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Abstract

This paper examines the effect of social trust on local bias. Our evidence suggests that institutional investors located in high-trust regions of the United States exhibit lower local bias. Moreover, we find that high-trust investors are better diversified, suggesting that trust helps accomplish greater diversification. The results are not due to firm, demographic, or local economic characteristics. Additional analysis reveals that the documented informational advantage in local holdings exists only in low-trust regions. We show that this finding is consistent with a trust explanation.

Keywords: Trust, Local Bias, Institutional Investors, Cultural Economics

JEL Classification: G11, G12, G23, Z1

"Virtually every commercial transaction has within itself an element of trust, certainly any transaction conducted over a period of time." - Kenneth Arrow (1972)

I. Introduction

Despite the well-documented gains from portfolio diversification, investors exhibit strong preferences for local stocks. This phenomenon is known as home bias or local bias, and it exists internationally, domestically, and among individual and institutional investors (Coval and Moskowitz (1999, Karolyi and Stulz (2003), Chan, Covrig, and Ng (2005), Ivković and Weisbenner (2005), Seasholes and Zhu (2009), and Baik, Kang, and Kim (2010)). In this paper, we examine social trust as a potential explanation for home/local bias. Social trust is likely to affect investment choice because investments are made for future promises (Sapienza and Zingales (2012)). Investing requires an act of faith in the financial system. Consistent with this view, recent studies find that trust is an important determinant of stock market participation (Guiso, Sapienza, and Zingales (2008), Giannetti and Wang (2016), Gurun, Stoffman, and Yonker (2017)).

We add to these findings by examining the effect of trust on the portfolio allocation decision, after the choice has been made to participate in the stock market. Our approach examines institutional investors because they are professionally delegated to manage investments. Institutional investors are also major participants in the U.S. market, and their decisions affect valuations, risk premiums, and the cost of capital for corporations.

Our empirical tests are guided by the theory developed in Guiso et al. (2008). While their focus is on the relation between trust and stock market participation, trust also has consequences for portfolio allocation. The authors discuss this potential implication (p. 2562): "*more knowledge… overcomes the barrier created by lack of trust. Hence, mistrust will be less of an obstacle in investing in local stocks*." Stated differently, investors that lack trust will hold relatively

more local stocks and fewer distant stocks and therefore have portfolios that are more concentrated and potentially underdiversified.

We take this prediction to the data using a measure of trust based on World Values Survey 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*?" The World Values Survey (WVS) is widely used to measure differences in trust across countries (La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997), Guiso et al. (2008)). To design a proper empirical setting for our research question, we measure social trust across different regions of the United States.[1] There are at least three benefits of the U.S. setting. First, firms in our sample face practically identical regulatory and accounting standards, allowing us to focus on the economic channel of trust while ruling out thorny institutional differences (e.g., language, accounting rules, disclosure requirements, and insider trading regulations, etc.) that arise from the international context. Second, the data on the locations of institutional investors and their quarterly portfolio holdings in U.S. firms are publicly available. Third, there is significant variation in social trust across different U.S. regions. These differences are comparable to the differences in trust across Western Europe.[2]

Our analysis begins at the institutional investor level. We assume that institutional investors are likely to exhibit trust attitudes that are similar to those of residents in their headquarters region. Since we focus on institutional investors, the local region is defined at the state level following Baik et al. (2010). The unconditional average local bias of investors in low-trust regions is 0.9% greater than that of investors located in high-trust regions. Multivariate analysis reveals that a 1-

[1] The United States is the only country in the World Value Survey that contains information on the geographical location and detailed personal characteristics of survey respondents. The survey is conducted approximately every five years.

[2] 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)).

standard-deviation increase in the trust measure reduces local bias by approximately 27% relative to the sample average. The difference is not due to investor characteristics, including total equity assets, age, and number of stocks in the portfolio, nor to differences in investor types. Since local bias has information content, we expect a stronger relation between trust and local bias among investors that are better able to exploit local knowledge. Consistent with this view, the effect of trust on local bias is larger among smaller investors, investors with fewer holdings, and investors with shorter holding horizons (Ke and Petroni (2004), Yan and Zhang (2009)).

The theoretical motivation for the relation between trust and local bias also produces a testable prediction on portfolio diversification. Specifically, if low-trust investors tend to avoid distant stocks, they are more likely to be underdiversified. We find evidence in support of this prediction. Following the approach in Pool, Stoffman, and Yonker (2012), we find that a lack of trust is associated with higher portfolio idiosyncratic volatility. Since investors may not necessarily follow the Capital Asset Pricing Model (CAPM) as their benchmark, we also employ a second measure of investor portfolio diversification defined as the sum of the squared portfolio weights on each stock (i.e., Herfindahl). The results are also similar using the Herfindahl measure. Overall, this line of analysis lends further credence to the relation between trust and local bias.

Since companies may systematically differ across high- and low-trust regions, we conduct stock-level analysis by aggregating ownership of institutional investors to create a measure of local ownership. Multivariate cross-sectional tests reveal that firms located in low-trust regions experience greater local ownership. We conjecture that this relation will be relatively greater for stocks with low national recognition. Consistent with this view, we find stronger effects among smaller stocks, non-S&P 500 members, nondividend payers, stocks without a credit rating, and stocks with high return volatility. The results are not due to firm characteristics (e.g., size,

profitability, liquidity, or institutional ownership) and remain with the inclusion of industry fixed effects and firm fixed effects. We also include state fixed effects to capture to regional industry clusters, financial centers, and urbanization. The results are similar using stricter specifications that directly control for demographics (e.g., gender, age, and education), economic fluctuations (e.g., GDP, unemployment rate, and household income), and security conditions (e.g., violent and property crime rates). Overall, the evidence suggests that regional characteristics do not explain the relation between trust and local ownership.

Culture-related research is commonly subject to measurement concerns (Karolyi (2015), Zingales (2015)). Our study also faces questions regarding the measurement of trust. One issue is that the World Values Survey measure is noisy because it is calculated at the U.S. regional level. We show that our findings are not sensitive to the WVS regional state groupings. Although many investors and firms are located in key financial centers, our main inferences are unchanged after excluding New York, Massachusetts, and California. We find similar results using two alternative trust measures, the first created from a subset of survey respondents that are likely to be stock market participants and the second using the General Social Survey (GSS) data. A second concern relates to the external validity of our findings outside of our U.S. setting. Using international cross-border equity portfolio data from the International Monetary Fund (IMF), we find a strong association between trust and international home bias at the aggregate country-level.[3] This test also allays concerns regarding the issue of measuring investor trust, because trust is measured at the aggregate country-level. Moreover, this result demonstrates that our main finding holds in an out-of-sample international setting.

Prior studies show that local holdings may reflect a stronger preference for familiar

[3] This association is also consistent with, although distinct from, the finding that bilateral trust affects portfolio investment in a country (Guiso, Sapienza, and Zingales (2009)).

companies (Huberman (2001)), skepticism of distant firms (Zingales (2011)), or information advantages. The trust explanation has a specific prediction in this regard on the information content of local ownership. When investors lack sufficient trust, they require better knowledge and/or information advantages in their investment decisions. If more local knowledge helps to overcome this barrier, we expect information advantages to play a larger role in the local ownership of investors in low-trust regions. Portfolio return tests support this prediction. In high-trust regions, a long-short portfolio of stocks sorted by local ownership generates an insignificant 0% Carhart (1997) 4-factor risk-adjusted annual return. In contrast, the long-short portfolio in low-trust regions earns Carhart (1997) 4-factor alphas of 6.5% annually. It is unlikely that regional factors explain these patterns because the results are similar after orthogonalizing our trust measure by other state characteristics. The evidence implies that low-trust regions drive the performance outcome of local ownership previously documented in the literature and provides additional support for the link between trust and local bias.

Additional analysis provides insights on the source of the information advantage of low-trust investors. We find a positive association between earnings surprise and local ownership in low-trust regions but not in high-trust regions. Moreover, in areas where local amenities provide better opportunities to build social connections, we find the information advantage of low-trust investors increases substantially. The results of these tests naturally raise questions of privileged access. However, since the information advantage of low-trust investors continues after the passage of Regulation Fair Disclosure (Reg FD), it is unlikely that privileged access is the primary source of this advantage.

Our remaining tests address alternative interpretations and provide robustness checks. An important consideration is the possibility that trust facilitates the collection and dissemination of

information, lowering the costs of investing and attracting investment from distant investors. Indeed, it is plausible that both forces, the "pull" of distant investors and the "push" to invest in distant stocks, are at work. We include additional controls for the firm's information environment to capture these lower investing costs and find that our main inferences are unchanged. Second, it is possible that trust is simply a proxy for attitudes towards risk (i.e., high trust captures lower risk-aversion). While risk aversion relates to stock market participation, additional tests reveal that our findings are not sensitive to the inclusion of a proxy for local risk tolerance. Moreover, the theoretical framework (Guiso et al. (2008)) that motivates our study shows that higher risk aversion predicts lower local bias.

Our study contributes to the literature on home/local bias by proposing social trust as an important element of the home/local bias puzzle. The sources of home/local bias have long puzzled economists (French and Poterba (1991), Baxter and Jermann (1997)), but recent findings suggest that stock market development, geographic distance, cultural distance, and language may help explain this phenomenon (Grinblatt and Keloharju (2001), Chan et al. (2005), Anderson, Fedenia, Hirschey, and Hill (2011), Karolyi (2015)).[4] Following theoretical guidance, we find empirical support using two independent surveys (WVS and GSS) and international cross-border equity portfolio flows, which provide external validity for our findings.

Our findings also extend studies that primarily examine individual investors on the effect of trust on portfolio decisions (Giannetti and Wang (2016), Shao and Wang (2016)). In contrast, we examine the effect of trust on portfolio choice among paid professionals. The trust explanation has a specific prediction that information advantages in local ownership should arise mostly in low-trust regions. We find evidence consistent with this unique prediction.

[4] Cooper, Sercu, and Vanpele (2013) provide a recent comprehensive survey of the home bias puzzle.

More broadly, we contribute to the growing literature on the role of culture in finance (Karolyi (2015), Zingales (2015)), specifically focusing on investment and portfolio choice.[5] Investment decisions are influenced by language and cultural similarities (Grinblatt and Keloharju, (2001), Beugelsdijk and Frijns (2010)), religious beliefs (Kumar, Page, and Spalt (2011), Shu, Sulaeman, and Yeung (2012)), egalitarianism (Siegel, Licht, and Schwartz (2011)), and trust (Guiso, Sapienza, and Zingales (2008), (2009)), Gennaioli, Shleifer, and Vishny (2015), Kostovetsky, (2016)).[6]

II. Data and Main Variables

Our measure of trust is collected from the World Values Survey 1981–2008 Integrated Questionnaire (Inglehart et al. (2014)). Three waves of surveys (waves 3, 4, and 5) with trust-related questions are conducted in the U.S. (1995, 2000, 2006).[7] Thus, our sample period starts in 1996 and ends in 2007. In each region, we calculate the trust index (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

[5] Studies show that different culture dimensions including religion, individualism, and social trust relate to shareholder/creditor rights (Stulz and Williamson (2003)), overseas listing decisions (Sarkissian and Schill (2004)), corporate investment (Hiliary and Hui (2009)), M&A activity (Ahern, Daminelli, and Fracassi (2015)), price momentum (Chui, Titman, and Wei (2010)), investment advisor selection (Kostovetsky (2016)), investor trading reaction (Jia, Wang, and Xiong (2017)), and co-movement (Eun, Wang, and Xiao (2015)).

[6] Social trust affects economic growth (Knack and Keefer (1997)), judicial efficiency and corruption (La Porta et al. (1997)), international trade (Guiso et al. (2009)), 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 et al. (2008)), and the choice of delegated asset management (Gennaioli et al. (2015)).

[7] 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, and Connecticut), Middle Atlantic (New York, Pennsylvania, and New Jersey), East North Central (Wisconsin, Michigan, Illinois, Indiana, and 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, and Florida), East South Central (Kentucky, Tennessee, Mississippi, and Alabama), West South Central (Oklahoma, Texas, Arkansas, and Louisiana), Rocky Mountain (Montana, Wyoming, Nevada, Utah, Colorado, Arizona, and New Mexico), Northwest (Oregon, Washington, and Idaho), and California.

between two consecutive surveys by linear interpolation. Interpolation is a standard convention for estimating regional characteristics (Hilary and Hui (2008), Kumar et al. (2011), Shu et al. (2012)). To allay concerns, we re-estimate our key tests using a noninterpolated TRUST_INDEX measure and provide the results in the Internet Appendix.

While studies commonly use the World Values Survey to measure trust (Guiso et al. (2004)), the measurement is coarse since surveys occur every five to six years. Therefore, we employ a second survey, the General Social Survey. The GSS is a U.S.-based survey conducted approximately every two years.[8] A benefit of the GSS is that trust can be measured at the state level because the survey provides respondents' state location. However, there are fewer responses per state, which introduces noise to the measure. Therefore, we primarily use the World Values Survey measure because 1) it is more commonly used in the literature and 2) it allows for comparability in our international analysis. Importantly, our main inferences are unchanged using the GSS trust measure.

Historical firm headquarters location data are gathered from Compact Disclosure. We obtain firm level accounting information from Compustat and security return information from Center for Research in Security Prices (CRSP). Our main sample includes all stocks with institutional ownership. The number of analysts covering a stock and the consensus forecast estimate are from the Institutional Brokers' Estimate System (IBES). Regional variables such as the natural log of the state population (POPULATION), the percentage of male population in each state (MALE), the percentage of population more than 65 years old in each state (SENIOR), the natural log of the median household income (HOUSEHOLD_INCOME), the unemployment rate

[8] We use the same methodology as with the World Values Survey by calculating the GSS TRUST_INDEX as the percentage of respondents answering, "Most people can be trusted" to the trust survey question. The GSS trust survey question has identical wording to the WVS trust question, "*Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?*"

(UNEMPLOYMENT), the state coincident index (SC_INDEX), the violent crime rate (VIOLENT_CRIME), and the property crime rate (PROPERTY_CRIME) are gathered from the U.S. Census Bureau, Bureau of Labor Statistics (BLS), Federal Reserve Bank of Philadelphia, and the FBI's Uniform Crime Reports. We collect data on cross-country equity portfolios from the IMF Coordinated Portfolio Investment Survey (CPIS) and data on aggregate stock market capitalization from the World Bank.

Quarterly equity holdings of institutional investors are from Thomson Reuters CDA/Spectrum (13F) institutional holdings database. The Securities and Exchange Commission (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. We obtain the corresponding values of latitude and longitude from the Gazetteer Files of Census 2000.

The investor-level measure of local bias (LOCAL_BIAS) is calculated as follows. Since we analyze institutional investors, the local area is defined at the state level following Baik et al. (2010). We calculate the fraction of U.S. equity assets invested in local stocks for investor *i* at quarter *t* and subtract the fraction of stocks that are located in the same state. The latter fraction acts as a necessary benchmark because available investments vary across local regions (Coval and Moskowitz (2001)).

We also create a stock-level measure called local ownership (LOCAL_OWNERSHIP) by first calculating the dollar holdings (*H*) of stock *j* by all investors *i* located in the same state at quarter *t* and dividing by the dollar holdings of stock *j* by the entire institutional investor universe, *I*. Following the approach in Coval and Moskowitz (2001) and Gaspar and Massa (2007), we then

subtract the total market equity asset value (A) of all investors i located in the same state divided by the total market equity asset value of the entire institutional investor universe, I. This term captures the fact that institutional investors are not uniformly located across the United States.

A benefit of performing analysis at the stock level is that doing so allows for direct controls for stock characteristics that may drive differences in local ownership. Additionally, individual portfolio managers are likely to have variation in trust, so aggregating at the stock level may help to reduce measurement noise on this dimension. Stock-level measures of local ownership also allow us to form portfolios to assess the potential for information advantages.

Panel A of Table 1 reports summary statistics of the main variables used in the study. The details of variable construction are described in the Appendix. There are 38,138 firm-year observations in our main sample. The 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_OWNERSHIP is 5.4% and 0.5%, with a standard deviation of 15.0%. The average and median LOCAL_BIAS is 3.4% and 0.8%, respectively. Panel B presents the TRUST_INDEX by region for each of the three survey waves, (1995, 2000, and 2006). It reports 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, and Alabama), with a value between 21.9% and 26.9%.

