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Foreign Bias in Institutional Portfolio Allocation: The Role of Social Trust

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Abstract

Using a large sample of institutionally managed portfolios, we study the role of social trust in the equity allocations of 8,088 investors from 33 countries over the 2000-2017 period. The negative relation between social trust and foreign bias suggests that institutional investors from high-social trust countries are less prone to underinvesting in foreign equity. Our results provide credence to an information-based explanation, indicating that social trust reduces foreign bias by compensating the lack of information about foreign markets. The negative relation between social trust and foreign bias does not hold unconditionally, but only relates to host countries with weak formal institutional frameworks. The informal institution of social trust can offset the lack of formal country-level institutions in international portfolio decisions. Social trust helps investors accomplish greater cross-country portfolio diversification.

JEL: G11, G14, G15, G23, Z1

Keywords: Trust, foreign bias, institutional investors, culture, information asymmetry, portfolio diversification

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1 Introduction

Investor preference for domestic over foreign investments is well-documented in the literature on international portfolio allocation (French and Poterba (1991)). As a result, investors often do not take full advantage of the considerable benefits of international diversification, and hold far more domestic securities than would be predicted by the relative share of their home markets in the world market portfolio. Empirical evidence suggests that the portfolios of both private and institutional investors tend to exhibit a significant "*home bias*" (Coval and Moskowitz (1999), Ahearne et al. (2004), Chan et al. (2005), Ke et al. (2010), Wei and Zhang (2020)).[1]

A wide range of studies have put forward possible explanations for the home bias. Older strands of literature address barriers to foreign investments that deter institutions from diversifying abroad (Cole and Obstfeld (1991), Van Wincoop (1999), Martin and Rey (2004)) or interpret domestic equity as a hedge against home-country specific risks (Cooper and Kaplanis (1994), Lewis (1996), Fidora et al. (2007)). More recent studies introduce behavioral biases (Amonlirdviman and Carvalho (2010), Ke et al. (2010), Morse and Shive (2011)) or emphasize the importance of information asymmetries in explaining investors' preference for domestic equity (Chan et al. (2005), Van Nieuwerburgh and Veldkamp (2010), Bell et al. (2012), Wei and Zhang (2020)).

The propensity to invest in domestic securities implies that foreign markets are underweighted in investor portfolios. This deviation from the optimal allocation in a particular foreign market is known as "*foreign bias*". While home bias and foreign bias are closely related from a theoretical point of view, they are not necessarily mutually dependent and only weakly correlated empirically. This is because an investor may assign an optimal weight to his home country (and show no home bias), but at the same time under- or overweight particular host countries (and exhibit a positive or negative foreign bias, respectively). However, compared to the home bias, the foreign bias has received much less attention in the literature (Chan et al. (2005), Bekaert and Wang (2009), Beugelsdijk and Frijns (2010), Vanpée and De Moor (2012), Niszczota (2014)), reflecting a long-standing lack of high-quality cross-border holdings data. Analyzing investors' portfolio decisions from a foreign bias perspective allows us to disentangle the influences of home and host country characteristics on international portfolio allocation, while inferences on home bias, by sample construction, are limited to domestic determinants of investment behavior.

[1] Coeurdacier and Rey (2012), Cooper et al. (2013), and Ardalan (2019) provide surveys of the literature.

Drawing on institutional investors' equity holdings provided by the FactSet database, we address this research gap by introducing a new factor that helps explain cross-border equity investments: social trust (or lack thereof). Economists have long recognized that a major component of social capital, the level of social trust, is salient for economic success in society (Arrow (1972), Coleman (1990), Fukuyama (1995)). Guiso et al. (2004, p. 527) explain that financial transactions depend "[...] *not only on the legal enforcement of contracts, but also on the extent to which the financier trusts the financee*." Provided that investors from more trusting countries tend to be less concerned about expropriation by managers and are more likely to put faith into the system that delivers asset payoffs, they should be more willing to invest in foreign stocks, even when they suffer from informational disadvantages abroad. Our argument does not invoke the objective characteristics of the financial system in the target country that determine the likelihood of frauds (e.g., the quality of investor protection and its enforcement), but rather appeals to the subjective component of investors' trusting behavior. We argue that investors from high-social trust countries have lower levels of foreign bias, despite facing the same shareholder expropriation problems in their foreign target firms as peer investors from low-social trust countries. As Guiso et al. (2008b) note, this is a demanding test, because most portfolio investments are in traded equity securities that are heavily monitored and regulated, and thus the risk of embezzlement is mitigated.

We use a global sample of more than 8,000 institutional investors from 33 countries that invest in equity across 84 target markets over the 2000 to 2017 time period. Data on generalized trust at the country level come from the Integrated Value Surveys (IVS) database, which includes data from the World Value Survey (WVS) and the European Value Survey (EVS). These surveys ask citizens of different nations how much they trust strangers (see Guiso et al. (2011) for detailed discussions).[2] We use regression analysis to generate *residual trust* that is not explained by a country's cultural, political, or institutional framework and use this residual trust measure as the explanatory variable in our main analyses. If social trust reflects investors' priors, it is expected to play a more important role when investors are less familiar with a particular market, which is more likely to be the case in foreign stock markets. Our large cross-country sample allows us to test the hypothesis that social trust can mitigate the problem of information asymmetry when it comes to investing in foreign equity. Moreover, it enables us to examine whether social trust

[2]The literature distinguished between personalized trust and generalized (social) trust. The former is trust in a specific individual; the latter is trust in a generic and unknown (randomly drawn) member of a broader community, such as other compatriots or people from other countries. As discussed in Guiso et al. (2011), the right measure of trust in empirical analyses is generalized (social) trust, i.e., people need to trust strangers for institutions and markets to work properly.

can, at least partly, offset the lack of formal institutions at the host country level. The empirical results strongly confirm that social trust has a strong impact on international portfolio choice, and that information asymmetry as well as the quality of the institutional environment on foreign stock markets are important moderators of this relationship.

