummy variable to be equal to 1 if the Trust Index in the previous year is above sample median and 0 (i.e. low trust) otherwise. We define the high trust dummy year by year. For each portfolio, we report the average local bias, the raw average portfolio return, the abnormal return (i.e., alpha) from the CAPM 1-factor (market factor) model, the alpha from the Fama-French 3-factor (market factor, SMB, HML) model, and the alpha from the Carhart 4-factor (market factor, SMB, HML, and momentum factor) model. In Panel B1, we form portfolios based on stocks located in low trust regions. In Panel B2, we form portfolios based on stocks located in high trust regions. ***, ** and * represent significance levels at 1%, 5% and 10% respectively using robust standard errors with t-statistics given in parentheses. N denotes the number of total months.

Panel B1: Portfolio Returns Sorted by Local Bias in Low Trust Regions

Portfolio Sorted by Local Bias	Average Local Bias	Raw Return	CAPM Alpha	Fama-French Alpha	Carhart Alpha	N
Portfolio 1	-0.071	0.0108	0.0003	-0.0006	0.0035*	144
			(0.09)	(-0.24)	(1.71)	
Portfolio 2	-0.011	0.0106	0.0013	-0.0020	0.0007	144
			(0.53)	(-1.22)	(0.62)	
Portfolio 3	0.009	0.0112	0.0023	-0.0008	0.0012	144
			(1.02)	(-0.57)	(1.08)	
Portfolio 4	0.064	0.0134	0.0034	0.0014	0.0041***	144
			(1.15)	(0.84)	(2.89)	
Portfolio 5	0.325	0.0166	0.0063	0.0052**	0.0089***	144
			(1.51)	(1.96)	(3.39)	
Long Portfolio 5 & Short Portfolio 1		0.0058***	0.0059***	0.0058***	0.0054***	144
		(3.33)	(3.42)	(3.55)	(3.09)	

Panel B2: Portfolio Returns Sorted by Local Bias in High Trust Regions

Portfolio Sorted by Local Bias	Average Local Bias	Raw Return	CAPM Alpha	Fama-French Alpha	Carhart Alpha	N
Portfolio 1	-0.106	0.0120	0.0021	0.0010	0.0043	144
			(0.53)	(0.38)	(1.57)	
Portfolio 2	-0.023	0.0106	0.0018	-0.0012	0.0021	144
			(0.71)	(-0.61)	(1.51)	
Portfolio 3	0.005	0.0104	0.0018	-0.0009	0.0010	144
			(0.89)	(-0.65)	(0.82)	
Portfolio 4	0.055	0.0113	0.0022	-0.0001	0.0027**	144
			(0.81)	(-0.08)	(2.06)	
Portfolio 5	0.306	0.0128	0.0036	0.0020	0.0059**	144
			(0.93)	(0.72)	(1.99)	
Long Portfolio 5 & Short Portfolio 1		0.0008	0.0015	0.0010	0.0016	144
		(0.53)	(1.09)	(0.74)	(1.16)	

Table VII
Portfolio Returns sorted by Local Bias and Orthogonalized Trust Index

This table presents robustness tests on the returns of stock portfolios sorted by local bias in low and high trust regions (dependent sorting). Instead of using the raw Trust Index in the main specifications, these tests use an *orthogonalized Trust Index* to identify high/low trust regions. Based on 571 state-year observations, in each year, the raw trust index is regressed on various state characteristics including state population characteristics (i.e. population size, fraction of male population, fraction of junior population, fraction of senior population, fraction with college degrees), state economic conditions (i.e. median household income, per capita GDP, unemployment rate, state coincident index) and state security conditions (i.e. violent crime rate and property crime rate), and compute the regression residual as the orthogonalized Trust Index. A high trust dummy variable is equal to 1 if the orthogonalized Trust Index in the previous year is above sample median and 0 (i.e. low trust) otherwise. The high trust dummy is defined each year. Panel A reports the returns of portfolios based on stocks located in low trust regions. Panel B reports the returns of portfolios based on stocks located in high trust regions. ***, ** and * represent significance levels at 1%, 5% and 10% respectively using robust standard errors with t-statistics given in parentheses. N denotes the number of total months.