[INSERT TABLE 1 HERE]

There is also considerable variation in the TRUST_INDEX over time across different U.S. geographical regions. Figure 1 plots the TRUST_INDEX by region and year. 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 make it feasible to identify the link between trust and local bias/ownership.

[INSERT FIGURE 1 HERE]

Trust has relatively low correlations with other demographic and regional characteristics. Panel C reports that the TRUST_INDEX is positively correlated with measures of wealth and economic activity (HOUSEHOLD_INCOME (0.39), SC_INDEX (0.34)) while negatively correlated with measures of economic decline (UNEMPLOYMENT (–0.27), VIOLENT_CRIME (–0.34), PROPERTY_CRIME (−0.23)). Since these characteristics are a primary concern for omitted variables, we are careful to provide robustness tests verifying that our results are not driven by these regional factors.

III. The Effect of Social Trust on Local Bias

This section examines the hypothesis that social trust lowers local bias. We begin with univariate analysis on the relation between trust and local bias. Then, we perform multivariate analysis, first on investor-level local bias, before turning our attention to stock-level local ownership. We discuss potential concerns with the measurement of trust at the end of this section.

A. Univariate Analysis

We begin by examining the average local bias and local ownership in our sample. The first three columns of Panel A in Table 2 present the investor-level analysis using local bias. Across all investors, the average institutional investor holds 11.6% of its portfolio in local stocks, and this value translates to a 3.4% local bias (t=40.20). Similar patterns arise at the stock level. The next

three columns show that the average local holding is 14.1% and that the average stock-level local ownership is 5.4% (t=69.79).

[INSERT TABLE 2 HERE]

Next, we examine local bias/local ownership across low- and high-trust regions. The first three columns of Panel B show that the average investor-level local bias is significantly higher in low-trust regions (3.9%) compared to high-trust regions (3.0%), with a difference of 0.9% (t=5.45). The difference in local bias across low- and high-trust regions is more pronounced for smaller institutional investors (1.7%, t=4.99) relative to their larger counterparts (0.5%, t=2.82). At the stock level, differences in local ownership across high- and low-trust regions are also present. The next three columns show that stocks located in low-trust regions exhibit 1.5% (t=10.24) higher local bias compared to their counterparts in high-trust regions (6.1% vs. 4.6%). For small stocks, the difference in average local bias between high- and low-trust regions is 3.4% (t=8.84), while for large stocks, the difference is only 0.8% (t=6.59).

B. Trust and Local Bias: Multivariate Investor-level Analysis

Next, we perform multivariate analysis to control for investor characteristics. We regress LOCAL_BIAS on the TRUST_INDEX and the log of investor size (INVESTOR_SIZE), investor age (INVESTOR_AGE), and number of stocks (NO_STOCKS) in the portfolio. The regression includes year fixed effects to capture macroeconomic shocks and investor-type fixed effects to control for potential differences in investment objectives across investor types. Investors types are defined using Brian Bushee's classification system.[9] Additional specifications include state fixed effects to capture persistent geographic/regional characteristics. Standard errors are clustered at

[9] The investor types include banks, insurance companies, investment companies, independent investment advisor, corporate (private) pension fund, public pension fund, university and foundation endowments, and other investors (miscellaneous). We thank Brian Bushee for making these data available at http://acct.wharton.upenn.edu/faculty/bushee/IIclass.html

the investor level.

Panel A of Table 3 reports that the relation between trust and local bias continues to hold in the multivariate setting. Across all specifications, there is a significantly negative relation between local bias and trust. The coefficient estimate in column 1 (−0.131, t=−3.54) implies that a 1-standard-deviation increase in TRUST_INDEX (0.069) reduces LOCAL_BIAS by 27% relative to the sample average (=−0.131×0.069÷0.034, where 0.034 is the average local bias). Column 2 reports similar findings with the inclusion of investor-type fixed effects to capture differences across investment objectives or styles. Column 3 reports that our inferences are unchanged with the inclusion of time-varying regional factors including demographics, economic fluctuations, and local security conditions. We find similar results with the inclusion of state fixed effects in column 4, suggesting that permanent, geographic features such as industry clustering are unlikely to explain our results.

[INSERT TABLE 3 HERE]

Overall, we find strong support that social trust reduces local bias. The results due to neither investor types nor local demographic or economic conditions. In the next section, we carefully investigate whether the relation between trust and local bias varies across different types of investors.

C. Trust and Local Bias: Heterogeneity across Investor Types

The previous analysis includes investor-type fixed effects to control for differences in investment objectives. Since studies show that local bias has information content (Baik et al. (2010)), we expect that the effect of trust on local bias may vary across investors with different investment styles. In particular, we conjecture that the relation is stronger among investors who are better able to exploit local knowledge. We investigate this possibility by re-estimating the

multivariate regressions among subsamples of investors. Specifically, we follow Coval and Moskowitz (2001) in identifying smaller investors, investors with fewer holdings, and older investors as those that are better able to exploit local knowledge. We also examine investors with shorter holding horizons because such investors can adapt quickly to investment opportunities (Ke and Petroni (2004), Yan and Zhang (2009)).[10]

To conduct this analysis, we classify an investor as "small" if its size (total asset value) is in the bottom tercile of investors and classify the remaining investors as "rest." Similarly, we split investors based on number of holdings into "few" if the investor is in the bottom tercile or "rest" otherwise. "Older" investors are investors in the top tercile of investor age or "rest" otherwise. We use two approaches to measure investment-holding horizon. First, we classify investors in the top tercile based on churn rate (Yan and Zhang (2009)) as "fast" and the remaining investors as "rest." Second, we obtain investor types classified as "Transient" (Bushee (2001), Bushee and Noe (2000)) from Brian Bushee's website and separately analyze transient and nontransient investors (i.e., "rest").

The results in Panel B of Table 3 show heterogeneity across investor types. We find a significantly negative effect of trust on local bias among smaller investors (column 1), investors with fewer holdings (column 3), older investors (column 5), investors with higher portfolio churn-rates (column 7), and transient investors (column 9). Across the specifications, the effect of trust is significantly greater among these investors compared to their counterparts at the 10% level or better with the exception of the comparison between older and rest of the investors.

Consistent with our predictions, the evidence suggests a stronger relation between trust and

[10] We calculate portfolio churn rate as the rate of portfolio turnover following Yan and Zhang (2009). For the transient investor classification, we collect the investor classification from Brian Bushee's website based on the classification methodology in Bushee (2001) and Bushee and Noe (2001).

local bias among investors that are likely to possess information advantages. We carefully explore the possibility in more detail using the stock-level analysis in Section 3.

D. Trust and Local Bias: Implications for Portfolio Diversification

While these findings provide strong empirical support for the effect of trust on local bias, cultural explanations of economic phenomenon are traditionally viewed with skepticism (Zingales (2015)). To temper such concerns, we revisit the theory that motivates the relation between trust and local bias. Specifically, a natural implication of the trust explanation is that trust should improve portfolio diversification by increasing investment in distant firms. Since investors that lack trust are likely to exclude distant stocks, they are likely to be underdiversified, providing a clear, testable prediction of our main hypothesis. We examine this prediction by creating two measures of portfolio diversification. Following Pool et al. (2012), we measure diversification using the idiosyncratic volatility of the portfolio. We calculate the idiosyncratic volatility (IVOL) for each investor in the following quarter by calculating the standard deviation of daily residual estimates from the CAPM. Since not all investors use the CAPM as their benchmark, this measure may be somewhat noisy. As underdiversified investors are likely to concentrate their portfolio holdings, we calculate a portfolio concentration measure (HERFINDAHL), defined as the sum of the squares of portfolio weights on individual stocks in the investor's portfolio.[11]

Consistent with this prediction, the results in Table 4 show that a lack of trust leads to greater under-diversification. Column 1 reports a statistically negative association between trust and idiosyncratic volatility. The inclusion of local demographic characteristics and economic conditions in column 2 yields similar findings. The coefficient estimate (−0.306, t=−1.99) indicates that for a 1- standard-deviation increase in TRUST_INDEX (0.069), IVOL decreases by 4.3%

[11] Kacperczyk, Sialm, and Zheng (2005) show that mutual funds that have concentrated industry holdings earn higher returns.

relative to the sample mean (=−0.306×0.069÷0.486, where is 0.486 the sample mean of IVOL). We also find similar results using idiosyncratic volatility based on the Fama–French (1993) 3-factor and the Carhart (1997) 4-factor models, suggesting that the relation between trust and portfolio diversification is not due to differences in risk-factor exposure. Column 3 reports that investors in low-trust regions exhibit higher concentration using the HERFINDAHL measure. Our inferences are unchanged with controls for demographic and economic characteristics in column 4. In this specification, the coefficient estimate of −0.125 (t=−2.74) implies that a 1-standard-deviation increase in TRUST_INDEX (0.069) reduces portfolio concentration by 14.6% relative to the sample mean (=−0.125×0.069÷0.059, where 0.059 is the sample mean of HERFINDAHL).

[INSERT TABLE 4 HERE]

Overall, the analysis in this subsection suggests that trust helps investors achieve greater portfolio diversification. This evidence is consistent with our main hypothesis and lends greater credence to our main findings that a lack of trust increases local bias.

E. Trust and Local Ownership: Multivariate Stock-level Analysis

To address the possibility that companies may systematically differ across high- and low-trust regions, we perform analysis at the stock level. We regress LOCAL_OWNERSHIP on the TRUST_INDEX and control for firm size (FIRM_SIZE), market-to-book (MARKET_TO_BOOK), book leverage (LEVERAGE), profitability (PROFITABILITY), and cash holdings (CASH_HOLDINGS) in the baseline specifications. The regressions include year fixed effects to capture macroeconomic trends and industry fixed effects to capture industry shocks. We also include state fixed effects to capture persistent geographic/regional characteristics. Standard errors are clustered at the firm level.

The multivariate results in Panel A of Table 5 confirm the univariate results. Column 1

reports a statistically negative parameter estimate on the TRUST_INDEX (–0.251, t=–7.28). The results are also economically important. A 1-standard-deviation increase in TRUST_INDEX (0.069) is associated with a 32% decrease in LOCAL_OWNERSHIP relative to the sample mean (=−0.251×0.069÷0.054=32.1%, where 0.054 is the sample average of LOCAL_OWNERSHIP). Our inferences are unchanged in column 2 with the inclusion of institutional ownership (IO), past one-year return (STOCK_RETURN), stock return volatility (RETURN_VOL), and the Amihud (2002) illiquidity measure (ILLIQ). Consistent with prior studies, local ownership is greater in stocks with low market capitalization, low institutional ownership, low past returns, greater return volatility, and greater illiquidity.

[INSERT TABLE 5 HERE]

Column 3 augments the specifications to capture time-varying regional factors. The parameter estimate on the TRUST_INDEX remains quantitatively and qualitatively similar after controlling for demographics, economic fluctuations, and security conditions. It is interesting to note that different measures of economic conditions have different directional effects on local bias. The results are similar with the inclusion of firm fixed effects in column 4, suggesting that unobserved firm heterogeneity is not driving our findings. Overall, the results indicate that the relation between trust and local ownership is robust to the inclusion of various firm or industry characteristics and different regression models.

Panel B of Table 5 reports that the trust/local ownership relation is concentrated among stocks with relatively low national recognition. Column 1 reports that the parameter estimate on the TRUST_INDEX for small stocks is more than twice as large and significantly different from that of large stocks in column 2 (–0.389, t=–4.46 vs. –0.169, t=–6.42). The results are similar when examining S&P500 index inclusion (columns 3 and 4), dividend payer (columns 5 and 6), and the

existence of an S&P credit rating (columns 7 and 8). We also expect stronger effects of trust on local ownership for stocks with high information opacity. Using stock volatility to measure information opacity, we find that the effect of trust on local ownership is greater among stocks with high return volatility in columns 9 and 10.

F. Measuring Trust: International Evidence

Our identification strategy assumes that local institutional investors exhibit trust attitudes similar to those of the residents in their local region. This identification approach is defensible because trust represents cultural attitudes between members of a social community. To the extent that institutional investors are members of the local community, their cultural attitudes should be correlated with those of their social environment. We propose an alternative approach using country-level aggregate equity portfolio flows and measures of trust. To the degree that there are no issues with aggregation, such analysis pairs well with the within-country U.S. evidence by providing both out of sample evidence and external validity.

We collect data on international equity portfolio flows (inbound and outbound) from the Coordinated Portfolio Investment Survey prepared by the IMF. We collect total market capitalization from official World Bank statistics and convert all units to U.S. dollars for comparison. Home bias is calculated for each country as the percentage of total equity holdings held in domestic equities minus the fraction of domestic equities of total world equities. Country-level trust is measured from the World Value Survey following the same methodology discussed earlier.

Figure 2 presents a scatter plot of country-level home bias against country-level trust for the year-end of 2005. Consistent with our U.S.-based analysis, the plot shows a strong negative pattern between home bias and trust. The R-square of the univariate regression is 0.37, and the

slope is –0.50. While this admittedly simple analysis is open to omitted variable concerns[12] regarding cross-country differences, it provides an important piece of out of sample evidence of the external validity of our key finding.

[INSERT FIGURE 2 HERE]

G. Measuring Trust: Using Individual Respondent Characteristics

As discussed above, the TRUST_INDEX measures social trust rather than the trust of investors. We bring additional evidence to bear by reconstructing the TRUST_INDEX to more closely represent the trust attitudes of local institutional managers. We expect that professional money managers and stock market participants are likely to share similar demographic characteristics. Prior research shows that stock market participants tend to be male, older in age, wealthier, and better educated. In the United States, White/Caucasian Whites are more likely to participate in the stock market (Blau and Graham (1990), Hong, Kubik, and Stein (2004)). Since the WVS provides individual characteristics, we recompose a TRUST_INDEX along these demographic dimensions and re-estimate our baseline local ownership regressions using the demographic-based trust indices. Our inferences are unchanged using this measure. The results are available in the Internet Appendix.

H. Measuring Trust: Using the General Social Survey Data

Although we use a total of three vintages of the WVS, each wave is conducted by the same organization using a roughly similar approach. In this section, we repeat our local ownership analysis using the General Social Survey, which is a separately conducted U.S.-only survey. The GSS occurs approximately every two years, helping to address time gaps, and provides respondent's state location to improve precision. Our findings are similar using the state level trust

[12] We provide a full discussion of omitted variable concerns in Section 4.

measure from GSS and are available in the Internet Appendix. The GSS results help to address concerns of the WVS relating to (1) sample frequency, (2) precision, and (3) reliability. It is also comforting that our findings can be replicated using a completely different source.

I. Measuring Trust: Robustness Tests

We provide additional robustness tests to address concerns regarding the WVS trust measure. First, since the WVS survey has long time gaps of five to six years between surveys, our main tests use a trust measure that interpolates values between each survey. However, this approach raises concerns of measurement noise. Therefore, we repeat our key tests using a noninterpolated trust measure and show our main inferences are unchanged. The results are available in the Internet Appendix.

Second, the trust measure produces sharp differences across neighboring states due to the grouping of states in the U.S. geographic regions used by the World Values Survey. The WVS state groupings are roughly based on the U.S. Census Bureau division definitions. However, this categorization creates unexpected differences in the trust measure among neighboring states, possibly creating noise and imprecise measurement of trust.[13] We perform the following analysis to explore the seriousness of this issue. We regroup certain border states using a different regional classification system from the Bureau of Economic Analysis (BEA) that clusters states on the basis of economic similarity.[14] Their regional state groupings are arguably more consistent with cultural similarities that we may expect within regions of the United States. Compared to the baseline results, we find very similar parameter estimates on the Trust measure, and in some cases, the

[13] For example, we may arguably expect Arkansas and Louisiana to be more culturally similar to bordering Southern states (e.g., Mississippi) than to Texas and Oklahoma. Seven of nine total CB divisions contain the same exact states as the corresponding WVS regions. The difference occurs in the West, where WVS separates California into its own region and flips Idaho and Nevada between the Rocky Mountain and Western areas.

[14] Specifically, we include (1) Arkansas and Louisiana in the East South-Central region, (2) Delaware, Maryland, and Washington D.C. in the Middle Atlantic, (3) Idaho in the Rocky Mountains, and (4) New Mexico in the West South Central.

standard errors are lower.