First, institutional investors from high-social trust countries are less prone to underinvesting in foreign stocks. The set of fixed effects includes investor $\times$ target country fixed effects, which means that our results control for all time-constant characteristics within investor-host country pairs, i.e., they explain changes in an investor's allocation bias toward a specific host country. The trust effect on foreign bias is economically significant: In our baseline regression, a one-standard deviation increase in our trust measure is associated with a reduction in foreign bias by 10.33%, relative to the sample mean. Our findings are not sensitive to considerations of social trust in the target country, and are robust to differences in the level of social trust among home-target country pairs. Moreover, although sample size and the number of sample countries reduce dramatically compared to our baseline model, the results remain unchanged when we use the bilateral trust measures from Guiso et al. (2009) and Bottazzi et al. (2016).

Second, we exploit the international cross-section of host countries for portfolio investments and explore host country characteristics that determine the importance of the role social trust has for investors' decisions to invest abroad. Our results show that the portfolio allocation biases that arise from low familiarity with foreign stock markets are more pronounced for investors from low-trust countries. Based on the information advantage theory (Van Nieuwerburgh and Veldkamp (2010), Coval and Moskowitz (1999)), investors rationally overweight domestic stocks about which they tend to be better informed. We use country-specific information asymmetry variables along four dimensions and confirm that the mitigating effect of social trust on foreign bias is moderated by the degree of information asymmetry between target and host countries. The economic effect of social trust on foreign bias is strongest when the familiarity with a particular foreign market is low, and it becomes weaker as an investor's knowledge gap between the domestic and target markets shrinks. This is also consistent with Guiso et al.'s (2008b, p. 2562) reverse argument that "*more knowledge* [...] *overcomes the barrier created by lack of trust.*"

Third, we document that the effect of the informal institution of social trust (North (1994), Williamson (2000)) on international portfolio choice depends on the quality of the host country's institutional framework. The negative relation between social trust and foreign bias does not

hold unconditionally, but only if the host (or target) country is characterized by a weak formal-institutional framework. These results suggest that trust, at least to some extent, can offset the lack of formal institutions at the country level (Guiso et al. (2004), Pevzner et al. (2015)). Finally, we assess the implications of our empirical results for asset owners: Rather than encouraging naive investment behavior, social trust facilitates cross-border portfolio risk diversification by means of reduced foreign bias.

Our paper is related to a growing literature that examines the impact of trust on economic outcomes. Guiso et al. (2008b) show that trust explains differences in stock market participation, i.e., less trusting individuals are less likely to buy stocks. Guiso et al. (2009) find that the degree of trust has a positive and statistically significant effect on the percentage of equity invested abroad. Their sample is limited to fifteen countries from the European Union, and they only use equity investments of European mutual funds disaggregated by country of origin. Wei and Zhang (2020) examine the effect of social trust on local bias. They find that institutional investors located in high-trust regions in the U.S. exhibit lower local bias. The negative relation between social trust and local bias is stronger among investors that are better able to exploit local knowledge, e.g., smaller investors, those with fewer holdings, and those with shorter holding horizons. High-trust investors benefit from greater portfolio diversification. However, given their focus on a single country, Wei and Zhang (2020) are unable to exploit differences in other dimensions (e.g., in formal institutions) between the home and host region (state) of the investments.

Our study advances the limited research to date on institutional investors' foreign bias. We contribute to the literature on international portfolio allocation in four key ways. First, we note that Wei and Zhang's (2020) innovative study analyzes U.S. states rather than countries, and thus adopts a home bias framework. Home and foreign bias, although related, are two different concepts that can vary independently from each other. An investor can simultaneously have no home bias but distinct foreign biases in various host countries. It is therefore important to examine the relationship between trust and portfolio concentration as it pertains to foreign holdings of a comprehensive sample of global institutional investors. With globalized equity markets, it is particularly timely to pay greater attention to the portfolio allocation of institutional investors at an international level. Compared to Guiso et al.'s (2009) analysis of mutual fund data by country of origin, our data is more granular and contains information on the international diversification of individual investors for countries outsides the European Union. Exploiting the cross-country

variations in social trust and incorporating control variables that include investor characteristics, we are able to run powerful tests on its effect on international portfolio decisions globally and not just restricted to a particular region of the world. To ensure that social trust does not capture the effects of related determinants, we isolate trust from institutional, political, or cultural factors, which affect foreign equity investments (Chan et al. (2005), Beugelsdijk and Frijns (2010)).

Second, the foreign bias perspective enables us to not only explore how social trust serves as a stand-alone determinant of investment behavior, but also to analyze the pivotal interplay between trust and the level of information asymmetry in target countries. As in Choi and Skiba (2015), we measure the degree of host-country information asymmetry along four dimensions and find evidence that trust plays a more important role in opaque information environments (Guiso et al. (2008b)). Social trust emerges as a partial solution to the information asymmetry problem that is most prominent when investing in foreign stocks. Our results provide support for an information-based explanation of the relation between social trust and foreign equity investments.

Third, we analyze the joint effect of formal and informal institutions in the context of institutional portfolio allocation. This is a pertinent analysis due to the great diversity of formal institutions around the world, which is likely to condition institutional investors' portfolio allocation. Analyzing international portfolio choices through the lens of foreign bias, we explore the relationship between trust and the quality of the institutional framework in the target countries (La Porta et al. (1998), Djankov et al. (2001, 2003)). Our empirical evidence shows that trust does not mitigate foreign bias per se, but only when the quality of host-country formal institutions is poor. We conclude that social trust, as an informal institution, can serve as a substitute for the quality of the host country's formal-institutional framework in international portfolio decisions.