Panel A: Portfolio Returns in Low Trust Regions using Orthogonalized Trust Index

Portfolio Sorting by Local Bias	Average Local Bias	Raw Return	CAPM Alpha	Fama-French Alpha	Carhart Alpha	N
Portfolio 1	-0.075	0.0104	-0.0003	-0.0007	0.0033	144
			(-0.09)	(-0.29)	(1.53)	
Portfolio 2	-0.015	0.0110	0.0015	-0.0012	0.0014	144
			(0.57)	(-0.75)	(1.16)	
Portfolio 3	0.009	0.0109	0.0017	-0.0007	0.0012	144
			(0.70)	(-0.49)	(0.96)	
Portfolio 4	0.066	0.0128	0.0024	0.0008	0.0035**	144
			(0.73)	(0.44)	(2.20)	
Portfolio 5	0.303	0.0163	0.0055	0.0052*	0.0094***	144
			(1.19)	(1.73)	(3.08)	
Long Portfolio 5 & Short Portfolio 1		0.0059***	0.0059***	0.0059***	0.0061***	144
		(2.98)	(2.92)	(3.31)	(3.03)	

Panel B: Portfolio Returns in High Trust Regions using Orthogonalized Trust Index

Portfolio Sorting by Local Bias	Average Local Bias	Raw Return	CAPM Alpha	Fama-French Alpha	Carhart Alpha	N
Portfolio 1	-0.084	0.0123	0.0025	0.0011	0.0048*	144
			(0.71)	(0.49)	(1.94)	
Portfolio 2	-0.013	0.0113	0.0026	-0.0012	0.0022	144
			(1.07)	(-0.61)	(1.60)	
Portfolio 3	0.006	0.0113	0.0030	-0.0003	0.0018*	144
			(1.49)	(-0.25)	(1.76)	
Portfolio 4	0.052	0.0125	0.0037	0.0009	0.0033***	144
			(1.59)	(0.65)	(3.17)	
Portfolio 5	0.281	0.0121	0.0031	0.0009	0.0046*	144
			(0.93)	(0.36)	(1.78)	
Long Portfolio 5 & Short Portfolio 1		-0.0002	0.0006	-0.0003	-0.0002	144
		(-0.16)	(0.48)	(-0.21)	(-0.16)	

Table VIII: Trust, Local Bias, and "Close-to-Golf" Investors

This table presents results using the sample of institutional investors located close to the top state golf courses. We proceed as follows. In each state, we obtain the location information of the top 20 golf courses from http://www.golflink.com/top-golf-courses/. For each institutional investor, we calculate the "distance-to-golf" as the average distance between the investor and the 20 golf courses. Then, we select the subsample of institutional investors ("close-to-golf" investors) if its distance-to-golf is below the state median. Next, we follow the previous methodology and define the "close-to-golf" local bias as the difference between the local investment and the benchmark investment by the local close-to-golf investors.

Panel A: Trust and the Local Bias of "Close-to-Golf" Investors

Panel A presents regressions of "close-to-golf" local bias on the Trust Index. We follow the same specifications as in Panel A of Table III. ***, ** and * represent significance levels at 1%, 5% and 10% respectively with heteroscedasticity-robust standard errors.

Dependent variable.: Close-to-Golf Local Bias	(1)	(2)	(3)	(4)
Trust Index	-0.567***	-0.537***	-0.457***	-0.508***
	(-10.91)	(-10.73)	(-11.45)	(-8.73)
Controls				
Firm size	-0.030***	-0.009***	-0.010***	-0.012***
	(-25.66)	(-8.27)	(-8.38)	(-3.42)
Market-to-Book	-0.004***	-0.002***	-0.002***	-0.001*
	(-6.42)	(-3.48)	(-3.41)	(-1.95)
Book leverage	0.036***	0.001	0.002	0.008
	(3.88)	(0.17)	(0.27)	(0.65)
Profitability	-0.027***	-0.008	-0.011	-0.019
	(-2.91)	(-1.05)	(-1.54)	(-1.51)
Cash holding	-0.076***	-0.046***	-0.043***	-0.013
	(-7.68)	(-4.90)	(-4.50)	(-0.88)
Institutional ownership		-0.088***	-0.085***	-0.045***
		(-12.55)	(-11.61)	(-3.75)
Yearly return		-0.013***	-0.013***	-0.011***
		(-7.97)	(-7.98)	(-6.20)
Stock return volatility		0.264**	0.253*	0.489***
		(2.00)	(1.85)	(3.53)
Amihud illiquidity		0.105***	0.105***	0.052***
		(12.96)	(13.10)	(5.75)
Year FE	Y	Y	Y	Y
State FE	Y	Y	Y	-
Industry FE (2-digit SIC)	-	-	Y	-
Firm FE	-	-	-	Y
Cluster	Firm	Firm	Firm	Firm
Number of Observations	31,468	31,468	31,461	31,468