A third concern is that a few states, namely, those where large investors reside, drive our results. To assess this possibility, we exclude investors located in New York, Massachusetts, and California and re-estimate our main specifications. While removing these states cuts the sample by nearly one-half, we continue to find a significant relation between trust and local bias.

IV. Trust and Local Bias: Information Advantage

In this section, we study whether the relation between trust and local bias reflects an information advantage, which builds on the earlier evidence that the trust/local bias relation is stronger among investors who are better able to adapt quickly to investment opportunities that arise from local knowledge. The trust explanation has a specific prediction in this regard on the information content of local ownership. When investors lack sufficient trust, they require better knowledge and/or information advantages in their investment decisions. If more local knowledge helps to overcome this barrier, we expect information advantages to play a larger role in the local ownership of investors in low-trust regions.

A. Portfolio Sorts

We first confirm that higher local ownership is associated with better performance in our sample. Our procedure is as follows. At the beginning of each month, we sort stocks into five portfolios based on the previous quarter-end local ownership.[15] Then, we calculate the average return of stocks in each portfolio for the month. For each portfolio, we have 144 monthly return observations from 1996 to 2007. To adjust for risk, we use the CAPM, the Fama–French (1993) 3-factor model, and the Carhart (1997) 4-factor model that includes the momentum factor to

[15] The sample includes firms that are held by at least one local investor for the construction of the local ownership measure. Our results in this section are quantitatively similar using the fraction of local ownership (without benchmark adjustment) to sort portfolios as in Baik et al. (2010).

estimate portfolio risk-adjusted returns (i.e., alphas) accordingly.

Panel A of Table 6 reports that the lowest local ownership portfolio (Portfolio 1) has an average LOCAL_OWNERSHIP of –9.1%, while the highest local ownership portfolio (Portfolio 5) has an average LOCAL_OWNERSHIP 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 32 bps per month (t=3.20), which translates to an annualized outperformance of approximately 4%. The results are similar using risk-adjusted returns across different factor models and are consistent with the findings in Baik et al. (2010).

[INSERT TABLE 6 HERE]

Our main focus is on portfolio return differences across low- and high-trust regions. We split stocks into high- or low-trust regions and create five portfolios based on the previous quarter-end institutional local bias within each region. Our results are both quantitatively and qualitatively similar when 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 B of Table 6 reports large 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), which 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 (59 bps, t=3.42), the Fama–French (1993) 3-factor model (58 bps, t=3.55), and the Carhart (1997) 4-factor model (54 bps, t=3.09). These patterns translate to an average annualized abnormal return of 6.5% using the Carhart (1997) 4-factor model. For the highest local ownership portfolio, the alpha estimate increases with the inclusion of the momentum factor. This increase occurs because the portfolio

loads negatively on the momentum factor (the portfolio contains stocks that are relative 'losers') and is consistent with the view that local investors in low-trust regions display an ability to select stocks that performed poorly but subsequently rebound. This reversal pattern helps to provide additional support for the claim that local ownership has information content because studies show that past losers have low expected returns on average (Conrad and Kaul (1998)).

In contrast, there is no abnormal return pattern for high-trust, region-based portfolios. Panel C of Table 6 reports a statistically insignificant (t=0.53) raw return difference between Portfolio 5 and Portfolio 1 of 8 bps per month. The results for risk-adjusted returns remain small and insignificant across different factor models, e.g., the CAPM (15 bps, t=1.09), the Fama–French (1993) 3-factor model (10 bps, t=0.74), and the Carhart (1997) 4-factor model (16 bps, t=1.11).

Figure 3 plots the time-series cumulative raw returns of long-short portfolios sorted by local ownership 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. Our findings are consistent with the prediction from the trust explanation that the information content of local ownership portfolios is concentrated in low-trust regions.

[INSERT FIGURE 3 HERE]

B. Removing the Influence of Regional Factors

To address the concern that regional factors are behind these return patterns, we orthogonalize the TRUST_INDEX from demographic and economic state characteristics using the following methodology. 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, fraction of junior population, fraction of senior

population, and fraction with college degrees), state economic conditions (i.e., median household income, per capita GDP, unemployment rate, and the 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, following the earlier sorting procedure, we split the sample into high- and low-trust regions based on annual median using the orthogonalized TRUST_INDEX.

The orthogonalized TRUST_INDEX produces similar results in Table 7. Panel A reports that in low-trust regions, the long-short portfolio sorted by institutional local bias generates a Carhart (1997) 4-factor adjusted return of 65 bps (t=3.03) per month. This return is in direct contrast to the high-trust region results in Panel B, which reports an insignificant 0.01 bps (t=0.04) return per month. The patterns are similar based on the raw returns and the other factor model adjusted returns. Additional robustness tests exclude penny stocks (stocks with prices less than $1) or microcap stocks (market capitalization less than $50 million or less than $100 million) or omit the month of January (to avoid tax-loss selling return effects). We continue to determine that the performance of local ownership portfolios only in low-trust regions.

[INSERT TABLE 7 HERE]

C. Understanding the Nature of Information Advantages

The relation between local ownership and future returns suggests that investors in low-trust areas possess information advantages that may arise from their geographic advantages in monitoring local companies and/or gathering valuable information from local sources (e.g., customers, suppliers, employees, etc.). In this section, we perform tests to better understand the nature of their information advantages.

1. Earnings Announcements

To explore the extent to which local ownership in low-trust regions reflects private

information, we focus on earnings announcements, because public disclosure of earnings news reveals private information to the rest of the market. Specifically, we test the hypothesis that if the relation between trust and local bias reflects an information advantage, local ownership will predict higher earnings surprises in low-trust regions compared to high-trust regions. We investigate this possibility by estimating earnings surprise as the difference between the actual earnings minus the analyst forecast consensus divided by the stock price. Using the main stock-level specifications from Table 5, we regress earnings surprises on local ownership separately for stocks located in high trust and low-trust regions.

The results in Panel A of Table 8 are consistent with the private information interpretation. Comparing column 1 with column 2, we find a significantly positive relation between local bias and earnings surprise only in the low-trust region. The difference in coefficient estimates on local bias across the two specifications is significantly different at the 10% level. Our inferences are similar in columns 3 and 4 with the inclusion of industry fixed effects. If local investors trade local stocks based on information, then we expect the change in local bias to be a good indicator for private information. In unreported tests, we find similar results using a specification with firm fixed effects to approximate the change in local bias. Overall, this analysis provides evidence that investors in low-trust areas possess valuable private information.

[INSERT TABLE 8 HERE]

2. Do Investors in Low-trust Regions have Better Social Connections?

Social connections with the local business community can facilitate the gathering of valuable information or monitoring of local companies. Studies show that social connections are an important source of private information. For example, Cohen, Malloy, and Frazzini (2008) find that mutual fund managers earn abnormal returns on stocks where they have social ties with the

firm's CEO. While identifying such types of direct social connection would be ideal, doing so is a considerable challenge in our setting because institutions often have multiple funds and many managers. For many of these nonmutual fund institutions, the managers cannot be readily identified.

Instead, we take a different empirical approach that is motivated by the following description in Coval and Moskowitz ((2001), p. 839): "*Mutual fund managers and local corporate executives may run in the same circles, belong to the same country club, and so forth.*" We conjecture that country clubs provide a natural venue for facilitating interactions and building social connections. Since it is more convenient to visit nearby country clubs, proximity may proxy for variation in social connections. We implement this idea by using rankings of golf courses published by Golflink.com to calculate the average distance to highly ranked, "prestigious" golf courses in the state.[16] We focus on these highly ranked golf courses because they are likely to have country clubs and host social functions and gatherings.

We repeat our portfolio return analysis by sorting stocks within low- and high-trust regions into quintile portfolios based on local ownership calculated using investors that are proximate to prestigious country clubs/golf courses. While we cannot observe direct social connections in this setting, we should observe two effects from information acquisition through social connections: (1) the highest quintile "close-to-golf" local ownership portfolio should have higher total local ownership and (2) greater information content in local ownership, which should produce larger abnormal returns in the long-short local ownership portfolios.

Consistent with our assertion that proximity to prestigious golf courses facilitates social

[16] 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.

connections, Panel B of Table 8 reports that the highest quintile "close-to-golf" local ownership portfolio exhibits higher local ownership compared to original local ownership sorts (0.425 vs. 0.325) in low-trust regions. The return patterns are also consistent with this view, as the Carhart (1997) 4-factor alpha reaches 9% per annum for the long-short portfolio of stocks sorted on "close-to-golf" local ownership in low-trust regions. The corresponding long-short portfolio in high-trust regions exhibits no significant abnormal returns.

Overall, the results suggest a link between social connections and the information advantages we document, but we interpret these findings cautiously. A limitation of this analysis is that the building of social connections at these country clubs remains unobservable. Since this setting relies on variation in this local amenity, other geographic characteristics that are difficult to rule out may also affect these findings.

3. Privileged Access? Evidence from Regulation Fair Disclosure

The superior performance of local ownership portfolios in low-trust regions could be due to privileged access to information. To explore this possibility, we use the implementation of Regulation Fair Disclosure. Reg FD was adopted by the SEC in August 2000 to curb the selective disclosure of material nonpublic information by firms to analysts and institutional investors. The purpose of Reg FD is to prohibit potential quid pro quo arrangements that may be a source of privileged information.

First, we analyze the univariate change in local ownership in the pre- and post-Reg FD periods (i.e., before and after the year 2001). The overall level of local ownership falls after the implementation of Reg FD in both high- and low-trust regions (Bernile et al. (2018)), but high-trust regions experience a greater reduction. We find that these patterns are similar in a multivariate setting. Since there is time-series variation in local ownership, we ask whether local ownership

still contains information content in the post-Reg FD era. Portfolio sorts show that the information advantages of low-trust investors remain after Reg FD. Based on the risk-adjusted return from the Carhart (1997) 4-factor model, a long-short portfolio of stocks sorted on local bias exhibits significant outperformance in both the pre-Reg FD period and post-Reg FD period in low-trust regions. This result suggests that the information advantage of institutional investors in low-trust regions is not solely driven by selective disclosure of material information, as their information advantage is not eliminated by Reg FD. We provide further details of this analysis in the Internet Appendix.

V. Additional Tests and Alternative Explanations

This section provides additional tests that address issues surrounding the measurement of trust and alternative explanations for our main findings.

A. Omitted Variables and Alternative Explanations

This section discusses how our identification strategy helps to mitigate omitted variable concerns. Our trust interpretation may be confounded by unobserved heterogeneity across geographic regions including societal characteristics (e.g., urbanization and segregation) or investor sophistication. However, these explanations are unlikely for the following reasons. The state fixed effects in our main specifications washes out persistent geographic heterogeneity. Our specifications also capture time-varying fluctuation in local crime, demographics, and economic conditions. In the local ownership analysis, we estimate firm fixed-effect regressions that should address the possibility that our results are due to persistent differences in firm characteristics.

Investor sophistication is also an unlikely candidate. First, we use a direct firm level proxy for investor sophistication with the institutional ownership measure. Second, region-level investor sophistication is likely captured by time-varying measures of income, GDP, and education. While

it is difficult to rule out all possible omitted variables, the following analysis provides further evidence to address a few of the most likely candidates.

B. Alternative Interpretation: Trust and Information Transparency

An alternative interpretation of our findings is that trust facilitates the collection and dissemination of information, lowering the costs of investing. As a result, stocks in high-trust regions attract more investment from distant investors. It is plausible that both forces, the "pull" of distant investors and the "push" to invest in distant stocks, affect the relation between trust and local bias.

To assess the relative importance of these two forces, we consider the effects that should result from lower costs of information collection and dissemination. Specifically, we conjecture that these lower costs will create a more transparent information environment, all else equal. Therefore, we add the following measures as controls for the firm's information environment: (1) the number of analysts covering the firm, (2) the probability of informed trading (Easley, Hvidkjaer, and O'Hara (2002), Brown and Hillegeist (2007)), and (3) the return-volume coefficient (Llorente, Michaely, Saar, and Wang (2002)). The latter two measures use order flow data to capture aspects of the information environment.

We re-estimate the trust/local ownership regressions follow the same baseline specifications with these added controls. We continue to find a significantly negative effect of trust on local ownership. Consistent with the "pull" effect, information transparency is associated with lower local ownership (and thus greater investment from distant investors), suggesting that both effects are likely at play. We present the results and discuss further details in the Internet Appendix.

C. Omitted Variable: Risk Aversion

A possible explanation for our findings is that trust simply captures investor risk-aversion, the idea is that low-trust investors have higher risk-aversion and vice versa. However, standard portfolio theory shows that greater risk-aversion raises the benefits of diversification, which is contrary to the evidence in Section 2.D. Moreover, this explanation would predict that low-trust investors have more-diversified portfolios and lower local bias, which is again contrary to our main findings. Moreover, Guiso et al. (2008) find supporting empirical evidence that the WVS trust measure is distinct from risk aversion. Nevertheless, we perform an additional test using a proxy for risk-taking behavior. Our results remain unchanged with the inclusion of the Catholic-Protestant ratio and local religiosity as proxy for the risk-aversion attitudes of local residents (Kumar et al. (2011), Shu et al. (2012)).[17] These results are available in the Internet Appendix.

VI. Conclusion

The origins of local and home bias have long puzzled economists (e.g., 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 potential source of local bias. Based on the theoretical predictions from Guiso et al. (2008), we find empirical support for the relation between trust and local bias.

Specifically, we find that institutional investors located in high-trust regions exhibit significantly lower local bias. A distinguishing feature of our trust-based explanation is the prediction that information advantages in local bias are more likely to occur in low-trust regions. We find support for this unique prediction, as investors located in low-trust regions earn significantly abnormal returns on their local holdings. Their high-trust counterparts do not possess local information advantages.

[17] We thank Johan Sulaeman for sharing data on the C/P ratio and local religiosity.

Our findings more generally suggest that trust affects portfolio choice. Our results are somewhat surprising because we find empirical evidence among professional delegated investors. This evidence raises the possibility that trust may affect other dimensions of portfolio choice. We leave this possibility for future research.

References

Ahern, K.R.; Daminelli, D.; and C. Fracassi. "Lost in Translation? The Effect of Cultural Values on Mergers around the World." *Journal of Financial Economics*, 117 (2015), 165–189.

Amihud, Y. "Illiquidity and Stock Returns: Cross-section and Time-series Effects." *Journal of Financial Markets*, 5 (2002), 31–56.

Anderson, C.; Fedenia, M.; Hirschey, M.; and S. Hill. "Cultural Influences on Home Bias and International Diversification by Institutional Investors." *Journal of Banking and Finance,* 35 (2011), 916–934.

Arrow, K. "Gifts and Exchanges." *Philosophy and Public Affairs*, 1 (1972), 343–62.

Baik, B.; Kang, J-K.; and J-M. Kim. "Local Institutional Investors, Information Asymmetries and Equity Returns." *Journal of Financial Economics*, 97 (2010), 81–106.

Baxter, M., and U.J. Jermann. "The International Diversification Puzzle is Worse than You Think." *American Economic Review*, 87 (1997), 170–180.

Bernile. G.; Kumar A.; Sulaeman J.; and Q. Wang. "Has Local Informational Advantage Disappeared?" *Review of Financial Economics*, forthcoming (2018).

Bertaut, C., and M. Starr-McCluer. "Household Portfolios in the United States", In *Household Portfolios*, Guiso, L., Haliassos, M., and T. Jappelli, eds. Cambridge, MA: MIT Press (2002), 181–218.

Beugelsdijk, S., and B.X. Frijns. "A Cultural Explanation of the Foreign Bias in International Asset Allocation." *Journal of Banking and Finance*, 34 (1997), 2121–2131.

Blau, F.D., and J.W. Graham. "Black-White Differences in Wealth and Asset Composition." *Quarterly Journal of Economics*, 105 (1990), 321–339.

Bloom, N.; Sadun, R.; and J. Van Reenen. "The Organization of Firms across Countries." *Quarterly Journal of Economics*, 127 (2012), 1663–1705.

Brown, S., and S.A. Hillegeist. "How Disclosure Quality Affects the Level of Information Asymmetry." *Review of Accounting Studies*, 12 (2007), 443–477.