Fourth, we contribute to the broader literature on the impact social trust has on economic outcomes (Guiso et al. (2009, 2011)). Adopting the measures of portfolio concentration from Choi et al. (2017), we show that social trust improves international risk sharing. Social trust helps institutional investors achieve greater diversification across international markets. Therefore, our findings have important practical implications for both policymakers and practitioners.

The remainder of this paper is structured as follows: In Section 2, we review the literature and develop our testable hypotheses. In Section 3, we introduce our measures of foreign bias and social trust, and provide descriptive statistics of our data. We document our main empirical results in Section 4, and present several robustness tests in Section 5. Section 6 concludes.

2 Literature Review and Hypothesis Development

2.1 Explanations for Home and Foreign Bias

There is an established literature that offers possible explanations for home and foreign bias. First, market frictions such as regulatory barriers, taxes, and transaction costs could constrain cross-country portfolio allocation if the associated costs exceed the profits from international diversification. While these barriers may contribute to the existence of the home and foreign bias (Black (1974), Cole and Obstfeld (1991), Van Wincoop (1999), Michaelides (2003), Martin and Rey (2004)), they seem to be of only secondary importance for explaining them (Coën (2001), Glassman and Riddick (2001)). Most importantly, despite the ongoing globalization process and the associated integration of international financial markets, which have made it easier to diversify globally, the preference for domestic equity has been persistent. In other words, equity portfolios remain severely home biased (Kho et al. (2009), Cooper et al. (2013), Ardalan (2019)).

A second line of research follows the notion that investors deliberately overweight their home markets in order to hedge against home-country specific risks, such as inflation risk (Cooper and Kaplanis (1994)), exchange rate risk (Fidora et al. (2007)), and non-tradable goods risk (Lewis (1996)). However, these concepts have also been challenged on theoretical grounds (Uppal (1993), Cooper and Kaplanis (1994)). For example, foreign equity, as compared to domestic equity, may be better suited as a hedge against domestic risks in some circumstances, and therefore these explanatory approaches may even facilitate home and foreign bias (Ardalan (2019)).

A third strand of literature provides behavioral-based explanations that address familiarity (Ke et al. (2010)), culture (Beugelsdijk and Frijns (2010), beliefs (Epstein and Miao (2003)), patriotism (Morse and Shive (2011)), ambiguity aversion (Uppal and Wang (2003)), and loss aversion (Amonlirdviman and Carvalho (2010)). For example, most investors tend to be overly optimistic about the future performance of domestic securities (Shiller et al. (1996), Strong and Xu (2003), Solnik and Zuo (2017)). Conversely, they seem to hold biased risk perceptions regarding unfamiliar host countries, and exaggerate the risk of investing abroad (Kho et al. (2009)).

Fourth, prior work refers to information asymmetry in a general sense (Coval and Moskowitz (1999)), and information advantages in domestic securities in particular (Ahearne et al. (2004), Van Nieuwerburgh and Veldkamp (2010), Bell et al. (2012)), to explain the preference for domestic equity. The latter strand of literature is based on the notion that investors in different countries are

endowed with different information sets on the stocks they can include in their portfolios as well as on the abilities of professional portfolio managers to which investors can delegate investment decisions (Gehrig (1993), Kang and Stulz (1997), Dziuda and Mondria (2012)). Investors are better informed about the payoff distributions in their home markets vis-à-vis foreign markets, which in turn induces them to overweight domestic equity, while discouraging them from investing abroad (Ahearne et al. (2004), Chan et al. (2005), Van Nieuwerburgh and Veldkamp (2010)).

Because the removal of information shortfalls is associated with costs, Kang and Stulz (1997) show that investors' cross-border engagements are biased toward larger firms. Apart from firm size, at a country-level, accounting and corporate governance rules play a critical role in providing high-quality information to foreign investors (Pagano et al. (2001), Ahearne et al. (2004), Hamberg et al. (2013)). Other related factors are a country's economic development (Chan et al. (2005), Ardalan (2019)), linguistic, and cultural differences (Grinblatt and Keloharju (2001), Beugelsdijk and Frijns (2010), Karolyi et al. (2018)).

A challenge to the information asymmetry argument and its validity to explain investment biases is that investors, and especially professional portfolio managers, should have the possibility to learn about foreign assets, recognizing that it is nowadays similarly costly to analyze domestic and foreign markets in economies that are tightly interconnected (Dziuda and Mondria (2012)). If these learning options were exploited, information asymmetries would not sustain over time. However, as Van Nieuwerburgh and Veldkamp (2009) argue, information immobility and the ensuing investment biases persist because investors have a given learning budget and deliberately choose to specialize in assets in which they possess an information advantage from the outset. Based on their initial information endowment about specific assets and a limited learning budget, investors decide to learn more and hold more of those assets, rather than gathering information on assets about which they have little knowledge. This behavior is incentivized by investors' more precise assessment of the skills of funds that specialize in assets about which they know more (domestic assets), making investments in these assets and funds more attractive (Dziuda and Mondria (2012)). As a result, initial differences in information endowments across investors can increase rather than decrease over time, leading to large, long-lasting cross-country differences in portfolio allocations. Empirical studies confirm that differences in the initial endowment of information about different countries translate into differences in portfolio holdings (Andrade and Chhaochharia (2010), Karolyi et al. (2020)).