Table VIII (Continued)

Panel B: Portfolio Returns Sorted by "Close-to-Golf" Local Bias

Panel B presents returns of portfolios sorted on "close-to-golf" local bias following the previous approach. Panel B1 presents portfolio returns sorted by close-to-golf local bias for the stocks in low trust regions. Panel B2 presents portfolio returns sorted by close-to-golf local bias for the stocks in high trust regions. Portfolio 1 (5) has the lowest (highest) close-to-golf local bias. "Long Portfolio 5 & Short Portfolio 1" is the difference in the returns between Portfolio 5 and Portfolio 1. For brevity, we only report the results for Portfolio 1, Portfolio 5 and the Long-Short portfolio, respectively. N denotes the number of total months.

Panel B1: Portfolio Returns (Low Trust Regions)

Portfolio Sorted by "Close-to Golf" Local Bias	Average Local Bias	Raw Return	CAPM Alpha	Fama-French Alpha	Carhart Alpha	N
Portfolio 1	-0.090	0.0106	-0.0005	-0.0009	0.0037*	144
			(-0.14)	(-0.35)	(1.95)	
Portfolio 5	0.425	0.0191	0.0086*	0.0077***	0.0112***	144
			(1.95)	(2.74)	(3.97)	
Long Portfolio 5 & Short Portfolio 1		0.0084***	0.0091***	0.0086***	0.0075***	144
		(3.77)	(4.28)	(3.84)	(3.23)	

Panel B2: Portfolio Returns (High Trust Regions)

Portfolio Sorted by "Close-to Golf" Local Bias	Average Local Bias	Raw Return	CAPM Alpha	Fama-French Alpha	Carhart Alpha	N
Portfolio 1	-0.128	0.0128	0.0029	0.0017	0.0053**	144
			(0.77)	(0.68)	(2.18)	
Portfolio 5	0.342	0.0122	0.0026	0.0013	0.0053**	144
			(0.67)	(0.50)	(2.03)	
Long Portfolio 5 & Short Portfolio 1		-0.0006	-0.0003	-0.0004	0.0000	144
		(-0.37)	(-0.22)	(-0.25)	(0.01)	

Table VIII (Continued)

Panel C: Portfolio Returns of "Close-to-Golf" Investors in Low Trust Regions by Weather

Panel C presents returns of portfolios sorted on "close-to-golf" local bias and weather for the low trust region subsample. We perform dependent double sorting by the level of state precipitation (previous quarter average) and the previous quarter-end "close-to-golf" local bias. We use both the raw measure of precipitation and the standardized state precipitation index, obtained directly from the National Climatic Data Center (NCDC) nClimDiv dataset (data items pcpn and sp01, respectively). The standardized index allows for comparison of precipitation observations at different locations with markedly different climates, i.e., an index value at one location expresses the same relative departure from median conditions at one location as at another location. For each month, we define "Good Weather" ("Bad weather") if the state precipitation is below (above) the sample median. In Panel C1, we define "Good/Bad" weather by the raw state precipitation, while in Panel C2, we define "Good/Bad" weather by the standardized state precipitation. For brevity, we only report the return (alphas) of the long-short portfolio, "Long Portfolio 5 & Short Portfolio 1", formed during the "Good/Bad" weather period, respectively. N denotes the number of total months.