Bushee, B.J. "Do Institutional Investors Prefer Near-Term Earnings Over Long Run Value?" *Contemporary Accounting Research*, (2001) 18, 207–246.

Bushee, B.J., and C.F. Noe. "Corporate Disclosure Practices, Institutional Investors, and Stock Return Volatility." *Journal of Accounting Research*, (2000), 171–202.

Carhart, M. "On Persistence in Mutual Fund Performance." *Journal of Finance*, 52 (1997), 57–82.

Chan, K.; Covrig, V.; and L. Ng. "What Determines the Domestic Bias and Foreign Bias? Evidence from Mutual Fund Equity Allocations Worldwide." *Journal of Finance*, 60 (2005), 1495–1534.

Chui, A.C.W.; Titman, S.; and K.C.J. Wei. "Individualism and Momentum around the World." *Journal of Finance*, 65 (2010), 361–392.

Cohen, L., Frazzini, A., and C. Malloy. "The Small World of Investing: Board Connections and Mutual Fund Returns." *Journal of Political Economy*, 116 (2008), 951–979.

Conrad, J., and G. Kaul. "An Anatomy of Trading Strategies." *Review of Financial Studies*, 11 (1998), 489–519.

Cooper, I.; Sercu, P.; and R. Vanpeé. "The Equity Home Bias Puzzle: A Survey." *Foundations and Trends in Finance*, vol 7, No. 4 (2013), 289–416.

Coval, J., and T. Moskowitz. “Home Bias at Home: Local Equity Preference in Domestic Portfolios.” *Journal of Finance*, 54 (1999), 2045–2073.

Coval, J., and T. Moskowitz. “The Geography of Investment: Informed Trading and Asset Prices. *Journal of Political Economy*, 109 (2001), 811–841.

Easley, D.; Hvidkjaer, S.; and M. O'Hara. “Is Information Risk a Determinant of Asset Returns?.” *Journal of Finance*, 57 (2002), 2185–2221.

Eun, C.S.; Wang, L.; and S.C. Xiao. “Culture and R2.” *Journal of Financial Economics*, 115 (2015), 283–303.

Fama, E.F., and K.R. French. “Common Risk Factors in the Returns on Stocks and Bonds.” *Journal of Financial Economics*, 33 (1993), 3–56.

French, K.R., and J.M. Poterba. “Investor Diversification and International and Equity Markets.” *American Economic Review Papers and Proceedings*, 81 (1991), 222–226.

Gaspar, J.M., and M. Massa. “Local Ownership as Private Information: Evidence on the Monitoring-liquidity Trade-off.” *Journal of Financial Economics*, 83 (2007), 751–92.

Gennaioli, N.; Shleifer, A.; and R. Vishny. “Money Doctors.” *Journal of Finance*, 70 (2015), 91–114.

Giannetti, M., and T.Y. Wang. “Corporate Scandals and Household Stock Market Participation.” *Journal of Finance*, 71 (2016), 2591–2636.

Grinblatt, M., and M. Keloharju. “How Distance, Language, and Culture Influence Stockholdings and Trades.” *Journal of Finance*, 56 (2001), 1053–1073.

Guiso, L.; Sapienza, P.; and L. Zingales. “The Role of Social Capital in Financial Development.” *American Economic Review*, 94 (2004), 526–556.

Guiso, L.; Sapienza, P.; and L. Zingales. “Trusting the Stock Market.” *Journal of Finance*, 63 (2008), 2557–2600.

Guiso, L.; Sapienza, P.; and L. Zingales. “Cultural Biases in Economic Exchange?” *Quarterly Journal of Economics*, 124 (2009), 1095–1131.

Gurun, U.; Stoffman, N.; and S. Yonker. “Trust Busting: The Effect of Fraud on Investor Behavior.” *Review of Financial Studies*, 31 (2018), 1341–1376.

Hilary, G., and K. Hui. “Does Religion Matter in Corporate Decision Making in America?” *Journal of Financial Economics*, 93 (2009), 455–473.

Hong, H.; Kubik, J.; and J. Stein. “Social Interaction and Stock-Market Participation.” *Journal of Finance*, 59 (2005), 137–163.

Huberman, G., “Familiarity Breeds Investment.” *Review of Financial Studies*, 14 (2001), 659–680.

Inglehart, R.; Haerpfer, C.; Moreno, A.; Welzel, C.; Kizilova, K.; Diez-Medrano, J.; Lagos, M.; Norris, P.; Ponarin, E.; and Puranen, B.; et al. *World Values Survey: All Rounds - Country-Pooled Datafile Version.* eds. Madrid: JD Systems Institute (2014).

Ivković, Z., and S.J. Weisbenner. “Local Does as Local is: Information Content of the Geography of Individual Investors’ Common Stock Investments.” *Journal of Finance* 60 (2005), 267–306.

Jia, C.; Wang, Y.; and W. Xiong. “Market Segmentation and Differential Reactions of Local and Foreign Investors to Analyst Recommendations.” *Review of Financial Studies*, 30 (2017), 2972–3008.

Kacperczyk, M.; Sialm, C.; and L. Zheng. “On the Industry Concentration of Actively Managed

Equity Mutual Funds." *Journal of Finance*, 60 (2005), 1983–2011.

Karolyi, G.A. "The Gravity of Culture for Finance." Working Paper, Cornell University (2015).

Karolyi, G.A., and R.M. Stulz. "Are Assets Priced Locally or Globally?" In *Handbook of the Economics of Finance,* G.M. Constantinides, M. Harris, and R. Stulz, eds. Amsterdam, The Netherlands: Elsevier Science B.V. (2003), 974–1018.

Karlan, D.; Mobius, M.; Rosenblat, T.; and A. Szeidl. "Trust and Social Collateral." *The Quarterly Journal of Economics*, 124 (2009), 1307–1361.

Ke, B., and K. Petroni. "How Informed Are Actively Trading Institutional Investors? Evidence From Their Trading Behavior Before A Break In A String Of Consecutive Earnings Increases." *Journal of Accounting Research*, 42 (2004), 895–927.

Kostovetsky, L. "Whom Do You Trust? Investor-advisor Relationship and Mutual Fund Flows." *Review of Financial Studies*, 29 (2016), 898–936.

Knack, S., and P. Keefer. "Does Social Capital have an Economic Payoff? A Cross-country Comparison." *Quarterly Journal of Economics* 112 (1997), 1251–1288.

Kumar, A.; Page, J.; and O. Spalt. "Religious Beliefs, Gambling Attitudes, and Financial Market Outcomes." *Journal of Financial Economics*, 102 (2011), 671–708.

La Porta, R.; Lopez-de-Silanes, F.; Shleifer, A.; and R. Vishny. "Trust in Large Organizations." *American Economic Review*, 87 (1997), 333–38.

Llorente, G.; Michaely, R.; Saar, G.; and J. Wang. "Dynamic Volume-Return Relation of Individual Stocks." *Review of Financial Studies*, 15 (2002), 1005–1047.

Petersen, M.A., and R.G. Rajan. "The Benefits of Lending Relationships: Evidence from Small Business Data." *Journal of Finance*, 49 (1994), 3–37.

Pool, V.K.; Stoffman, N.; and S.E. Yonker. "No Place Like Home: Familiarity in Mutual Fund Manager Portfolio Choice." *Review of Financial Studies* 25 (2012), 2563–2599

Sapienza, P., and L. Zingales. "A Trust Crisis." *International Review of Finance*, 12 (2012), 123–131.

Sarkissian, S., and M.J. Schill. "The Overseas Listing Decision: New Evidence of Proximity Preference." *Review of Financial Studies*, 17 (2004), 769–809.

Seasholes, M., and N. Zhu. "Individual Investors and Local Bias." *Journal of Finance*, 65 (2010), 1987–2011.

Shao, R., and N. Wang. "Trust and Local Bias of Individual Investors." Working Paper, Yeshiva University (2016).

Shu, T.; Sulaeman, J.; and P.E. Yeung. "Local Religious Beliefs and Mutual Fund Risk Taking Behaviors." *Management Science*, 58 (2012), 1779–1796.

Siegel, J.I.; Licht, A.N.; and S.H. Schwartz. "Egalitarianism and International Investment." *Journal of Financial Economics*, 102 (2011), 621–642.

Stock, J.H., and M.W. Watson. "New Indexes of Coincident and Leading Economic Indicators." *NBER Macroeconomics Annual*, 4 (1989), 351–394.

Stulz, R., and R. Williamson. "Culture, Openness, and Finance." *Journal of Financial Economics*, 70 (2003), 313–349.

van Rooij, M.; Lusardi, A.; and R. Alessie. "Financial Literacy and Stock Market Participation." *Journal of Financial Economics*, 101 (2011), 449–472.

Vissing-Jorgensen, A. “Limited Stock Market Participation and Elasticity of Intertemporal Substitution.” *Journal of Political Economy*, 110 (2002), 825–853.

Yan, X., and Z. Zhang. “Institutional Investors and Equity Returns: Are Short-Term Institutions Better Informed?” *Review of Financial Studies*, 22 (2009), 893–924.

Zingales, L. “The Role of Trust in the 2008 Financial Crisis.” *Review of Austrian Economics*, 24 (2011), 235–249.

Zingales, L. “The “Cultural Revolution” in Finance.” *Journal of Financial Economics*, 117 (2014), 1–4.

Appendix. Variable Definitions

State Level Variables

TRUST_INDEX*:* 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. Source: World Values Survey

POPULATION: Natural log of the state population. Source: U.S. Census Bureau county population estimates datasets.

MALE: Percentage of male population in each state. We only include the population aging from 35 to 85. Source: U.S. Census Bureau county population estimates datasets.

SENIOR: Percentage of population more than 65 years old in each state. Source: U.S. Census Bureau county population estimates datasets.

COLLEGE: Percentage of population with college degrees in each state. Source: Economic Research Service in the U.S. Department of Agriculture.

HOUSEHOLD_INCOME: Natural log of the median household income in each state. Source: U.S. Census Bureau SAIPE (Small Area Income and Poverty Estimates) datasets.

UNEMPLOYMENT: Rate of unemployment in each state. Source: Bureau of Labor Statistics.

SC_INDEX: State level economic condition index variable developed at the Federal Reserve Bank of Philadelphia based on a national coincident index methodology developed by Stock and Watson (1989). It combines the following four state level indicators to summarize current economic conditions in a single statistic: 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 of violent crimes that include murder, rape and sexual assault, robbery, and assault. Source: FBI's Uniform Crime Reports (annuals).

PROPERTY_CRIME: Rate of property crime includes the offenses of burglary, larceny-theft, motor vehicle theft, and arson. Source: FBI's Uniform Crime Reports (annuals).

Firm Level Variables

LOCAL_OWNERSHIP*:* Sum of dollar holdings (H) of stock *j* by all investor *i* located in the same state, divided by the dollar holdings of stock *j* by the entire institutional investor universe, *I*. Following the approach in Coval and Moskowitz (2001) and Gaspar and Massa (2007), we then subtract the total market equity asset value (*A*) of all investors *i* located in the same state divided by the total market equity asset value of the entire institutional investor universe, *I*. Source: Compact Disclosure and Thomson

CDA/Spectrum (13F)

FIRM_SIZE: Natural log of assets (AT). Source: Compustat.

MARKET_TO_BOOK**:** Market value of assets/book assets (Compustat item AT), where the market value of assets is calculated as: stock price (PRCC_F) * shares outstanding (CSHO) + short term debt(DLC) + long term debt(DLTT) + preferred stock liquidation value (PSTKL) – deferred taxes and investment tax credits (TXDITC). Source: Compustat.

LEVERAGE: Total debt/book assets (AT), where the total debt is long term debt (DLTT) + short term debt (DLC). Source: Compustat.

PROFITABILITY: Operating income before depreciation (OIBDP)/book assets (AT). Source: Compustat.

CASH_HOLDING: Cash and short-term investments (CHE)/book assets (AT). Source: Compustat.

IO: Fraction of institutional ownership, calculated from Thomason CDA/Spectrum institutional ownership Database (13F). Source: Thomson CDA/Spectrum (13F)

STOCK_RETURN: Cumulative stock returns in the year. Source: CRSP.

RETURN_VOL: Standard deviation of daily stock returns in the year. Source: CRSP.

ILLIQ: Square-root version of the Amihud (2002) illiquidity measure. It is calculated as the average 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: $\frac{1}{D_t}\sum_{Days\in t}(1000 \times \sqrt{\frac{|\text{daily return}|}{\text{daily dollar volume}}})$ where D_t is the number of days in year *t*. Source: CRSP.

NO_ANALYSTS: Number of analysts covering the firm. Source: IBES.

EARNINGS_SURPRISE: The difference between the actual earning minus the analyst forecast consensus divided by the stock price before the earnings announcement date. Source: IBES.

Investor Level Variables

LOCAL_BIAS: Difference between the fraction of U.S. equity assets invested in local stocks for investor i and the benchmark allocation of stocks that are located in the same state, assuming the benchmark is the market portfolio. Source: Compact Disclosure and Thomson CDA/Spectrum (13F)

INVESTOR_SIZE: Natural log of the dollar amount of investor portfolio holdings. Source: Thomson CDA/Spectrum (13F)

INVESTOR_AGE: Natural log of the number of years since the investor first appeared in the CDA/Spectrum 13F database. Source: Thomson CDA/Spectrum (13F)

NO_STOCKS: Natural log of the number of stocks in the investor's portfolio. Source: Thomson CDA/Spectrum (13F)

IVOL: Standard deviation of daily residual estimates from the CAPM model. Source: CRSP and Thomson CDA/Spectrum (13F)

HERFINDAHL: Sum of squared portfolio weights on individual stocks in the investor's portfolio. Source: Thomson CDA/Spectrum (13F)

FIGURE 1
Trust Index by Region and Survey Year

Figure 1 shows 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?".

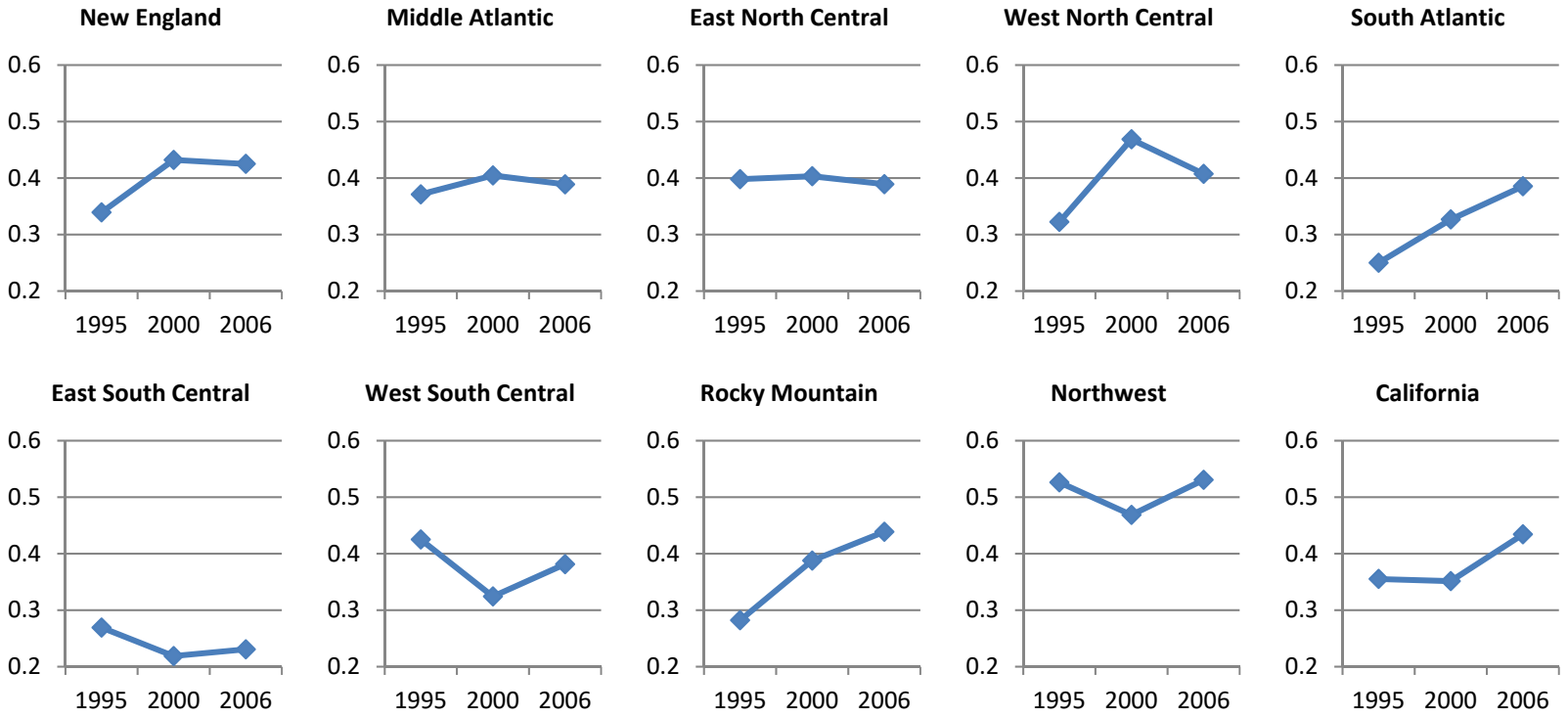

FIGURE 2
The Cross-Country Relation between Home Bias and Trust

Figure 2 shows a scatter-plot of the country-level TRUST_INDEX and home bias in the year 2005. The TRUST_INDEX is calculated as the percentage of World Value Survey (wave 5, 2005-2009) 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?" Home bias is calculated for each country as the percentage of total equity holdings held in domestic equities minus the fraction of domestic equities of total world equities (Source: Coordinated Portfolio Survey, International Monetary Fund).