2.2 Social Trust as a Determinant of Economic Outcomes

Guiso et al. (2006) define social capital as persistent and shared beliefs and values that help a group overcome the free-rider problem in the pursuit of socially valuable activities. Beliefs about an opponent's behavior are a critical determinant of the willingness to cooperate with others. If people believe others are unfair, they may also be reluctant to grant coordination and decision power for fear of abuse. As Guiso et al. (2011) note, mistrust can discourage people's willingness to invest and hamper economic success. Therefore, social trust has attracted most of the attention of economists interested in studying the economic effects of civic capital. This strand of literature is based on Arrow's (1972, p. 357) notion that "*virtually every commercial transaction has within itself an element of trust*". Guiso et al. (2008a, p. 296) define social trust as "*the set of beliefs and values that foster cooperation*".

A growing empirical literature identifies social trust as a determinant of economic outcomes and corporate decisions in a variety of contexts.[3] Social trust promotes trade and economic growth (Knack and Keefer (1997), Whiteley (2000), Zak and Knack (2001), Guiso et al. (2009)) and encourages financial development and investor participation in the stock market (Guiso et al. (2004, 2008b)). It facilitates venture capital investing (Bottazzi et al. (2016)), debt financing and public debt contracting (Duarte et al. (2012), Hasan et al. (2017), Hagendorff et al. (2019), Brockman et al. (2020)), public equity financing (Gupta et al. (2018)), cross-border mergers and acquisitions (Ahern et al. (2015)), firm performance (Krishnan et al. (2006), Lins et al. (2017)), and is associated with more positive stock recommendations (Pursiainen (2022)). Trust also influences the size and organizational structure of firms (Bloom et al. (2012)), firms' accounting reporting quality (Garrett et al. (2014)), investors' reaction to corporate earnings announcements (Pevzner et al. (2015)), and government regulation (Aghion et al. (2010)). Overall, these studies suggest that social trust is crucial to establishing credibility in contracting relationships.

Guiso et al. (2011) document a strong correlation between social trust and economic development for countries with very high per capita GDP, and almost no correlation at low GDP levels. One explanation could be that trust is particularly useful in more sophisticated transactions. As these authors put it, "[...] *one can effectively run a sugar plantation without much trust, while it is difficult to engage in financial transactions without it*" (p. 455). This argument is also consistent with Guiso et al.'s (2009) hypothesis that social trust between countries is more important in

[3] See Guiso et al. (2006, 2011) for literature reviews on the effect of social capital and trust on economic outcomes.

the international trading of more differentiated goods. Therefore, analyzing the relation between social trust and foreign bias in institutional investor portfolios provides a fruitful research setting. This is even more relevant because the time horizon of equity investments is finite, and thus it is more difficult for geographically distant investors to punish managers abroad for misbehavior.

2.3 Hypothesis Development

Social trust lowers the costs of trust-sensitive transactions, i.e., economic interactions in which parties rely on the future actions of others (Knack and Keefer (1997), Whiteley (2000)). This idea supports our premise that trust will affect investment decisions, given that they are characterized by the exchange of money for future promises and require a belief in repayment (Sapienza and Zingales (2012)). Guiso et al. (2008b) develop a model of stock market participation in which they measure social trust as "*the percentage probability of being cheated*" (p. 2557). They conclude that the lack of trust creates an investment barrier, which can be overcome with more knowledge of a market. With better information, investors are less reliant on trust when interacting in markets about which they felt poorly informed initially.

Assuming that investors possess better knowledge about domestic and certain foreign securities (Gehrig (1993), Kang and Stulz (1997)), and that they decide to specialize in assets about which they possess an information advantage in the first place (Van Nieuwerburgh and Veldkamp (2009)), Guiso et al.'s (2008b) argument should have implications for international portfolio choices. On the one hand, investors from low-social trust countries are expected to invest predominantly in stocks where the lack of trust is counteracted by sufficient information, which is more likely to be the case in their home markets or in "close" foreign markets, be it geographically and/or culturally among other possible dimensions (e.g., a German investor should have good knowledge of Austrian securities for historical and geographical reasons, while a British investor is expected to be more familiar with the Australian stock market due to cultural and historical links). On the other hand, when investors are poorly informed about some segments of global stock markets, as is likely the case for "more distant" foreign stock markets (e.g., most south-east Asian emerging economies are likely less well-known for European investors based in Mediterranean countries like Italy or Spain), higher levels of trust are necessary to compensate for information shortfalls.

Information asymmetries should not only be an obstacle in the choice between home and foreign markets, but also when considering different foreign stock markets and assessing their relative

risks. The information and learning advantages of investors shape their information endowment about individual markets and translate into great differences in how much each investor knows about different foreign markets that are potential targets (Gehrig (1993), Brennan and Cao (1997), Kang and Stulz (1997), Van Nieuwerburgh and Veldkamp (2010)). We emphasize that social trust not only helps to understand differences in home bias, but it is equally useful to explain observable variations in foreign bias, i.e., the systematic over- and underweightings across countries. In the model proposed by Van Nieuwerburgh and Veldkamp (2009), investors face a choice in deciding about which assets to acquire information when there are multiple risky assets in the investor's opportunity set. Facing information processing constraints, the model predicts that investors with an initial information endowment and a limited learning budget exert more effort in acquiring additional information about domestic assets, where they most likely benefit from a comparative advantage in learning. As a result, they have a tendency to invest at home. In the same spirit, investors prefer to invest in foreign markets where they possess an initial information endowment, e.g., as proxied by foreign direct investments or trade flows between the two countries (Andrade and Chhaochharia (2010), Karolyi et al. (2020)), and avoid other, less familiar foreign markets.

In our framework, this rationale implies that investors from countries with low social trust favor foreign assets with which they are more familiar, increasing foreign bias due to overweighting of specific foreign assets. In contrast, independent of their initial information endowment, investors from countries with high social trust should be more willing to invest in any kind of foreign asset, leading to portfolio weightings closer to the theoretical optimum. As a result, social trust is likely to play a central role in the more subtle selection of different foreign assets (foreign bias), beyond its influence on the more immediate (dichotomous) choice between domestic and foreign assets (home bias). In other words, low-trust institutions may concentrate their foreign investments in host countries about which they have accumulated relatively more information in the past, while high-trust institutions might be more willing to invest in any foreign country because their higher level of trust renders information deficiencies less important.