Panel C1: Good/Bad Weather by Raw State Precipitation

Low Trust Region: Long Portfolio 5 & Short Portfolio 1	Raw Return	CAPM Alpha	Fama-French Alpha	Carhart Alpha	N
Good Weather	0.0116*** (3.74)	0.0131*** (4.51)	0.0122*** (4.00)	0.0119*** (3.36)	144
Bad Weather	0.0014 (0.52)	0.0027 (1.10)	0.0018 (0.65)	-0.0002 (-0.09)	144

Panel C2: Good/Bad Weather by Standardized State Precipitation

Low Trust Region: Long Portfolio 5 & Short Portfolio 1	Raw Return	CAPM Alpha	Fama-French Alpha	Carhart Alpha	N
Good Weather	0.0114*** (3.84)	0.0129*** (4.63)	0.0124*** (4.39)	0.0120*** (3.90)	144
Bad Weather	0.0041 (1.60)	0.0051** (2.09)	0.0038 (1.52)	0.0021 (0.81)	144

Table IX: Trust, Regulation Fair Disclosure, and Local Bias

This table presents results on the impact of the passage of Regulation Fair Disclosure (Reg FD) rule on the relation between trust and local bias. Reg FD was adopted by the SEC on August 2000 to curb the selective disclosure of material nonpublic information by firms to analysts and institutional investors. The post-Reg FD dummy is equal to 1 if the year is after 2001 and 0 (pre-Reg FD) otherwise.

Panel A: Univariate Sorts

Panel A presents the average local bias of stocks located in the high/low trust regions during the pre-Reg FD period and during the post-Reg FD period, respectively. Both t-tests and Wilcoxon tests are reported to test whether the average local bias is significantly different during the two periods.

Local Bias	Pre-Reg FD	Post-Reg FD	T-test: Pre=Post	Wilcoxon: Pre=Post
Low Trust	7.1%	4.3%	13.84***	9.28***
	(11830)	(10439)		
High Trust	6.5%	2.8%	15.13***	15.88***
	(8540)	(7329)		

Panel B: Multivariate Regressions

Panel B presents regression analysis, following the baseline specification as in Table V, Panel A. The dependent variable is the local bias as previously defined. Trust Index* Post-Reg FD is the interaction between trust index and the post-Reg FD dummy. The post-Reg FD dummy is omitted since year fixed effects are included in all specifications.

Dependent variable.: Local Bias	(1)	(2)	(3)	(4)
Trust Index	-0.214***	-0.197***	-0.197***	-0.182***
	(-6.23)	(-5.87)	(-5.85)	(-4.92)
Trust Index * Post-Reg FD	-0.197***	-0.203***	-0.197***	-0.172***
	(-5.77)	(-5.98)	(-5.77)	(-4.32)
Controls				
Firm size	-0.021***	-0.005***	-0.006***	-0.009***
	(-23.17)	(-6.22)	(-6.81)	(-3.61)
Market-to-Book	-0.002***	0.000	0.000	-0.000
	(-3.74)	(0.32)	(0.22)	(-0.95)
Book leverage	0.029***	0.003	0.006	0.011
	(4.04)	(0.46)	(0.78)	(1.16)
Profitability	-0.020***	-0.008	-0.010*	-0.011
	(-2.85)	(-1.41)	(-1.73)	(-1.34)
Cash holding	-0.048***	-0.029***	-0.028***	-0.010
	(-6.84)	(-4.25)	(-3.95)	(-0.96)
Institutional ownership		-0.050***	-0.045***	-0.017**
		(-8.95)	(-7.56)	(-2.02)
Yearly return		-0.011***	-0.011***	-0.009***
		(-8.54)	(-8.66)	(-7.16)
Stock return volatility		0.289***	0.325***	0.358***
		(2.93)	(3.17)	(3.45)
Amihud illiquidity		0.068***	0.066***	0.037***
		(13.27)	(13.11)	(6.04)
Year FE	Y	Y	Y	Y
State FE	Y	Y	Y	-
Industry FE (2-digit SIC)	-	-	Y	-
Firm FE	-	-	-	Y
Cluster	Firm	Firm	Firm	Firm
Number of Observations	38,138	38,138	38,138	38,138
R-squared	0.114	0.156	0.163	0.615

Table IX (Continued)

Panel C: Portfolio Returns

Panel C reports the returns of stock portfolios sorted by local bias during the pre-Reg FD and the post-Reg FD periods, respectively. The procedure is the same as in Table III to sort portfolios. At each month-beginning, all stocks are sorted into quintiles based on the previous quarter-end local bias. Portfolio 1 is the portfolio with the lowest local bias and portfolio 5 is the portfolio with the highest local bias. Equally-weighted returns are calculated over the month for the five portfolios. For brevity, the table reports the long-short portfolio return, "Long Portfolio 5 & Short Portfolio 1", i.e., the difference in the returns between the highest and lowest local bias portfolios. The raw return, the CAPM 1-factor, the Fama-French 3-factor and the Carhart 4-factor abnormal returns are reported for the long-short portfolio accordingly. Panel C1 report the results for stocks located in the low trust regions, and Panel C2 presents the results for stocks located in the high trust regions. ***, ** and * represent significance levels at 1%, 5% and 10% respectively using robust standard errors with t-statistics given in parentheses. N is the number of total months.