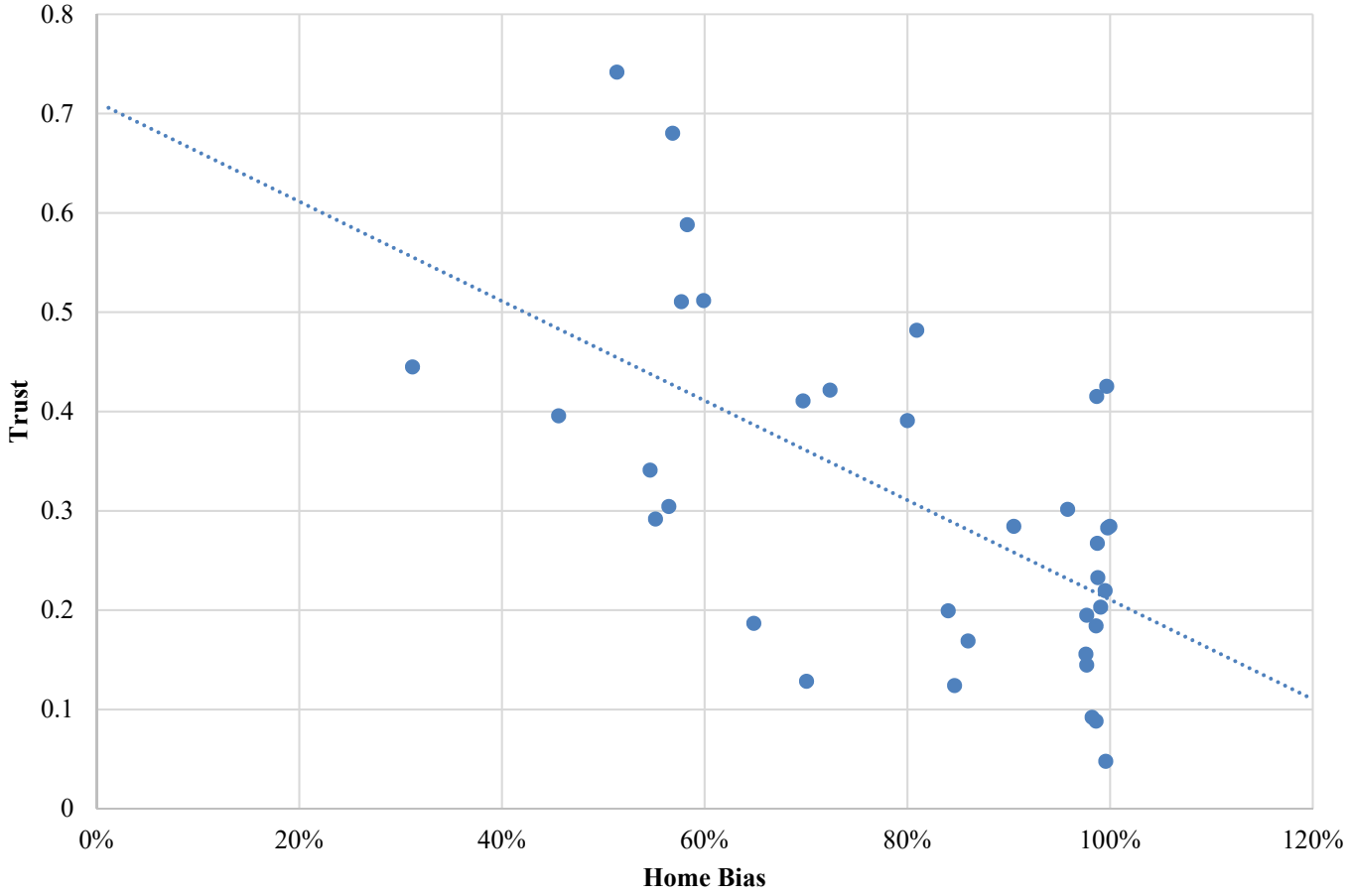

FIGURE 3

Cumulative Returns: Long-Short Portfolios of Stocks Sorted by Local Ownership

Figure 3 shows cumulative returns of long-short portfolios of stocks sorted by local ownership for the low- and high- trust subsamples. At each month-beginning from January 1996 to December 2007, stocks are sorted into quintiles based on the previous quarter-end local ownership, 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 ownership portfolio (P5) minus the lowest local ownership portfolio (P1).

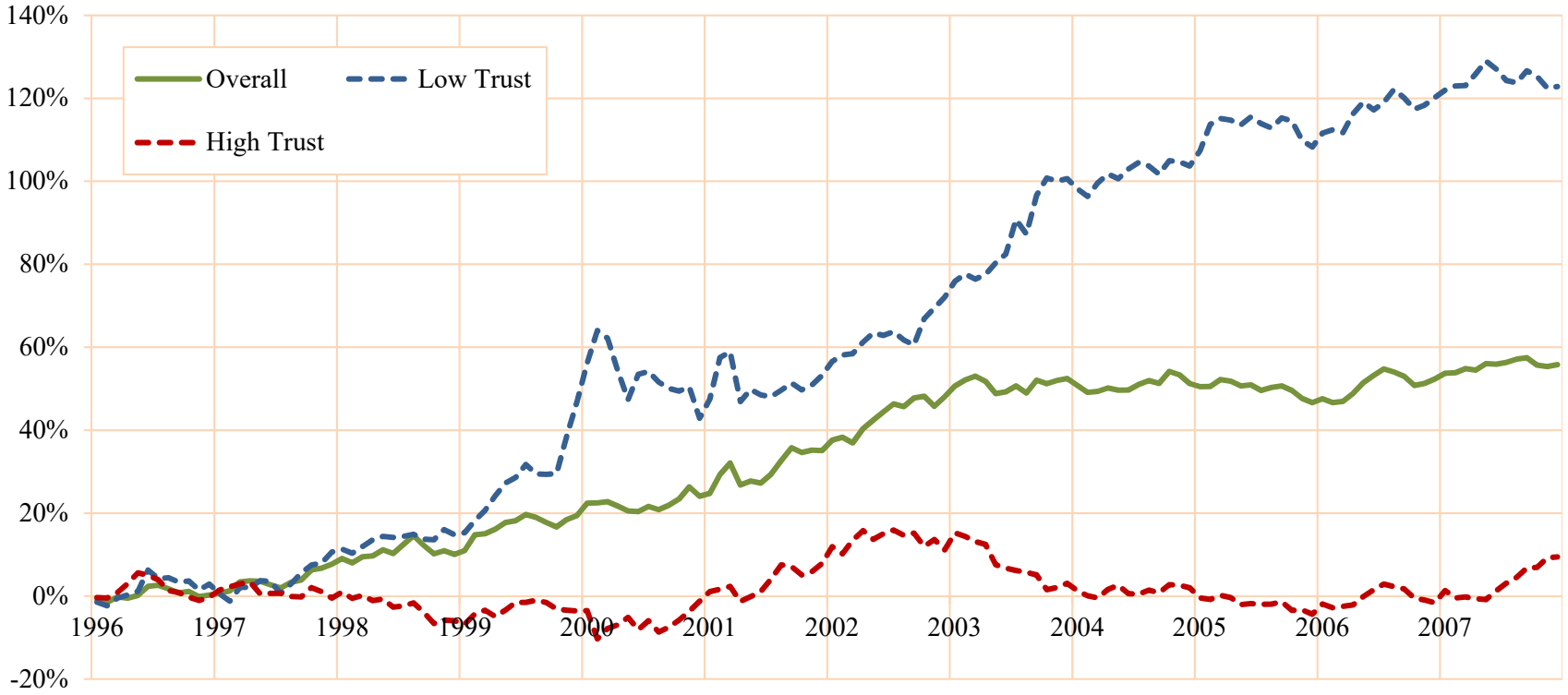

TABLE 1

Summary Statistics

Table 1 reports summary statistics of the main variables used in the subsequent analysis. Panel A reports the number of observations (n), 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 are from the U.S. Census Bureau SAIPE datasets. The data on unemployment rate are from the Bureau of Labor Statistics. The data on education level of population are from the Economic Research Service in the U.S. Department of Agriculture. The data on state coincident index are from the Federal Reserve Bank of Philadelphia. The data on violent crime rate and property crime rate are 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 are 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.

Panel B 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?"

Panel C reports the correlation matrix of state level variables among 571 state-year observations. We report the correlations between the TRUST_INDEX, the natural log of state population (POPULATION), the percentage of male population (MALE), the percentage of person age 65 and above (SENIOR), the percentage of population with college degrees (COLLEGE), the natural log of the median household income (HOUSEHOLD_INCOME), the unemployment rate (UNEMPLOYMENT), the state coincident index (SC_INDEX), the violent crime rate (VIOLENT_CRIME), and the property crime rate (PROPERTY_CRIME).

TABLE 1 (CONTINUED)

Panel A: Summary Statistics of Main Variables

	Frequency	Mean	Median	Std. Dev.	N
Investor level variables					
LOCAL_BIAS	Year	0.034	0.008	0.127	22152
INVESTOR_SIZE	Year	6.239	5.940	1.800	22152
INVESTOR_AGE	Year	1.932	2.079	0.943	22152
NO_STOCKS	Year	4.682	4.605	1.290	22152
IVOL	Year	0.486	0.368	0.396	20531
HERFINDAHL	Year	0.059	0.026	0.113	22152
Firm level variables					
LOCAL_OWNERSHIP	Year	0.054	0.005	0.150	38138
FIRM_SIZE	Year	5.880	5.762	2.007	38138
MARKET_TO_BOOK	Year	2.171	1.331	3.288	38138
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
IO	Year	0.458	0.454	0.270	38138
STOCK_RETURN	Year	0.195	0.084	0.678	38138
RETURN_VOL	Year	0.036	0.031	0.021	38138
ILLIQ	Year	0.300	0.125	0.457	38138
NO_ANALYSTS	Quarter	9.795	7.000	8.958	84337
EARNINGS_SURPRISE	Quarter	0.000	0.000	0.005	84337
State level variables					
TRUST_INDEX	Year	0.376	0.392	0.069	571
POPULATION	Year	15.128	15.252	0.982	571
MALE	Year	0.488	0.486	0.010	571
SENIOR	Year	0.143	0.140	0.024	571
COLLEGE	Year	0.181	0.166	0.050	571
HOUSEHOLD_INCOME	Year	10.480	10.462	0.185	571
UNEMPLOYMENT	Year	0.053	0.052	0.014	571
SC_INDEX	Year	1.408	1.391	0.192	571
VIOLENT_CRIME	Year	0.044	0.042	0.021	571
PROPERTY_CRIME	Year	0.371	0.374	0.097	571

TABLE 1 (CONTINUED)

Panel B: Trust Index by Region and Survey Year

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

Panel C: Correlation Matrix of State level Variables

	TRUST_INDEX	POPULATION	MALE	SENIOR	COLLEGE	HOUSEHOLD_INCOME	UNEMPLOYMENT	SC_INDEX	VIOLENT_CRIME	PROPERTY_CRIME
TRUST_INDEX	1.00									
POPULATION	-0.13	1.00								
MALE	0.25	0.05	1.00							
SENIOR	0.16	0.08	-0.09	1.00						
COLLEGE	0.36	-0.15	-0.09	-0.30	1.00					
HOUSEHOLD_INCOME	0.39	0.05	-0.02	-0.30	0.73	1.00				
UNEMPLOYMENT	-0.27	0.33	0.07	-0.19	-0.33	-0.37	1.00			
SC_INDEX	0.34	-0.05	0.38	-0.27	0.15	0.40	-0.14	1.00		
VIOLENT_CRIME	-0.34	0.49	0.06	-0.12	-0.21	-0.18	0.35	-0.10	1.00	
PROPERTY_CRIME	-0.23	0.25	0.23	-0.05	-0.31	-0.41	0.43	-0.16	0.65	1.00

TABLE 2
Trust and Local Bias: Univariate Results

Table 2 reports univariate results on the relation between trust and local bias at both the stock level and institutional investor level. 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 investor, LOCAL_BIAS is defined as the difference between the fraction of portfolio allocation in local stocks and the benchmark allocation in local stocks assuming that the benchmark is the market portfolio. For a given stock, LOCAL_OWNERSHIP is calculated as the fraction of holdings held by local investors minus the total market equity asset value of all investors located in the same state divided by the total market equity asset value of the entire institutional investor universe.

Panel A reports the averages of LOCAL_BIAS and LOCAL_OWNERSHIP in our sample. We perform t-tests to test whether the average LOCAL_BIAS (LOCAL_OWNERSHIP) is significantly different from 0. The No. of obs. is reported in parenthesis.

Panel B reports the level of LOCAL_BIAS between stocks located in the high trust regions versus stocks located in the low trust regions. An investor/stock is classified as High Trust (Low Trust) if the TRUST_INDEX in the previous year is above (below) sample median. t-tests are reported to test whether the average local bias is significantly different between the two groups. We report the results both at the institutional investor level (LOCAL_BIAS) and at the stock level (LOCAL_OWNERSHIP). The No. of obs. is reported in parenthesis. We report the results for the full sample, as well as subsamples of small/large investors (stocks). A stock is classified as small if its beginning of the year market capitalization is below the bottom sample tercile and large otherwise. An investor is classified as small if the market value of its portfolio holdings is below the bottom sample tercile and large otherwise.

Panel A. Full Sample

	Investor level Analysis (Investor-year) LOCAL_BIAS			Firm level Analysis (Firm-year) LOCAL_OWNERSHIP		
	Portfolio in Local Stocks	Benchmark Allocation	T-test: LOCAL_BIAS=0	Holdings by Local Investors	Benchmark Ownership	T-test: LOCAL_OWNERSHIP=0
Full sample	11.6%	8.2%	3.4%	14.1%	8.7%	5.4%
	(22152)	(22152)	40.20***	(38138)	(38138)	69.79***

Panel B. High vs Low Trust Regions

	Investor level Analysis (Investor-year) LOCAL_BIAS			Firm level Analysis (Firm-year) LOCAL_OWNERSHIP		
	Low Trust	High Trust	T-test: Difference	Low Trust	High Trust	T-test: Difference
Full sample	3.9%	3.0%	0.9%	6.1%	4.6%	1.5%
	(11325)	(10827)	5.45***	(19411)	(18727)	10.24***
Small	4.7%	3.0%	1.7%	12.5%	9.1%	3.4%
	(3807)	(3580)	4.99***	(6405)	(6310)	8.84***
Large	3.5%	3.0%	0.5%	3.0%	2.2%	0.8%
	(7518)	(7247)	2.82***	(13006)	(12417)	6.59***

TABLE 3
Trust and Local Bias: Investor Level Analysis

Table 3 reports multivariate results on the effect of trust on local at the investor level. For an investor, a stock is classified as a local stock if it is headquartered in the same state as the investor. Investor level LOCAL_BIAS is defined as the difference between the fraction of portfolio allocation in local stocks and the benchmark allocation in local stocks assuming that the benchmark is the market portfolio.