Pevzner et al. (2015) argue that the effect of trust on investors' reaction to information disclosure of firms could work indirectly through its influence on managerial behavior, i.e., by reducing managers' incentives to engage in shareholder expropriation. However, such an indirect effect is unlikely in our context because we analyze cross-border equity investments, involving countries

(and investors) with differing levels of social trust. The level of social trust in an investor's home country has little or no effect on the agency incentives of managers in a target firm abroad, which in turn depend on the level of social trust in this particular host country. Our argument is not that social trust relates to managerial behavior, but that investors from more trusting countries will be less concerned about the potential for moral hazard and more likely to believe that target firm managers are trustworthy. Moreover, provided there is an effect of social trust on foreign bias, it cannot be attributed to selective behavior by managers of the country receiving the investment. As Guiso et al. (2009) point out with an example, managers of French firms cannot hurt British investors who have invested in a minority position independently of German or Italian ones.

To summarize, if investors are informationally disadvantaged in a particular foreign market, social trust helps reduce investment barriers and increase investment in this country's foreign equity. Social trust has a direct effect on investors' portfolio choices, independent of its relation with managerial behavior, thereby mitigating foreign bias. This leads to our first hypothesis:

Hypothesis 1: *The higher the level of social trust in an investor's country of domicile, the lower is the investor's foreign bias.*

A possible explanation for the link between trust and foreign bias is that asymmetric information between domestic and foreign investors is a crucial determinant of international asset allocation. Based on the information advantage theory, investors rationally overweight stocks about which they are well informed (Van Nieuwerburgh and Veldkamp (2010)). Since investors are usually better informed about the payoff distributions in their home markets (Gehrig (1993), Kang and Stulz (1997)), these relative information advantages induce them to overweight domestic equity, while simultaneously discouraging them from investing abroad. A similar rationale is valid for the selection of particular foreign securities, in the sense that investors favor those foreign assets about which they can gather more information at lower cost. Coval and Moskowitz (1999) observe that mutual fund managers prefer to invest in locally-headquartered firms for which they presumably possess information advantages. Moreover, because the removal of information shortfalls is costly (such as opportunity costs due to familiarization or travel expenses), Kang and Stulz (1997) and Bell et al. (2012) find foreign investors' cross-border engagements to be biased toward large firms for which information is more widespread and globally distributed. Chan et al. (2005) proxy

information costs by the distance between two countries and observe that geographically close markets attract more foreign investments, leading to lower foreign bias.

Wei and Zhang (2020) document that institutional investors located in low-trust states of the U.S. exhibit stronger local bias. The relation is more pronounced for investors who are better able to exploit domestic knowledge, e.g., through personal ties with local executives. Wei and Zhang (2020) conclude that non-trusting investors require better knowledge and/or information advantages in their investment decisions. By the same token, we expect that high-trust investors will demand less information to make their investment decisions. Even if they have little information about certain foreign markets (e.g., more geographically and culturally distant ones), high-trust investors will be less reluctant to consider them when designing their portfolios.

Building on these arguments and findings, we focus on information asymmetry as a factor that shapes the relationship between social trust and foreign bias in institutional investor portfolios. Based on Guiso et al.'s (2008b) reasoning that more knowledge overcomes the barrier created by lack of trust, we hypothesize that the effect of social trust on foreign bias is strongest when the information asymmetry in a particular foreign equity market is high and the knowledge gap between domestic and host market is most pronounced. Therefore, our second hypothesis is:

Hypothesis 2: *The trust-related reduction in foreign bias is stronger when the information asymmetry in foreign equity markets is high.*

Economic theory suggests that the negative association between social trust and foreign bias also varies with formal-institutional characteristics, and the trust literature discusses offsetting effects between the informal institution of social trust and formal-institutional frameworks in different contexts (Guiso et al. (2004), Carlin et al. (2009), Aghion et al. (2010), Pevzner et al. (2015)).[4] Social trust is of particular importance where formal institutions are less effective. For example, Yu et al. (2015) analyze bilateral trade patterns among European countries, and find that the positive effect of trust on trade is dependent on the quality of the rule of law, i.e., trust and rule of law substitute each other. Abdelsalam et al. (2020) analyze the impact of shareholders trust on firm market risk. The negative relation between trust and risk is more pronounced for

[4] Carlin et al. (2009) and Aghion et al. (2010) analyze how trust and local institutions evolve in equilibrium in a society and focus on the feedback effects between the two concepts. One interpretation of these findings is that trust cannot be directly compared across countries without accounting for the development of legal rules and institutions that have evolved together with trust over time.

firms in countries without well-functioning institutions. Brockman et al. (2020) document that the inverse relationship between Yankee bond debt covenants and social trust is more pronounced for firms in countries with weak formal institutional frameworks, as well as for those with poor corporate governance and greater information opacity.