Panel C1: Long-Short Portfolio Returns in Low Trust Regions

Long Portfolio 5 & Short Portfolio 1	Raw Return	CAPM Alpha	Fama-French Alpha	Carhart Alpha	N
Pre-Reg FD	0.0063**	0.0067**	0.0069**	0.0059**	72
	(2.04)	(2.17)	(2.51)	(1.97)	
Post-Reg FD	0.0053***	0.0052***	0.0049***	0.0052***	72
	(3.22)	(3.19)	(2.70)	(2.88)	

Panel C2: Long-Short Portfolio Returns in High Trust Regions

Long Portfolio 5 & Short Portfolio 1	Raw Return	CAPM Alpha	Fama-French Alpha	Carhart Alpha	N
Pre-Reg FD	0.0014	0.0023	0.0013	0.0021	72
	(0.64)	(1.15)	(0.69)	(1.10)	
Post-Reg FD	0.0003	0.0008	0.0011	0.0013	72
	(0.15)	(0.43)	(0.59)	(0.68)	

Figure I
Trust Index by Region and Survey Year

This figure presents plots of the Trust Index by region and year. The World Values Survey conducted three waves of surveys in the U.S. in year 1995, 2000 and 2006. The survey identifies the locations of Survey Respondents by ten geographical regions: New England (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut), Middle Atlantic (New York, Pennsylvania, New Jersey), East North Central (Wisconsin, Michigan, Illinois, Indiana, Ohio), West North Central (Missouri, North Dakota, South Dakota, Nebraska, Kansas, Minnesota, Iowa), South Atlantic (Delaware, Maryland, Washington D.C., Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida), East South Central (Kentucky, Tennessee, Mississippi, Alabama), West South Central (Oklahoma, Texas, Arkansas, Louisiana), Rocky Mountain (Montana, Wyoming, Nevada, Utah, Colorado, Arizona, New Mexico), Northwest (Oregon, Washington, Idaho) and California.. In each region, the Trust Index is calculated as the percentage of Survey Respondents answering "Most people can be trusted" to the survey question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?".