Panel A reports the baseline results. We control for investor characteristics including the natural log of the dollar amount of investor portfolio holdings (INVESTOR_SIZE), the natural log of the number of years since the investor first appeared in the Thomson 13F database (INVESTOR_AGE), and the natural log of the number of stocks in the investor's portfolio (NO_STOCKS). Year, investor-type, state fixed effects are included in different specifications. We obtain investor type classifications from Brian Bushee's website. In columns 3 and 4, we control for state population characteristics, state economic conditions, and state security conditions. ***, ** and * represent significance levels at 1%, 5%, and 10% respectively with heteroscedasticity-robust standard errors clustered at the investor level.

Panel B reports results on the relation between trust and local bias across various types of institutional investors. We identify institutional investor characteristics by investor size (total asset value), number of stocks in the portfolio, age of investor, portfolio churn rate, and investment horizon style. In columns 1 and 2, an investor is classified as Small if investor size (total asset value) is in the bottom sample tercile each year or Rest otherwise. In columns 3 and 4, an investor is classified as Low if the number of stocks in the investor's portfolio is in the bottom sample tercile each year or Rest otherwise. In columns 5 and 6, an investor is classified as Older if the age of the investor is in the top sample tercile each year or Rest otherwise. In columns 7 and 8, an investor is classified as Fast if the churn rate of the investor's portfolio (Yan and Zhang (2009)) is in the top sample tercile each year or Rest otherwise. Columns 9 and 10 partition the sample based on investors' investment horizon: Transient investors have investor classification "TRA" (Bushee (2001)), otherwise the investor is classified as Rest. Year and investor-type are included in different specifications. We obtain investor type classifications from Brian Bushee's website. ***, **, and * represent significance levels at 1%, 5%, and 10% respectively with heteroscedasticity-robust standard errors clustered at the investor level. We perform the Chi-square tests to test the differences in coefficients between the subsamples (Diff in TRUST_INDEX).

TABLE 3 (CONTINUED)

Panel A: Baseline Results

	Dependent variable: LOCAL_BIAS			
	1	2	3	4
TRUST_INDEX	-0.131***	-0.124***	-0.131***	-0.205***
	(-3.54)	(-3.57)	(-3.43)	(-3.42)
INVESTOR_SIZE	-0.002	-0.001	-0.000	0.000
	(-1.60)	(-0.66)	(-0.14)	(0.15)
INVESTOR_AGE	-0.001	-0.002	-0.002	-0.002
	(-0.31)	(-0.90)	(-0.93)	(-0.79)
NO_STOCKS	-0.003	-0.007**	-0.008***	-0.009***
	(-0.97)	(-2.41)	(-2.94)	(-3.25)
POPULATION			0.020***	-0.054
			(6.06)	(-0.68)
MALE			-0.619**	-2.193
			(-2.23)	(-1.18)
SENIOR			0.525***	3.767***
			(4.08)	(2.62)
COLLEGE			-0.246***	0.300
			(-3.72)	(0.36)
HOUSEHOLD_INCOME			0.098***	0.073
			(5.19)	(1.34)
UNEMPLOYMENT			1.231***	-0.072
			(6.36)	(-0.33)
SC _INDEX			0.175***	0.100***
			(8.20)	(2.77)
VIOLENT_CRIME			-0.824***	1.235***
			(-5.59)	(5.01)
PROPERTY_CRIME			0.156***	-0.204***
			(4.36)	(-3.05)
Year fixed effect	Y	Y	Y	Y
Investor-type fixed effect	-	Y	Y	Y
State fixed effect	-	-	-	Y
Cluster	Investor	Investor	Investor	Investor
No. of obs.	22,152	22,152	22,152	22,152
R^2	0.01	0.03	0.08	0.10

TABLE 3 (CONTINUED)

Panel B: Trust and Local Bias: Heterogeneity across Investor Types

	Dependent variable: LOCAL_BIAS									
	Investor Size		Number of Stocks		Age of Investor		Portfolio Churn Rate		Investment Horizon	
	Small	Rest	Low	Rest	Older	Rest	Fast	Rest	Transient	Rest
	1	2	3	4	5	6	7	8	9	10
TRUST_INDEX	-0.202***	-0.079**	-0.267***	-0.054	-0.142**	-0.117***	-0.216***	-0.085**	-0.184***	-0.094**
	(-3.31)	(-2.06)	(-3.80)	(-1.49)	(-2.45)	(-2.77)	(-4.80)	(-2.10)	(-4.21)	(-2.34)
INVESTOR_SIZE	0.003	-0.005***	0.003	-0.003**	0.001	-0.002	-0.000	-0.001	-0.002	-0.001
	(0.77)	(-2.83)	(0.94)	(-2.24)	(0.52)	(-0.89)	(-0.17)	(-0.67)	(-1.43)	(-0.72)
INVESTOR_AGE	-0.007**	0.002	-0.004	-0.003	-0.003	-0.003	-0.005**	-0.006*	-0.010***	0.001
	(-2.32)	(0.66)	(-0.79)	(-1.24)	(-0.21)	(-1.03)	(-1.96)	(-1.77)	(-3.14)	(0.21)
NO_STOCKS	-0.007	-0.007**	-0.022***	-0.006***	-0.008	-0.006*	-0.002	-0.009**	0.001	-0.009**
	(-1.47)	(-2.20)	(-2.65)	(-2.79)	(-1.47)	(-1.94)	(-0.67)	(-2.47)	(0.55)	(-2.45)
Year fixed effect	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Investor-type fixed effect	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Investor	Investor	Investor	Investor	Investor	Investor	Investor	Investor	Investor	Investor
No. of obs.	7,387	14,765	7,474	14,678	7,225	14,927	7,259	14,893	6,987	15,165
R^2	0.020	0.045	0.029	0.058	0.044	0.030	0.025	0.040	0.023	0.032
Chi-square test: Diff in TRUST_INDEX	3.33*		7.81**		0.13		6.33**		3.20*	

TABLE 4
Trust and Investor Portfolio Diversification

Table 4 reports results on the effect of social trust on investor portfolio diversification. We construct two measures of portfolio diversification at the investor level. The first measure is the idiosyncratic volatility (IVOL), defined as the standard deviation of residuals from regressing portfolio returns on market returns. The second measure is the portfolio Herfindahl (HERFINDAHL), defined as the sum square of portfolio weights on individual stocks in an investor's portfolio. The dependent variable in columns 1 and 2 is IVOL, and the dependent variable in columns 3 and 4 is HERFINDAHL. Year and state fixed effects are included in all of the specifications. In columns 2 and 4, we control for state population characteristics, state economic conditions, and state security conditions. ***, **, and * represent significance levels at 1%, 5%, and 10% respectively with heteroscedasticity-robust standard errors clustered at the investor level.

	Dependent variable: IVOL		Dependent variable: HERFINDAHL	
	1	2	3	4
TRUST_INDEX	-0.253**	-0.306**	-0.099***	-0.125***
	(-2.00)	(-1.99)	(-2.73)	(-2.74)
INVESTOR_SIZE	0.016***	0.016***	0.007***	0.007***
	(4.11)	(4.12)	(4.75)	(4.73)
INVESTOR_AGE	-0.022***	-0.022***	0.007***	0.007***
	(-4.34)	(-4.40)	(4.17)	(4.16)
NO_STOCKS	-0.184***	-0.184***	-0.059***	-0.059***
	(-28.52)	(-28.53)	(-23.29)	(-23.25)
POPULATION		0.323*		0.005
		(1.66)		(0.08)
MALE		-15.705**		-1.779
		(-2.38)		(-0.93)
SENIOR		6.935		2.162
		(1.46)		(1.53)
COLLEGE		10.765***		0.938
		(3.41)		(0.99)
HOUSEHOLD_INCOME		-0.645***		-0.008
		(-4.41)		(-0.18)
UNEMPLOYMENT		-2.531***		-0.311
		(-3.61)		(-1.59)
SC_INDEX		-0.206*		-0.008
		(-1.77)		(-0.22)
VIOLENT_CRIME		0.783		0.325
		(1.16)		(1.56)
PROPERTY_CRIME		-0.219		-0.089*
		(-1.18)		(-1.72)
Year fixed effects	Y	Y	Y	Y
State fixed effects	Y	Y	Y	Y
Cluster	Investor	Investor	Investor	Investor
No. of obs.	20,531	20,531	22,152	22,152
R^2	0.45	0.45	0.37	0.37

TABLE 5

Trust and Local Bias: Stock-level Analysis

Table 5 reports results on the effect of trust on local ownership at the stock level. Panel A presents our baseline results. The control variables for firm characteristics include FIRM_SIZE, MARKET_TO_BOOK, LEVERAGE, PROFITABILITY, CASH_HOLDING, IO, STOCK_RETURN, RETURN_VOL, and ILLIQ. We control for various state characteristics in columns 3 and 4. Year, state, and industry (2-digit SIC) fixed effects are included in different specifications. Column 4 presents the specification with firm fixed effects. ***, **, and * represent significance levels at 1%, 5%, and 10% respectively with heteroscedasticity-robust standard errors clustered at the firm level.

Panel B presents subsample analyses by firm characteristics. Columns 1 and 2 separate the sample by the market value of assets (year-beginning market size, below/above sample tercile, small vs. large). Columns 3 and 4 separate the sample by whether the firm is in the S&P 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 (below/above sample tercile, 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 (Diff in TRUST_INDEX).

TABLE 5 (CONTINUED)

Panel A: Baseline Results

	Dependent variable: LOCAL_OWNERSHIP			
	1	2	3	4
TRUST_INDEX	-0.251***	-0.237***	-0.220***	-0.223***
	(-7.28)	(-7.03)	(-5.27)	(-5.52)
FIRM_SIZE	-0.022***	-0.006***	-0.006***	-0.010***
	(-23.77)	(-6.81)	(-6.88)	(-3.69)
MARKET_TO_BOOK	-0.002***	0.000	-0.000	-0.000
	(-3.86)	(0.23)	(-0.04)	(-1.09)
LEVERAGE	0.030***	0.005	0.006	0.011
	(4.03)	(0.73)	(0.86)	(1.21)
PROFITABILITY	-0.022***	-0.010*	-0.010*	-0.010
	(-3.24)	(-1.71)	(-1.69)	(-1.21)
CASH_HOLDING	-0.045***	-0.028***	-0.026***	-0.009
	(-6.22)	(-4.02)	(-3.79)	(-0.93)
IO		-0.045***	-0.046***	-0.018**
		(-7.55)	(-7.64)	(-2.14)
STOCK_RETURN		-0.011***	-0.011***	-0.009***
		(-8.65)	(-8.69)	(-7.12)
RETURN_VOL		0.332***	0.293***	0.355***
		(3.23)	(2.84)	(3.42)
ILLIQ		0.066***	0.066***	0.036***
		(13.07)	(13.13)	(5.92)
POPULATION			0.236***	0.011
			(4.14)	(1.57)
MALE			-1.186	0.576
			(-0.86)	(1.20)
SENIOR			0.390	0.073
			(0.31)	(0.27)
COLLEGE			1.494*	0.151
			(1.70)	(1.04)
HOUSEHOLD_INCOME			-0.368***	-0.116***
			(-6.86)	(-3.14)
UNEMPLOYMENT			-0.302	-0.394*
			(-1.60)	(-1.93)
SC_INDEX			-0.065*	-0.002
			(-1.90)	(-0.07)
VIOLENT_CRIME			-0.084	-0.461**
			(-0.34)	(-2.10)
PROPERTY_CRIME			-0.240***	-0.146***
			(-4.76)	(-3.48)
Year fixed effect	Y	Y	Y	Y
State fixed effect	Y	Y	Y	-
Industry fixed effect	Y	Y	Y	-
Firm fixed effect	-	-	-	Y
Cluster	Firm	Firm	Firm	Firm
No. of obs.	38,138	38,138	38,138	38,138
R^2	0.12	0.16	0.17	0.62

TABLE 5 (CONTINUED)

Panel B: Heterogeneity across Firm Characteristics

	Dependent variable: LOCAL_OWNERSHIP									
	Firm size		S&P 500		Dividend Payer		With Credit Rating		Stock Volatility	
	Small	Large	Yes	No	Yes	No	Yes	No	High	Low
	1	2	3	4	5	6	7	8	9	10
TRUST_INDEX	-0.389***	-0.169***	-0.028	-0.266***	-0.086*	-0.317***	-0.065*	-0.295***	-0.378***	-0.153***
	(-4.46)	(-6.42)	(-0.76)	(-6.98)	(-1.96)	(-6.81)	(-1.91)	(-6.48)	(-4.70)	(-4.77)
Controls										
FIRM_SIZE	-0.029***	-0.003***	-0.004**	-0.010***	-0.003**	-0.011***	-0.001	-0.013***	-0.017***	-0.004***
	(-6.98)	(-3.22)	(-2.26)	(-6.85)	(-2.36)	(-7.24)	(-1.09)	(-7.53)	(-7.51)	(-3.98)
MARKET_TO_BOOK	-0.005***	0.001	-0.000	-0.000	0.000	-0.001*	-0.000	-0.000	-0.001***	0.002**
	(-4.36)	(1.59)	(-0.67)	(-0.53)	(0.10)	(-1.65)	(-0.16)	(-1.02)	(-3.25)	(2.25)
LEVERAGE	0.053***	-0.006	-0.006	0.012	-0.007	0.015*	-0.002	0.012	0.028**	0.001
	(3.33)	(-0.90)	(-0.65)	(1.56)	(-0.64)	(1.74)	(-0.19)	(1.26)	(2.30)	(0.08)
PROFITABILITY	-0.003	-0.001	-0.004	-0.009	0.004	-0.011*	-0.034**	-0.006	-0.001	-0.021*
	(-0.53)	(-0.14)	(-0.25)	(-1.50)	(0.23)	(-1.87)	(-2.06)	(-0.98)	(-0.12)	(-1.78)
CASH_HOLDING	-0.034***	-0.005	-0.022	-0.028***	-0.030*	-0.027***	-0.003	-0.026***	-0.026***	-0.022**
	(-2.73)	(-0.83)	(-1.17)	(-3.86)	(-1.75)	(-3.43)	(-0.21)	(-3.38)	(-2.58)	(-2.45)
IO	-0.098***	-0.023***	-0.028*	-0.042***	-0.025**	-0.042***	-0.016*	-0.045***	-0.057***	-0.030***
	(-6.68)	(-3.49)	(-1.82)	(-6.41)	(-2.09)	(-6.25)	(-1.87)	(-5.87)	(-5.60)	(-4.28)
STOCK_RETURN	-0.015***	-0.007***	-0.007***	-0.011***	-0.008***	-0.010***	-0.006***	-0.012***	-0.011***	-0.009***
	(-5.15)	(-5.66)	(-3.04)	(-7.89)	(-3.43)	(-7.65)	(-3.89)	(-7.67)	(-6.03)	(-5.78)
STOCK_VOL	0.263*	0.168*	0.028	0.324***	0.097	0.316***	-0.226	0.341***	0.373**	-0.194
	(1.69)	(1.80)	(0.17)	(3.05)	(0.39)	(2.75)	(-1.27)	(2.97)	(2.49)	(-0.95)
ILLIQ	0.042***	0.065***	-0.122	0.062***	0.081***	0.060***	0.105***	0.057***	0.049***	0.080***
	(6.85)	(3.87)	(-1.32)	(11.79)	(6.18)	(10.90)	(3.77)	(10.82)	(8.02)	(9.01)
Year fixed effect	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry fixed effect	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
State fixed effect	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm
No. of obs.	12,715	25,415	4,934	33,197	12,659	25,472	11,067	27,064	12,716	25,415
Chi-Square test: Diff in TRUST_INDEX	5.95**		20.17***		13.19***		16.71***		7.04**	

TABLE 6
Portfolio Returns Sorted by Local Ownership

Table 6 reports the returns of stock portfolios sorted by local ownership as previously defined at the firm level. At each month-beginning from January 1996 to December 2007, stocks are sorted into quintiles based on the previous quarter-end local ownership. Portfolio 1 has the lowest ownership. Portfolio 5 has the highest ownership. Equally-weighted returns for the five portfolios are calculated over the month.