We hypothesize that a better institutional environment in a particular host country makes it easier to assess the objective risks of being cheated in that country, which diminishes even trusting investors' reliance on their faith that the country's system is fair. Therefore, the beneficial effect of social trust in terms of lower foreign bias is not equally applicable to all host countries. The informal institution of social trust should play a more important beneficial role, by way of a foreign bias reduction, in the case of host countries characterized by the poor quality of their institutions. Our testable hypothesis suggests a substitution effect between social trust in the home country and the formal-institutional framework in the host country:

Hypothesis 3: *The trust-related reduction in foreign bias is stronger when the formal institutions in the host country are weak.*

Finally, we are compelled to examine whether the expected negative impact of social trust on foreign bias has economic implications. As elaborated in Cooper et al. (2013), lower home bias improves risk sharing and economic welfare. Our line of reasoning implies that investors from low-social trust countries avoid foreign stocks about which they have insufficient knowledge. Their reluctance to hold this type of stocks prevents them from benefitting from international risk diversification. An ensuing implication is that higher social trust leads to more geographically diversified portfolios. Wei and Zhang (2020) provide support for the role of trust in portfolio diversification. They measure diversification using idiosyncratic portfolio volatility and a Herfindahl concentration measure, and show that high-trust U.S. investors are better diversified across *individual* stocks. However, Wei and Zhang's (2020) results do not allow for more general conclusions about cross-country diversification, in which information asymmetries are even more pronounced. While investors might be willing to diversify through home-country stocks, they could at the same time be hesitant to invest their capital outside their country of origin. Therefore, an international sample is necessary to explore this type of issue. In our cross-country framework, we expect social trust to help accomplish greater international diversification in institutional investors' portfolios. Accordingly, our final hypothesis is:

Hypothesis 4: *The higher an investor's level of social trust, the greater is the investor's international portfolio diversification.*

3 Sample and Descriptive Statistics

3.1 Foreign Bias

We obtain data on international institutional equity holdings from the FactSet database. For the sake of consistency in the cross-section of investors, we aggregate holdings data at the institution-year level because both the reporting frequency (monthly to annually) and granularity (institution-level vs. fund-level) vary across countries. In aggregating the data from fund-level to the institution-level, we follow Ferreira and Matos (2008) and Ke et al. (2010), and use the last holdings observation of a fund in a given year. We only consider holdings in common and preferred stock.[5] Security prices and firm-level information come from Compustat. Local currencies are converted into 2010 constant U.S. dollars.

We note that there are different specifications of foreign bias measures commonly used in the literature. Following Bekaert and Wang (2009) and Choi et al. (2017), we define our investor-level measure of institutional foreign bias as the difference between a country-specific optimal benchmark and the actual portfolio weight allocated to a certain target country.[6] In determining the theoretically optimal benchmark weights, we assume that a world CAPM holds, in which investors weight a host country as per that country's share of world stock market capitalization.[7] Based on earlier work by Chan et al. (2005, 2009), Bekaert and Wang (2009), Beugelsdijk and

[5]This restriction is applied for several reasons: 1) These two issue types account for more than 94% of equity holdings' total value in the database, 2) some issue types by nature cannot be assigned to a single country (e.g., international exchange-traded funds), and 3) some issue types may involve misleading assumptions about their *true* domicile, e.g., when an investment bank with U.S. headquarters issues certificates with Volkswagen as the underlying stock, or in the case of American Depositary Receipts (ADRs). ADRs are traded on a stock exchange on behalf of the share. These certificates are issued by American banks that have taken the underlying stock into custody. In our setup, Volkswagen ADRs would be classified as a U.S. investment. Economically more meaningful, however, is to classify them as a German investment because Volkswagen is headquartered in Germany. To ensure this decision does not affect our results, we perform robustness checks. Our results remain unchanged when we re-estimate the baseline model using either all stock types or common stock only.

[6]Our baseline results remain qualitatively unchanged when we apply alternative bias measures, e.g., the Chan et al. (2005, 2009) measure, where foreign bias is defined as the logarithm of the ratio of the actual portfolio weight to the benchmark weight.

[7]Levy and Levy (2014) document an increase in the average correlations between international markets from 0.4 in the 1990s to 0.9 in 2010. Since the benefits of international diversification have declined dramatically, it is not obvious that market values still reflect the optimal level of foreign diversification. One could repeat all our analyses using alternative benchmarks, such as the optimal country-level weights postulated by the classical Markowitz (1952) mean-variance portfolio model instead of the world CAPM. See Mishra (2015) for an overview of alternative benchmarks.

Frijns (2010), and Choi et al. (2017), we calculate the weights for each investor-country-year combination as:

$$w^*_{j,t} = \frac{MV^*_{j,t}}{\sum_j MV^*_{j,t}} \tag{1}$$

$$w_{k,i,j,t} = \frac{MV_{k,i,j,t}}{\sum_j MV_{k,i,j,t}}, \tag{2}$$

where $MV^*_{j,t}$ is the equity market capitalization of target country j at time t; $\sum_j MV^*_{j,t}$ is the world equity market portfolio at time t; $MV_{k,i,j,t}$ is the market value of equity holdings in target country j for investor k from home country i at time t; and $\sum_j MV_{k,i,j,t}$ is the market value of total equity holdings for investor k from country i at time t. The foreign bias measure ($FBIAS_{k,i,j,t}$) for investor k from domicile i toward host country j at the end of year t is calculated as:

$$FBIAS_{k,i,j,t} = w^*_{j,t} - w_{k,i,j,t} \quad \text{for} \quad i \neq j, \tag{3}$$

where the investor's home country is defined, following Coval and Moskowitz (1999) and Schumacher (2018), as the location of the institution's corporate headquarters instead of its country of incorporation.[8] The foreign bias measure is defined inversely, i.e., a positive value of our foreign bias measure indicates an underweighting of foreign equities in the institutional investor's portfolio. We scale FBIAS by 100 for exposition. To calculate country-level market capitalization benchmark weights, we rely on the entire Compustat stock universe, and aggregate the market value of all available shares (defined as the product of the closing price and the number of shares outstanding) for each country as of the end of December.[9] Consistent with our approach to determining home countries at an investor level, we use companies' historical headquarters locations to define their domestic equity markets (He et al. (2019)). Since we only consider common and preferred stock when calculating actual portfolio weights, we also restrict our sample to these types of securities when calculating the benchmark weights.[10]

[8]This approach avoids overweighting offshore locations (e.g., the Cayman Islands), since the country of incorporation is often chosen only due to preferential tax treatments or legislative environments and not due to operational reasons (Coval and Moskowitz (1999), Schumacher (2018)). Moreover, it seems economically meaningful given that the location of the headquarters identifies the location where portfolio decisions are taken (Schumacher (2018)).