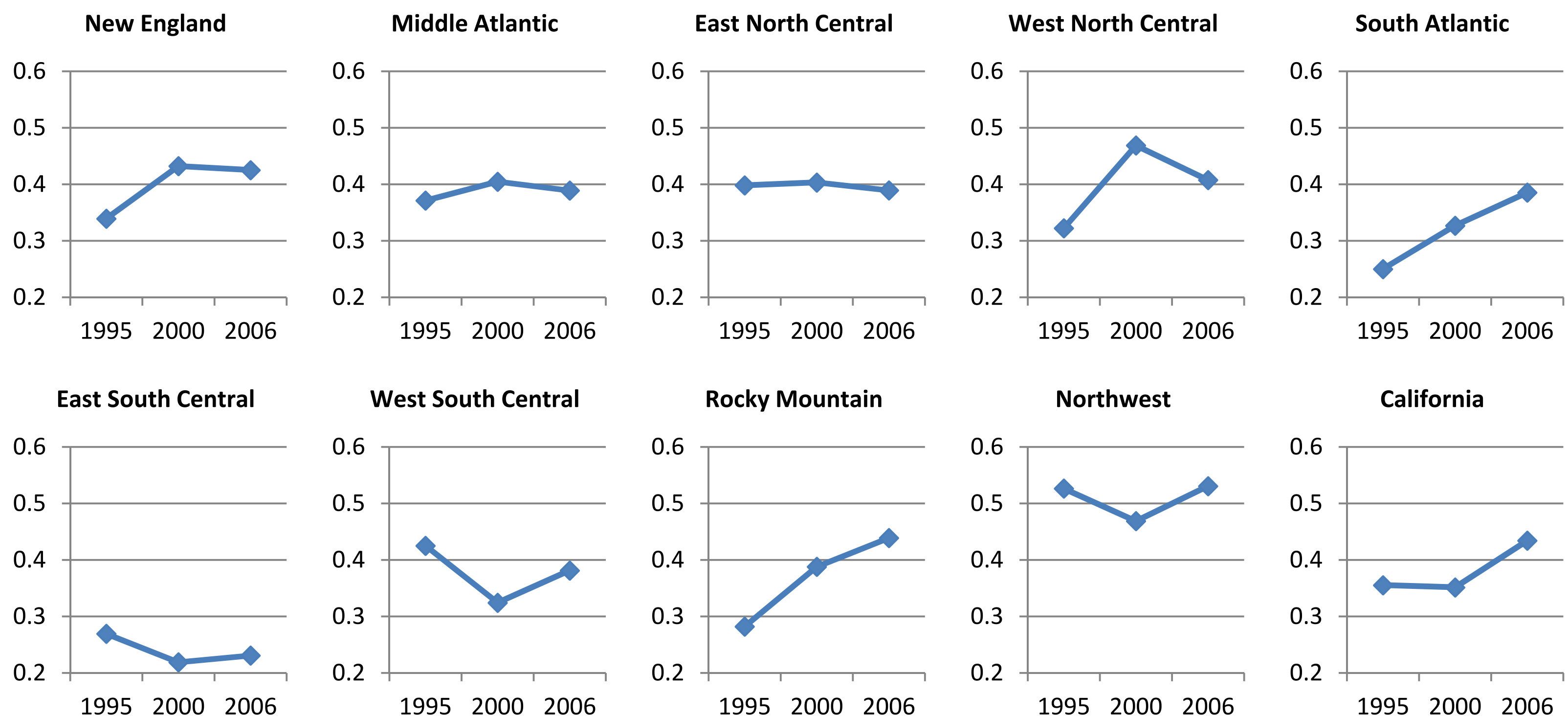
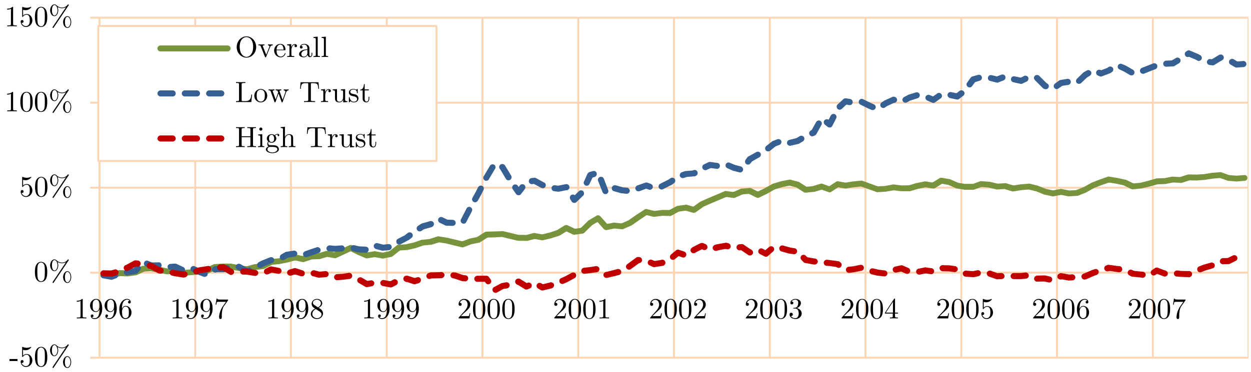