Panel A reports portfolio returns of stocks sorted by local ownership for the full sample of stocks. For each portfolio, we report the average LOCAL_OWNERSHIP, the raw average portfolio return (Raw Return), the abnormal return from the CAPM 1-factor model (CAPM Alpha), the abnormal return from the Fama–French (1993) 3-factor model (Fama–French Alpha), and the abnormal return from the Carhart (1997) 4-factor model (Carhart Alpha). "Long Portfolio 5 & Short Portfolio 1" is the difference in the returns between the highest and lowest local ownership portfolios. We report the raw return, the CAPM alpha, the Fama–French (1993) 3-factor alpha and the Carhart (1997) 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.

Panel B and C reports portfolio returns of stocks sorted by LOCAL_OWNERSHIP 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). A stock is classified in the Low Trust Region (High Trust Region) if the TRUST_INDEX in the previous year is below (above) sample median. In Panel B, we form portfolios based on stocks located in low trust regions. In Panel C, 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 A: Portfolio Returns of Portfolios Sorted by Local Ownership

	Average LOCAL_OWNERSHIP	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 6 (CONTINUED)

Panel B. Portfolio Returns of Portfolios Sorted by Local Ownership in Low Trust Regions

	Average LOCAL_OWNERSHIP	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 C. Portfolio Returns of Portfolios Sorted by Local Ownership in High Trust Regions

	Average LOCAL_OWNERSHIP	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 7

Portfolio Returns Sorted by Local Ownership using Orthogonalized Trust Index

Table 7 reports robustness tests on the returns of stock portfolios sorted by local ownership 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 stock is classified in the Low Trust Region (High Trust Region) if the TRUST_INDEX in the previous year is below (above) sample median. 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 of Portfolios Sorted by Local Ownership in Low Trust Regions (Using Orthogonalized TRUST_INDEX)

	Average LOCAL_OWNERSHIP	Raw Return	CAPM Alpha	Fama–French Alpha	Carhart Alpha	N
Portfolio 1	-0.075	0.0101	-0.0007	-0.0012	0.0029	144
			(-0.19)	(-0.50)	(1.45)	
Portfolio 2	-0.015	0.0113	0.0017	-0.0011	0.0016	144
			(0.67)	(-0.68)	(1.30)	
Portfolio 3	0.008	0.0113	0.0021	-0.0005	0.0014	144
			(0.87)	(-0.33)	(1.09)	
Portfolio 4	0.064	0.0132	0.0027	0.0011	0.0039**	144
			(0.83)	(0.59)	(2.37)	
Portfolio 5	0.301	0.0164	0.0056	0.0052*	0.0094***	144
			(1.21)	(1.74)	(3.09)	
Long portfolio 5 & short portfolio 1		0.0064***	0.0063***	0.0064***	0.0065***	144
		(3.08)	(3.01)	(3.41)	(3.03)	

Panel B: Portfolio Returns of Portfolios Sorted by Local Ownership in High Trust Regions (Using Orthogonalized TRUST_INDEX)

	Average LOCAL_OWNERSHIP	Raw Return	CAPM Alpha	Fama–French Alpha	Carhart Alpha	N
Portfolio 1	-0.084	0.0122	0.0024	0.0011	0.0047*	144
			(0.69)	(0.48)	(1.88)	
Portfolio 2	-0.012	0.0107	0.0021	-0.0014	0.0020	144
			(0.86)	(-0.76)	(1.45)	
Portfolio 3	0.007	0.0106	0.0023	-0.0009	0.0011	144
			(1.15)	(-0.73)	(1.11)	
Portfolio 4	0.053	0.0124	0.0036	0.0010	0.0036***	144
			(1.58)	(0.74)	(3.48)	
Portfolio 5	0.284	0.0122	0.0032	0.0009	0.0047*	144
			(0.94)	(0.38)	(1.83)	
Long portfolio 5 & short portfolio 1		0.0000	0.0008	-0.0002	0.0001	144
		(0.00)	(0.58)	(-0.15)	(0.04)	

TABLE 8

Trust and Local Bias: Potential Information Channels

Table 8 reports results from tests of potential information channels. Panel A 8 reports results on the relation between local ownership and earnings surprise in the following quarter. We perform the analyses at the stock level, comparing stocks located in the high trust regions versus stocks located in the low trust regions. A stock is classified in the Low Trust Region (High Trust Region) if the TRUST_INDEX in the previous year is below (above) sample median. EARNINGS_SURPRISE is the difference between the actual earning minus the analyst forecast consensus divided by the stock price before the earnings announcement date. For a given stock, we calculate the fraction of holdings held by local investors divided by the amount of total institutional holdings of the stock. LOCAL_OWNERSHIP is defined as the difference between the local holdings fraction and the benchmark fraction by local investors assuming that every investor is holding the market portfolio. In columns 1 and 2, we consider stocks headquartered in low trust regions, while in columns 3 and 4, we focus on stocks headquartered in high trust regions. ***, ** and * represent significance levels at 1%, 5%, and 10% respectively with heteroscedasticity-robust standard errors clustered at the firm level. We perform the Chi-square tests to test the differences in coefficients between subsamples.

Panel B reports results using the sample of institutional investors located close to the top ranked 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 ownership as the difference between the local investment and the benchmark investment by the local close-to-golf investors. We present portfolio returns sorted by close-to-golf local ownership for the stocks in low- and high-trust regions separately. Portfolio 1 (5) has the lowest (highest) close-to-golf local ownership. "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.

TABLE 8 (CONTINUED)

Panel A: Earnings Surprise in High/Low Trust Regions

	Dependent variable: EARNINGS_SURPRISE			
	1	2	3	4
	Low Trust Region	High Trust Region	Low Trust Region	High Trust Region
LOCAL_OWNERSHIP	0.100**	0.005	0.107***	0.006
	(2.49)	(0.12)	(2.65)	(0.13)
FIRM_SIZE	0.017***	0.015***	0.016***	0.017***
	(5.16)	(5.14)	(4.46)	(5.32)
MARKET_TO_BOOK	-0.001*	-0.009***	-0.001	-0.009***
	(-1.73)	(-6.63)	(-1.61)	(-6.20)
LEVERAGE	-0.012	-0.035	-0.029	-0.036
	(-0.47)	(-1.53)	(-1.09)	(-1.45)
PROFITABILITY	0.027	0.017	0.049*	-0.008
	(1.06)	(0.60)	(1.81)	(-0.29)
CASH_HOLDING	0.145***	0.147***	0.139***	0.142***
	(6.30)	(6.60)	(5.80)	(6.15)
NO_ANALYSTS	0.000	-0.000	0.004	0.000
	(0.07)	(-0.07)	(0.56)	(0.05)
IO	0.022	0.005	0.017	-0.005
	(1.29)	(0.30)	(0.99)	(-0.28)
STOCK_RETURN	0.029***	0.024***	0.028***	0.024***
	(5.32)	(4.84)	(5.20)	(4.66)
RETURN_VOL	-0.894**	0.560	-0.441	0.475
	(-2.38)	(1.54)	(-1.12)	(1.26)
ILLIQ	-0.006	-0.033	-0.016	-0.035
	(-0.15)	(-1.10)	(-0.44)	(-1.13)
Year-quarter fixed effect	Y	Y	Y	Y
State fixed effect	Y	Y	Y	Y
Industry fixed effect	-	-	Y	Y
Cluster	Firm	Firm	Firm	Firm
No. of obs.	40,790	43,547	40,790	43,547
R^2	0.01	0.01	0.02	0.01
Chi-square test: Diff in TRUST_INDEX	2.73*		3.09*	

TABLE 8 (CONTINUED)

Panel B. Portfolio Returns of Portfolios Sorted by "Close-to Golf" LOCAL_OWNERSHIP

	Average LOCAL_OWNERSHIP	Raw Return	CAPM Alpha	Fama−French Alpha	Carhart Alpha	N
Low Trust Regions						
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)	
High Trust Regions						
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)	

Internet Appendix

This is the Internet Appendix for "Trust and Local Bias." This supplementary appendix is not meant for publication in print. It can be made available on a Journal website and the authors' websites upon publication.

It reports the complete results of additional tests described in the main text, but not included in the main table for brevity. Section 1 reports our main results using an alternative non-interpolated TRUST_INDEX. This robustness tests assures that our results are not due the interpolation of the Trust Index. Section 2 reports results using the characteristics based version of the TRUST_INDEX. Section 3 re-estimates our key findings using a biennial state level trust measure created from the General Society Survey. Section 4 shows the effect of trust on local ownership before and after Regulation Fair Disclosure (Reg FD). Section 5 shows are results are unchanged with the inclusion of controls for the information environment while Section 6 shows similar results after controlling for risk aversion.

1. Non–Interpolated Trust Index

Though out our study, we use a measure of trust derived from the World Values Survey (WVS). The TRUST_INDEX is 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.

One concern with the World Values Survey is that it is only conducted once every 5 to 6 years. Therefore, for the years without a survey we follow standard practice in the existing literature by extrapolating the values. However, this may raise concerns given the length of the time between each survey. In this section, we re-estimate our analysis using a non-interpolated measure of trust.

We construct a non-interpolated measure of trust using the World Values Survey as follows. For years 1996-1998, we use the TRUST_INDEX calculated from the 1996 survey. For years 1999-2005, we use the 1999 survey. And for years 2006 and 2007, we use the 2006 survey. We re-estimate both the multivariate local ownership tests (Table V) and portfolio return tests (Table VI) sorted by local ownership in low and high trust regions.

Panel A of Table A1 presents regressions results of trust on local ownership. Column 1 shows that the coefficient estimate on the *non-interpolated* Trust Index remains negative and statistically significant (–0.098, t=–4.97), consistent with our main findings in Table V. It remains negative and statistically significant after controlling for stock return variables in Column 2 and with the inclusion of industry fixed effects in Column 3. Our findings remain unchanged with the inclusion of firm fixed effects in Column 4.

Panel B of Table A1 reports portfolio return differences across low and high trust regions using the non-interpolated measure. 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. 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.

The long-short portfolio (long Portfolio 5 and short Portfolio 1) generates an average monthly return of 49 bps (t=2.78). Risk adjusted returns show similar patterns across various factor models: the CAPM market model (50 bps, t=2.89), the Fama–French 3-factor model (53 bps, t=3.13), and the Carhart (1997) 4-factor model (49 bps, t=2.68). These estimates are comparable to the results in the main text. For example, in Table VI, Panel B, the Carhart (1997) 4-factor model generates a long-short return of 53 bps. Again, we observe that the high trust region based portfolios shows no abnormal return patterns. The raw return difference between Portfolio 5 and Portfolio 1 is 10 bps per month and statistically insignificant (t=0.70).

In sum, these tests show that interpolating the Trust Index makes negligible difference to the key findings in this study.

2. Measuring Trust: Respondent-Characteristics-Based Trust Index

Table A2 presents the results using the respondent-characteristic based TRUST_INDEX. We present the summary statistics by characteristics in Panel A and multivariate local ownership results in Panel B. Panel A reports, for each demographic group, 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 are non-White/Caucasian White respondents (41.2% vs. 25.1%). Trust increases with age, education level, and financial health. 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 nonchief wage earners (Chief=38.3%, Nonchief=37%). These patterns 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. Across all specifications, the alternative TRUST_INDEX constructed from demographic group respondents are the main driver behind the trust/local ownership relation. Column 1 shows that the effect of the TRUST_INDEX on local ownership is due to the trust attitudes of Male respondents. Column 2 shows that the effect of the TRUST_INDEX on local ownership is driven by the trust level of White/Caucasian White respondents. The link between trust and local ownership is only significant amongst respondents 30+ year in age in column 3. Columns 4 though 6 shows 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. Each of the six columns shows that the effect of social trust on local ownership exists in the demographic group that is more likely to be a stock market participant. We find no relation for most of the other demographic groups that is less likely to be stock market participants.

3. Measuring Trust: State–Level Trust Index from General Society Survey

There are two concerns with our primary TRUST_INDEX measure created from the World Value Survey. First, the survey is only conducted once every 5-6 years, leaving long time gaps. Second, the WVS only provides location information at the region–level. We might expect variation in the TRUST_INDEX within each region, raising concerns about the appropriateness of the WVS measure.

To address both these concerns, we construct a TRUST_INDEX from a different survey: General Society Survey (GSS). This survey is conducted only in the United States and is conducted approximately every two years. The survey is a projected funded by the Sociology Program of the National Science Foundation. Each survey wave asks a similar trust question. Therefore, we use the same methodology as with the World Values Survey by calculating the GSS TRUST_INDEX as the percentage of respondents answering "Most people can be trusted" to the survey question [TRUST]: "*Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?*" One potential weakness of using a state–level measure is that for certain waves, certain state have very few respondents. While the state–level measure is

more granular than the regional-level WVS measure, it is potentially noisier. Therefore, we require at least 20 respondents in each wave to calculate the Trust measure, and interpolate between waves.

Panel A of Table A3 presents regressions results of trust on local ownership using the same the multivariate regressions specifications as in Table V. Column 1 shows that the coefficient estimate on the GSS TRUST_INDEX remains negative and statistically significant, consistent with our main findings in Table V. It remains negative and statistically significant after controlling for stock return variables in Column 2 and with the inclusion of industry fixed effects in Column 3. Our findings remain unchanged with the inclusion of firm fixed effects in Column 4.

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 ownership 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 A3 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 42 bps (t=2.60). Risk adjusted returns show similar patterns across various factor models: the CAPM market model (48 bps, t=3.06), the Fama–French 3-factor model (48 bps, t=3.07), and the Carhart (1997) 4-factor model (49 bps, t=2.99).

In stark contrast, Panel B2 of Table A3 does not show abnormal return patterns for high trust region based portfolios. The raw return difference between Portfolio 5 and Portfolio 1 is 18 bps per month and statistically insignificant (t=1.11). The results for risk-adjusted returns remain small and insignificant across different factor models.

This set of tests based on the GSS TRUST_INDEX addresses at least three potential concerns. First, it shows that our main findings are unchanged using a completely different survey. This provides a check on our results. Second, the GSS Trust Index addresses concerns that the region definition of the WVS TRUST_INDEX measure is too crude and shows that our results continue to hold at the state–level. Third, the GSS TRUST_INDEX addresses concerns of long time gaps in measurement since it is conducted approximately every 2 years.

4. Privileged Access? Evidence from Regulation Fair Disclosure

The performance of investors in low trust regions raises concerns of 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. 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 ownership in the pre- and post- Reg FD periods (i.e., before and after year 2001). Panel A of Table A4 shows that the overall level of local ownership falls after the implementation of Reg FD. This occurs in both high and low trust regions, but the reduction in local ownership appears to be greater in high trust regions. Next, we confirm that the patterns are similar in a multivariate setting. Panel B presents the regression results. We use the panel regression specification in Table V, 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 confirms that Reg FD is associated with a greater decrease in local ownership in high trust regions. Panel C presents the main tests on long-short portfolio returns sorted by local ownership 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 Carhart 4-factor model, a long–short portfolio of stocks sorted on local ownership exhibit significant outperformance in both the pre–Reg FD period and post–Reg FD period 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.

5. Omitted Variable: Information Environment

To address the concern that stocks in high trust regions have more distant investors because of lower information collection costs, we add the following controls for the firm's information environment: 1 the number of analysts covering the firm, 2 the probability of informed trading (PIN) (e.g., Easley, Kiefer, and O'Hara, 1997; Brown and Hillegeist, 2007)[1], and 3 the return-volume coefficient (C2) (Llorente et al., 2002). We re-estimate the trust/local ownership regressions follow the same baseline specifications with these controls.

Table A5 reports the results. Across all specifications, we continue to find a significantly negative effect of trust on local ownership. In the first column, the coefficient estimates on the information environment measures imply that greater transparency attracts more distant investors (and thus, lowers local ownership). Consistent with our conjecture, greater analyst coverage leaders to lower local ownership, while higher PIN and C2 results in higher local ownership.

6. Omitted Variable: Risk Aversion

One concern is whether trust is simply a measure of risk aversion. Guiso, Sapenza, and Zingales (2008) provide a thorough analysis of this issue. Using both a theoretical model and empirical proxy, they find that trust is a distinct concept from risk aversion.