[9]Compustat claims to cover 90% of the world's total market capitalization, including 95% of the European and Taiwanese market capitalization and 90% of Asian market capitalization.

[10]We choose this approach for several reasons: 1) These two issue types account for more than 92% of the total sample market capitalization, 2) it avoids double counting such as in the case of ADRs, 3) some issue types cannot be assigned to a country by their nature, and 4) some issue types involve misleading assumptions regarding their *true* domiciles.

To address concerns that the global equity market capitalizations calculated using Compustat could be affected by survivorship bias (Kothari et al. (1995)), we compare our values for the country-level and global equity market capitalizations with the publicly available World Development Indicators provided by the World Bank. These latter values are used in prior studies to proxy for global equity market capitalizations (Lau et al. (2010)). The comparison reveals small deviations in only a few cases.[11] Therefore, we believe that our results do not depend on the source of the equity market capitalization data.

3.2 Social Trust

The core variable of our analysis is generalized (social) trust. We obtain data on social trust at the country level from the Integrated Values Surveys (IVS) 1981-2014 database, which includes data from the World Values Survey (WVS) and the European Values Study (EVS).[12] To increase coverage, we complement these data with the seventh (2020) WVS wave and the fifth (2017) EVS wave. Both the WVS and the EVS have been extensively used in the literature (Alesina and Giuliano (2011), Bloom et al. (2012), Pevzner et al. (2015), Wei and Zhang (2020)). For each sample country i, we calculate the trust measure (Social $\text{Trust}_{i,t}$) at year-end t as the percentage of survey participants answering "*Most people can be trusted*" 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?*" We follow Wei and Zhang (2020) and use linear interpolation to estimate missing values between data points.

Inglehart et al. (2000) note that some demographic groups tend to be overrepresented (e.g., city dwellers) or underrepresented (e.g., the illiterate population) in the survey samples. Therefore, we apply weights to correct for deviations from national population parameters when constructing our measure of country-level trust.[13] Since both the WVS and the EVS include the original weights reported by the participant countries in their datasets, we do not count each respondent record as

[11] These deviations likely occur because the World Bank does not exclusively consider ordinary and preferred shares, nor does it use headquarters locations for country classifications.

[12] The IVS database was constructed by the World Values Survey Association and covers all six waves (1981-2014) of the World Values Survey Official Aggregate and the first four waves (1981-2008) of the European Values Study Longitudinal Data File. WVS and EVS are large-scale, cross-national panel survey research programs that cover a broad range of human values. Data were collected in face-to-face interviews and are based on representative samples of the resident adult population of each country. Guiso et al. (2011) conclude that such a survey-based measure is the most promising trust indicator.

[13] To ensure that weighting survey responses does not affect our results, we also show the results of re-running the baseline model, where we use a measure of unweighted residual trust.

one case, but treat it as one times its corresponding weighting factor cases instead.[14] Weighted samples aim to ensure representative coverage of religions, gender, and cultural groups. However, according to Inglehart et al. (2000), higher-status groups may still lack representativeness. Since both the WVS and the EVS draw from different survey samples, we avoid combining observations when constructing the country-level trust time series. Instead, we adhere to the data source that provides the largest number of annual observations per country, allowing us to maximize data coverage for social trust within our sample period.

Our identification strategy is based on the implicit premise that local investors exhibit the same trust attitudes as those of the residents in their country. It implies that an individual's level of trust is independent of the other party in the exchange. Related studies (Guiso et al. (2009), Bottazzi et al. (2016), Pursiainen (2022)) use a bilateral measure of trust between fifteen European countries based on the Eurobarometer survey.[15] Bilateral trust measures are not available for our substantially larger sample. However, Guiso et al. (2011) show a correlation between trusting and being trusted. For example, Scandinavian countries are at the top of the level of trustworthiness and also trust others most. This observation indicates that people tend to apply the level of trustworthiness of their own compatriots to people from other countries.[16] We implement several robustness tests to challenge this implicit premise (see Section 4.2 and Section 5.1).

3.3 Information Asymmetry

To examine whether the effect of social trust on foreign bias is moderated by the degree of information asymmetry prevalent in foreign target markets, we proxy for information asymmetry along four dimensions. In a first step, based on Choi and Skiba (2015), we obtain country-specific information asymmetry variables of the following categories: 1) macroeconomic factors related to the information environment, 2) investor access to information, 3) investor independence, and 4) information transparency. Note that we multiply a number of measures by negative one to ensure that all proxies are positively associated with the degree of information asymmetry in host

[14] Suppose 10% of a country's population is illiterate (target sample), but only 5% of the survey respondents are found to be illiterate (actual sample). To adjust for the misrepresentation of the illiterate population in the actual sample, a weighting factor of 2 (= 0.1/0.05) is provided. To obtain country-level representative trust measures of the target sample, we do not count each illiterate survey respondent as only one case, but as two.

[15] In this survey, respondents are asked to report how much they trust their fellow citizens and how much they trust the citizens of each of the countries in the European Union.

[16] Experimental evidence in Glaeser et al. (2002) also supports this idea.

countries. In a second step, we construct a composite index for each dimension of information asymmetry using Principal Component Analysis (PCA).