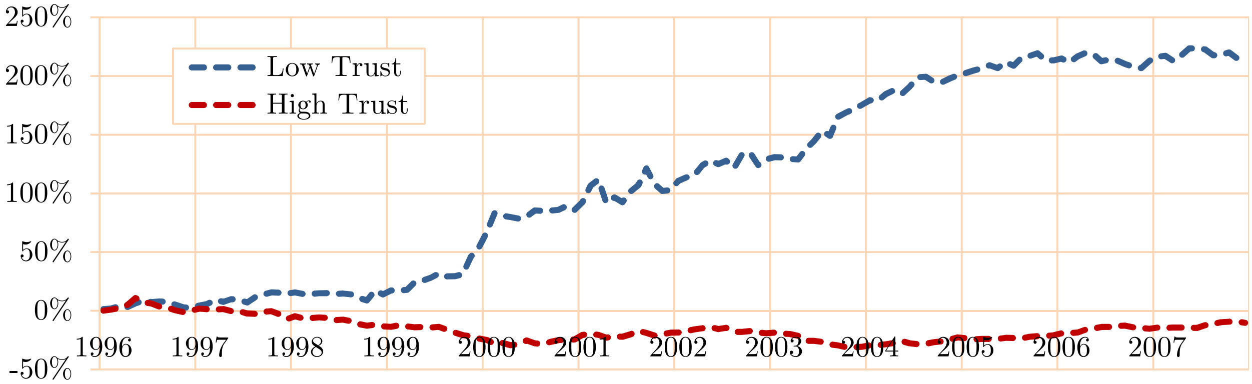
Figure II
Cumulative Returns: Long-Short Portfolios of Stocks Sorted by Local Bias

This figure presents cumulative returns of long-short portfolios of stocks sorted by local bias for the full sample (Panel A), the Close-to-Golf Investor sample (Panel B), and the low trust, Close-to-Golf sample (Panel C). Panel A and B includes plots for the low- and high- trust subsamples. Panel C plots good and bad weather subsamples. At each month-beginning from January 1996 to December 2007, stocks are sorted into quintiles based on the previous quarter-end local bias, and the average return of each portfolio is calculated. The return of the long-short portfolio is calculated as the return of the highest local bias portfolio (P5) minus the lowest local bias portfolio (P1). "Local bias" is defined as the difference between the actual local investment and the benchmark investment by local investors assuming that every investor is holding the market portfolio.

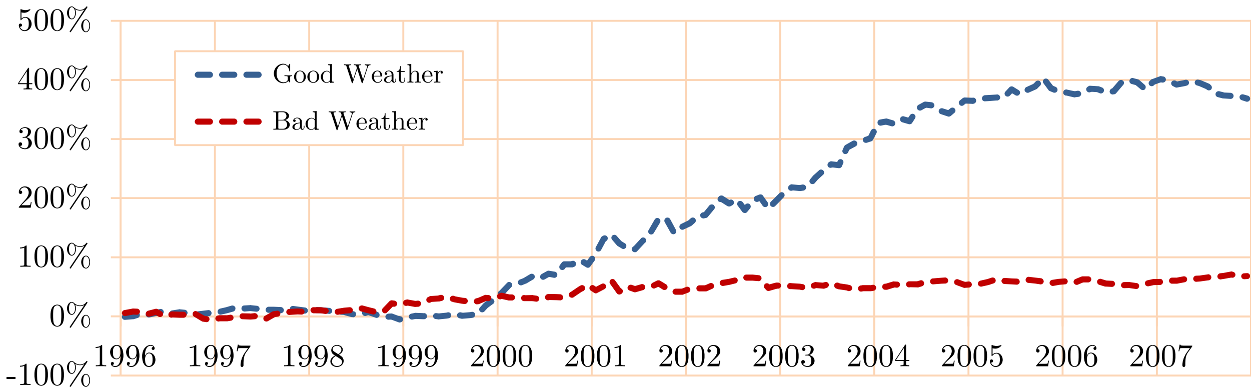
Panel A. Overall Sample



Panel B. Close-to-Golf Course Sample



Panel C. Low Trust-Only, Close-to-Golf Course Sample



For Online Publication: Variable Definitions

State level variables

Trust Index: We construct the state-level Trust Index from the survey information from the World Values Survey. The World Values Survey conducted three waves of surveys in the U.S. in year 1995, 2000 and 2006. In total there are around 4000 Survey Respondents in the three surveys. The survey identifies the locations of Survey Respondents by ten geographical regions: New England (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut), Middle Atlantic (New York, Pennsylvania, New Jersey), East North Central (Wisconsin, Michigan, Illinois, Indiana, Ohio), West North Central (Missouri, North Dakota, South Dakota, Nebraska, Kansas, Minnesota, Iowa), South Atlantic (Delaware, Maryland, Washington D.C., Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida), East South Central (Kentucky, Tennessee, Mississippi, Alabama), West South Central (Oklahoma, Texas, Arkansas, Louisiana), Rocky Mountain (Montana, Wyoming, Nevada, Utah, Colorado, Arizona, New Mexico), Northwest (Oregon, Washington, Idaho) and California. Specifically, in each region, we calculate the percentage of Survey Respondents answering "Most people can be trusted" to the survey question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". We estimate the value of the Trust Index in the years between two consecutive surveys by linear interpolation.