While risk and ambiguity aversion are related to stock market participation, we are unaware of any theory that suggests that risk or ambiguity aversion relate to local bias. Nevertheless, we provide additional evidence to rule–out this concern. Ideally, we would use survey questions to directly control for risk and ambiguity aversion, however neither the World Values Survey or General Society Survey conduct such questions. In the absence of these questions, we use the local Catholic–Protestant ratio to proxy for the local resident's risk–taking attitudes (e.g., Kumar, Page, and Spalt, 2011; Shu, Sulaeman, and Yeung, 2012).[2]

Table A6 presents the results of panel regression of local ownership on our main Trust Index, controlling for local religiosity and the Catholic-Protestant (C/P) ratio at the state–level. The coefficient estimates on the Trust Index remain largely unchanged. Column 1 shows that the C/P ratio is positively related to local ownership suggesting that risk–seeking behavior relates to greater local ownership. However, this relation becomes statistically weaker after controlling for

[1] We thank Stephen Brown for making the PIN measure publicly available.
[2] We thank Johan Sulaeman for sharing data on the C/P ratio and local religiosity.

additional stock characteristics and industry effect, and statistically insignificant with the inclusion of firm fixed effects in column 4.

In sum, this test supports the idea that the trust measure is different than risk aversion, and that our results are no due to local risk attitudes.

References

Alesina, A., and E. La Ferrara. "Who Trusts Others?" *Journal of Public Economics*, 85 (2002), 207–234.

Glaeser, E.; Laibson, D.; Scheinkman, J.; and C.L. Soutter. "Measuring Trust." *Quarterly Journal of Economics*, 115 (2000), 811–846.

Table A1: Non-Interpolated Trust Measure

This table reports our key results using the non-interpolated trust measure based on the World Values Survey. 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 ownership is calculated as the fraction of holdings held by local investors minus the total market equity asset value of all investors located in the same state divided by the total market equity asset value of the entire institutional investor universe.

Panel A: Multivariate Analysis

Panel A reports results on the relation between trust and local ownership using the non-interpolated trust measure. 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 clustered at the firm level.

Dependent variable: *Local Ownership*	1	2	3	4
Non-Interpolated Trust Index	-0.098***	-0.092***	-0.095***	-0.108***
	(-4.97)	(-4.77)	(-4.94)	(-5.14)
Controls				
Firm size	-0.013***	-0.003***	-0.005***	-0.008***
	(-12.14)	(-3.35)	(-4.33)	(-3.08)
Market-to-Book	-0.001***	0.000	0.000	-0.000
	(-2.68)	(0.77)	(0.62)	(-0.71)
Book leverage	0.018**	0.000	0.003	0.009
	(2.50)	(0.03)	(0.44)	(0.92)
Profitability	-0.021***	-0.008	-0.010*	-0.011
	(-3.10)	(-1.38)	(-1.68)	(-1.33)
Cash holding	-0.039***	-0.028***	-0.027***	-0.010
	(-5.49)	(-4.07)	(-3.85)	(-0.96)
Institutional ownership	-0.019***	-0.006***	-0.005***	-0.004*
	(-10.59)	(-3.40)	(-2.76)	(-1.80)
Yearly return		-0.044***	-0.040***	-0.014*
		(-7.36)	(-6.45)	(-1.70)
Stock return volatility		-0.011***	-0.011***	-0.009***
		(-8.78)	(-8.82)	(-7.32)
Amihud illiquidity		0.351***	0.373***	0.389***
		(3.60)	(3.68)	(3.73)
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
No. of obs.	38,138	38,138	38,138	38,138
R-squared	0.12	0.15	0.16	0.61

Table A1 (Continued)

Panel B: Portfolio Sorted by Local Ownership in Low/High Trust Regions (Non-Interpolated)

Panel B presents tests on the returns of stock portfolios sorted by local ownership in low and high trust regions (dependent sorting). These tests use the *Non-interpolated Trust Index* to identify high/low trust regions. Panel B1 reports the returns of portfolios based on stocks located in low trust regions. Panel B2 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 B1: Portfolio Sorted by Local Ownership in Low Trust Regions (Non-Interpolated)

Portfolio Sorted by Local Ownership	Average Local Ownership	Raw Return	FF 1-factor Alpha	FF 3-factor Alpha	FF 4-factor Alpha	N
Portfolio 1	-0.066	0.0072	0.0000	-0.0012	0.0028	144
			(0.01)	(-0.52)	(1.48)	
Portfolio 2	-0.009	0.0076	0.0018	-0.0018	0.0010	144
			(0.73)	(-1.07)	(0.82)	
Portfolio 3	0.008	0.0082	0.0025	-0.0008	0.0012	144
			(1.21)	(-0.61)	(1.17)	
Portfolio 4	0.056	0.0100	0.0035	0.0012	0.0038***	144
			(1.26)	(0.71)	(2.68)	
Portfolio 5	0.287	0.0121	0.0051	0.0041	0.0077***	144
			(1.23)	(1.49)	(2.77)	
Long Portfolio 5 & Short Portfolio 1		0.0049***	0.0050***	0.0053***	0.0049***	144
		(2.78)	(2.89)	(3.13)	(2.68)	

Panel B2: Portfolio Sorted by Local Ownership in High Trust Regions (Non-Interpolated)

Portfolio Sorted by Local Ownership	Average Local Ownership	Raw Return	FF 1-factor Alpha	FF 3-factor Alpha	FF 4-factor Alpha	N
Portfolio 1	-0.103	0.0086	0.0014	0.0006	0.0045	144
			(0.35)	(0.23)	(1.61)	
Portfolio 2	-0.022	0.0067	0.0007	-0.0020	0.0011	144
			(0.28)	(-1.13)	(0.84)	
Portfolio 3	0.005	0.0086	0.0027	0.0007	0.0027**	144
			(1.22)	(0.50)	(2.29)	
Portfolio 4	0.056	0.0098	0.0032	0.0017	0.0041***	144
			(1.16)	(1.06)	(2.95)	
Portfolio 5	0.288	0.0095	0.0031	0.0016	0.0059*	144
			(0.77)	(0.55)	(1.91)	
Long Portfolio 5 & Short Portfolio 1		0.0010	0.0017	0.0010	0.0014	144
		(0.70)	(1.33)	(0.76)	(1.06)	

Table A2: Respondent-Characteristics-Based Trust Index

Panel A: Trust Index by 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 No. of obs., 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 A2 (Continued)

Panel B: Respondent-Characteristics-Based Trust Index and Local Ownership

This table presents regressions of local ownership and the respondent-characteristics based Trust Indexes. The dependent variable is the local ownership 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 Ownership	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
No. of obs.	38,138	38,138	38,138	38,138	38,138	38,138

Table A3: State level GSS Measure

This table reports our key results using the state level trust measure from the General Society Survey. 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 ownership is calculated as the fraction of holdings held by local investors minus the total market equity asset value of all investors located in the same state divided by the total market equity asset value of the entire institutional investor universe.

Panel A: Multivariate Analysis

Panel A reports results on the relation between trust and local ownership using the GSS trust measure. 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 clustered at the firm level.

Dep. var.: Local Ownership	1	2	3	4
GSS Trust Index	-0.048***	-0.049***	-0.051***	-0.042***
	(-3.12)	(-3.23)	(-3.36)	(-2.77)
Controls				
Firm size	-0.013***	-0.003***	-0.005***	-0.008***
	(-12.08)	(-3.27)	(-4.26)	(-2.92)
Market-to-Book	-0.001***	0.000	0.000	-0.000
	(-2.64)	(0.79)	(0.65)	(-0.59)
Book leverage	0.018**	-0.000	0.003	0.008
	(2.47)	(-0.00)	(0.43)	(0.86)
Profitability	-0.021***	-0.008	-0.010*	-0.011
	(-3.10)	(-1.37)	(-1.67)	(-1.36)
Cash holding	-0.039***	-0.028***	-0.027***	-0.009
	(-5.49)	(-4.08)	(-3.85)	(-0.93)
Institutional ownership	-0.019***	-0.006***	-0.005***	-0.004*
	(-10.61)	(-3.42)	(-2.78)	(-1.82)
Yearly return		-0.044***	-0.041***	-0.016*
		(-7.43)	(-6.52)	(-1.87)
Stock return volatility		-0.011***	-0.011***	-0.009***
		(-8.79)	(-8.83)	(-7.34)
Amihud illiquidity		0.355***	0.379***	0.399***
		(3.64)	(3.73)	(3.83)
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
No. of obs.	38,138	38,138	38,131	38,138
R-squared	0.12	0.15	0.16	0.61

Table A3 (Continued)

Panel B: Portfolio Sorted by Local Ownership in Low/High Trust Regions (GSS Measure)

Panel B presents tests on the returns of stock portfolios sorted by local ownership in low and high trust regions (dependent sorting). These tests use the *GSS Trust Index* to identify high/low trust regions. Panel B1 reports the returns of portfolios based on stocks located in low trust regions. Panel B2 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 B1: Portfolio Sorted by Local Ownership in Low Trust Regions

Portfolio Sorted by Local Ownership	Average Local Ownership	Raw Return	FF 1-factor Alpha	FF 3-factor Alpha	Carhart 4-factor Alpha	N
Portfolio 1	-0.074	0.0089	0.0023	-0.0001	0.0029	144
			(0.75)	(-0.03)	(1.31)	
Portfolio 2	-0.013	0.0094	0.0037	0.0002	0.0027**	144
			(1.44)	(0.11)	(2.20)	
Portfolio 3	0.006	0.0090	0.0037*	0.0003	0.0017	144
			(1.68)	(0.21)	(1.42)	
Portfolio 4	0.052	0.0107	0.0050*	0.0016	0.0035**	144
			(1.90)	(0.95)	(2.33)	
Portfolio 5	0.280	0.0130	0.0071*	0.0047*	0.0078***	144
			(1.94)	(1.68)	(2.68)	
Long Portfolio 5 & Short Portfolio 1		0.0042***	0.0048***	0.0048***	0.0049***	144
		(2.60)	(3.06)	(3.07)	(2.99)	

Panel B2: Portfolio Sorted by Local Ownership in High Trust Regions

Portfolio Sorted by Local Ownership	Average Local Ownership	Raw Return	FF 1-factor Alpha	FF 3-factor Alpha	Carhart 4-factor Alpha	N
Portfolio 1	-0.080	0.0071	-0.0005	-0.0010	0.0035	144
			(-0.12)	(-0.37)	(1.55)	
Portfolio 2	-0.014	0.0068	0.0008	-0.0018	0.0017	144
			(0.31)	(-0.93)	(1.18)	
Portfolio 3	0.009	0.0067	0.0005	-0.0017	0.0010	144
			(0.22)	(-1.05)	(0.85)	
Portfolio 4	0.063	0.0079	0.0010	-0.0003	0.0032	144
			(0.30)	(-0.12)	(1.62)	
Portfolio 5	0.292	0.0089	0.0018	0.0011	0.0053*	144
			(0.44)	(0.38)	(1.87)	
Long Portfolio 5 & Short Portfolio 1		0.0018	0.0023	0.0021	0.0018	144
		(1.11)	(1.46)	(1.25)	(1.02)	

Table A4: Trust, Regulation Fair Disclosure, and Local Ownership

This table presents results on the impact of the passage of Regulation Fair Disclosure (Reg FD) rule on the relation between trust and local ownership. 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 ownership 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 ownership is significantly different during the two periods.

Local ownership	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 in Table V, Panel A. The dependent variable is the local ownership 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.

Dep. variable.: Local ownership	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
No. of obs.	38,138	38,138	38,138	38,138
R-squared	0.114	0.156	0.163	0.615

Table A4 (Continued)

Panel C: Portfolio Returns

Panel C reports the returns of stock portfolios sorted by local ownership during the pre-Reg FD and the post-Reg FD periods, respectively. The procedure is the same as in Table VI to sort portfolios. At each month-beginning, all stocks are sorted into quintiles based on the previous quarter-end local ownership. Portfolio 1 is the portfolio with the lowest local ownership and portfolio 5 is the portfolio with the highest local ownership. 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 ownership 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)	

Table A5: Trust and Local Ownership: Controlling for Additional Information Environment Measures

This table examines the effect of trust on local ownership controlling for additional information environment measures. Specifically, we control for the number of analysts, the probability of information-based trading (PIN) from Brown and Hillegeist (2007), and the return-volume coefficient C2 from Llorente, Michaely, Saar and Wang (2002). 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 clustered at the firm level.

Local Ownership	1	2	3	4
Trust Index	-0.234***	-0.224***	-0.224***	-0.235***
	(-6.71)	(-6.55)	(-6.51)	(-6.01)
Controls				
Firm size	-0.010***	-0.003**	-0.004***	-0.005*
	(-8.38)	(-2.21)	(-3.20)	(-1.93)
Market-to-Book	-0.001*	0.000	0.000	-0.000
	(-1.77)	(0.56)	(0.39)	(-0.75)
Book leverage	0.012	-0.001	0.002	0.013
	(1.63)	(-0.20)	(0.28)	(1.32)
Profitability	-0.019***	-0.003	-0.005	-0.005
	(-3.05)	(-0.59)	(-0.84)	(-0.60)
Cash holding	-0.032***	-0.026***	-0.025***	-0.005
	(-4.41)	(-3.70)	(-3.50)	(-0.50)
Number of analysts	-0.014***	-0.006***	-0.005***	-0.003
	(-8.25)	(-3.04)	(-2.62)	(-1.44)
Probability of informed trading (PIN)	0.117***	0.029	0.021	0.041**
	(6.19)	(1.54)	(1.12)	(2.00)
Return-Volume coefficient (C2)	0.016**	0.009	0.008	0.007
	(2.09)	(1.16)	(1.15)	(1.11)
Institutional ownership		-0.043***	-0.040***	-0.013
		(-6.91)	(-6.10)	(-1.47)
Yearly return		-0.011***	-0.011***	-0.008***
		(-8.33)	(-8.48)	(-6.61)
Stock return volatility		0.405***	0.417***	0.306***
		(4.03)	(3.95)	(2.83)
Amihud illiquidity		0.064***	0.063***	0.035***
		(11.31)	(11.25)	(5.26)
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
No. of obs.	34,287	34,287	34,287	34,287
R-squared	0.119	0.148	0.156	0.623

Table A6: Controlling for Risk Aversion

This table examines the effect of trust on local ownership, controlling for local risk aversion. Specifically, we control for the religious population and Catholic-Protestant ratio in the state (e.g., Kumar, Page, and Spalt, 2011). 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 clustered at the firm level.

Dep. var.: Local Ownership	1	2	3	4
Trust Index	-0.255***	-0.247***	-0.248***	-0.229***
	(-7.08)	(-6.94)	(-6.94)	(-5.90)
Controls				
Religious population	-0.117	-0.177*	-0.175*	0.007
	(-1.25)	(-1.90)	(-1.85)	(0.15)
Catholic-Protestant ratio	0.399**	0.335*	0.343*	0.013
	(1.98)	(1.69)	(1.73)	(0.57)
Firm size	-0.013***	-0.004***	-0.005***	-0.008***
	(-12.22)	(-3.48)	(-4.44)	(-3.05)
Market-to-Book	-0.001***	0.000	0.000	-0.000
	(-2.78)	(0.65)	(0.51)	(-0.90)
Book leverage	0.018**	0.001	0.004	0.009
	(2.56)	(0.10)	(0.52)	(0.99)
Profitability	-0.021***	-0.008	-0.010*	-0.011
	(-3.09)	(-1.42)	(-1.72)	(-1.37)
Cash holding	-0.039***	-0.027***	-0.027***	-0.010
	(-5.47)	(-4.01)	(-3.79)	(-1.02)
Institutional ownership	-0.019***	-0.006***	-0.005***	-0.003*
	(-10.47)	(-3.26)	(-2.61)	(-1.68)
Yearly return		-0.044***	-0.040***	-0.014*
		(-7.38)	(-6.47)	(-1.67)
Stock return volatility		-0.011***	-0.011***	-0.009***
		(-8.81)	(-8.85)	(-7.31)
Amihud illiquidity		0.335***	0.357***	0.365***
		(3.43)	(3.51)	(3.50)
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
No. of obs.	38,138	38,138	38,131	38,138
R-squared	0.12	0.15	0.16	0.61