High Trust Dummy: a dummy variable equal to 1 if the *Trust Index* is above sample median and 0 otherwise. We define the high trust dummy year by year.

log(Population): the natural log of the size of state population. The data comes from the U.S. Census Bureau county population estimates datasets.

Male fraction: the percentage of male population in each state. We only include the population aging from 35 to 85. The data comes from the U.S. Census Bureau county population estimates datasets.

Senior fraction: the percentage of population more than 65 years old in each state. The data comes from the U.S. Census Bureau county population estimates datasets.

College fraction: the percentage of population with college degrees in each state. The data comes from the Economic Research Service in the U.S. Department of Agriculture.

log(Household income): the natural log of the median household income in each state. The data come from the U.S. Census Bureau SAIPE (Small Area Income and Poverty Estimates) datasets.

log(Per capital GDP): the log value of the total amount of state GDP divided by state population.

Unemployment rate: the historical rate of unemployment in each state. The data comes from the Bureau of Labor Statistics.

State coincident index: it is a state-level economic condition index variable that has been developed at the Federal Reserve Bank of Philadelphia, which in turn is based on a national coincident index methodology developed by Stock and Watson (1989). The coincident indexes combine four state-level indicators to summarize current economic conditions in a single statistic. The four state-level variables in each coincident index are nonfarm payroll employment, average hours worked in manufacturing, the unemployment rate, and wage and salary disbursements deflated by the consumer price index (U.S. city average).

Violent crime rate: Violent crime includes murder, rape and sexual assault, robbery, and assault. It is obtained on a yearly basis from the FBI's Uniform Crime Reports.

Property crime rate: Property crime includes the offenses of burglary, larceny-theft, motor vehicle theft, and arson. It is obtained on a yearly basis from the FBI's Uniform Crime Reports.

Firm level variables

Local Bias: We follow the methodology developed in Coval and Moskowiktz (2001). For a given stock, we define the local bias as the difference between the local investment in excess of the benchmark investment assuming that every investor is holding the market portfolio. For each stock j, suppose I is the entire institutional investor universe, $H_{i,j,t}$ is the holdings of stock j by investor i at quarter t, and $A_{i,t}$ is the total dollar holdings of investor i at quarter t, then it is calculated as:

$$Local\ Bias_{j,t} = \sum_{i \in I:\text{ Same State as Stock j}} H_{i,j,t} \Big/ \sum_{i \in I} H_{i,j,t} - \sum_{i \in I:\text{ Same State as Stock j}} A_{i,t} \Big/ \sum_{i \in I} A_{i,t} .$$

Firm size: the log value of assets (data 6)

Market-to-book: market value of assets/book assets (data6), where the market value of assets is calculated as: stock price (data199) * shares outstanding (data25) + short term debt(data34) + long term debt(data9) + preferred stock liquidation value (data10) – deferred taxes and investment tax credits (data35).

Book leverage: total debt/book assets (data6), where the total debt is long term debt (data9) + short term debt (data34)

Profitability: operating income before depreciation (data13)/book assets (data6)

Cash holding: cash and short-term investments (data1)/book assets (data6)

Yearly stock return: cumulative stock returns in the year

Institutional ownership: the fraction of institutional ownership, calculated from Thomason CDA/Spectrum institutional ownership Database (13F).

Amihud Illiquidity: the value of the Amihud (2000) illiquidity measure. It averages over each day in year t the square root of the ratio of the absolute price change divided by daily dollar volume. It is calculated as:

$$Illiquidity_{i,t} = \frac{1}{D_t} \sum_{Days \in t} (1000 * \sqrt{\frac{|\text{daily return}|}{|\text{daily dollar volume}|}}) ,$$

where D_t is the number of days in year t.

Stock return volatility: the standard deviation of daily stock returns in the year.