Prior evidence suggests that, in times of market turmoil (e.g., during a financial crisis), investors tend to base their investment decisions to a larger extent on available information. Financial shocks cast doubt on the probability distribution of asset returns and cause risk averse investors to focus on those assets they are more familiar with. In uncertain times, information becomes relatively more important (Caballero and Krishnamurthy (2008), Krishnamurty (2010), Uhlig (2010), Ahrend and Schwellnus (2013)), and the local advantage is most pronounced (Ferreira et al. (2017)). As a proxy for macroeconomic factors related to information asymmetry, we use a continuous variable from Laeven and Valencia's (2020) database that captures the relative output loss associated with crisis episodes prevalent in the target country (Crisis Output $\text{Loss}_{j,t}$). This measure captures opaque information environments, in which the knowledge gap between domestic and foreign stock markets should be most pronounced. As in Choi and Skiba (2015), we add the Gross Domestic Product per Capita in USD (GDP per $\text{Capita}_{j,t}$) and obtain data on average annual inflation measured by the consumer price index ($\text{Inflation}_{j,t}$) from the World Bank. We use these three variables to get one composite index that represents information asymmetry due to macroeconomic factors ($\text{Macroeconomy}_{j,t}$) by applying the PCA technique.

Next, we measure the degree of information asymmetry along the dimension of investors' access to information. Following Choi and Skiba (2015), we obtain data on the number of internet users as a percentage of the overall population ($\text{Internet Availability}_{j,t}$), the number of daily newspapers per 100 people ($\text{Newspapers}_{j,t}$), and data on mobile cellular subscriptions per 100 people (Cellular $\text{Subscriptions}_{j,t}$) from the World Bank. We augment this set of proxy variables with data on countries' overall access to media ($\text{Access to Media}_{j}$) from Bushman and Piotroski (2004). Again using PCA technique, we construct a single measure that represents information asymmetry in terms of investors' access to information ($\text{Access to Information}_{j,t}$).

To capture information asymmetry related to investor independence, we follow Choi and Skiba (2015) and incorporate a proxy for restrictions on foreign capital transactions (Investment $\text{Freedom}_{j,t}$), an index on the quality of governance in the banking and financing environment (Financial $\text{Freedom}_{j,t}$), and an index on the host countries' overall economic freedom (Economic $\text{Freedom}_{j,t}$). We draw all these variables from the Heritage Foundation and obtain one combined measure through PCA ($\text{Investor Independence}_{j,t}$).

Finally, we proxy for information asymmetry by several accounting transparency measures. As in Choi and Skiba (2015), we consider Disclosure Intensity$_j$, Financial Disclosures$_j$, Governance Disclosures$_j$, Timeliness of Disclosures$_j$, Credibility of Disclosures$_j$, Analyst Coverage$_j$, Insider Trading$_j$, and Institutional Investors$_j$ (all from Bushman and Piotroski (2004)). We aggregate all proxies into one single measure by using PCA (Corporate Transparency$_j$).

3.4 Control Variables

We collect a comprehensive set of control variables. An overview of all variables, together with detailed construction principles and data sources, is given in Table A1 in the Appendix. Recognizing that the quality of institutional, political, and cultural frameworks has been shown to affect international investment choice (Chan et al. (2005), Beugelsdijk and Frijns (2010)), we incorporate investor country control variables into our dataset. Institutional variables come from La Porta et al. (1998) and Djankov et al. (2001, 2003), and comprise a country's law and order tradition (Law and Order$_i$), the integrity of its legal system (Judicial Integrity$_i$), the transparency of its accounting standards (Accounting Standards$_i$), the risk of forced nationalization or outright confiscation (Expropriation Risk$_i$), the efficiency of its judicial system (Judicial Efficiency$_i$), and a dummy variable indicating the presence of a civil law system (Legal System Dummy$_i$).

Political variables come from Caldara and Iacoviello (2019), and include a newspaper-based measure of global geopolitical risk (Geopolitical Risk$_{i,t}$), as well as a measure of a country's perceived level of public sector corruption (Corruption$_{i,t}$). Finally, variables on a country's cultural environment comprise Hofstede's (2001) cultural dimensions (Power Distance$_i$, Individualism$_i$, Masculinity$_i$, Uncertainty Avoidance$_i$, Long-term Orientation$_i$, and Indulgence$_i$). We use all these control variables for institutional, political, and cultural characteristics of an investor's country of domicile i to isolate social trust from its related dimensions as part of a two-stage regression approach (see Section 4.1).

The level of familiarity between investor country and host country also affects the foreign bias (Chan et al. (2005), Bekaert and Wang (2009), Beugelsdijk and Frijns (2010)). We incorporate a set of bilateral country-level familiarity variables from the Center for Research and Expertise on the World Economy into our model. They comprise the distance between the capitals of two countries in kilometers (Geographic Distance$_{i,j}$), and dummy variables indicating whether two countries share a common official language (Common Language Dummy$_{i,j}$), are contiguous

(Contiguity Dummy$_{i,j}$), ever had a colonial link (Colony Dummy$_{i,j}$), and are now or were for a long period of time the same state or the same administrative entity (Same Country Dummy$_{i,j}$).

Following Wei and Zhang (2020), we further include a set of time-varying investor characteristics from our holdings data. We use the natural logarithm of the dollar amount of investor portfolio holdings to proxy for investor size (Investor Size$_{k,i,t}$), the number of years since the investment entity was founded to proxy for investor expertise (Investor Age$_{k,i,t}$), and the number of stocks held in the investor portfolio to proxy for the degree of diversification (Number of Stocks$_{k,i,t}$).

Some host countries may be more attractive to investors than others. Therefore, we also take the relative attractiveness of a target country into account, and include a measure of the relative size of the stock market (Stock Market Development$_{j,t}$) in our baseline regression model. This measure is based on Compustat and World Bank data (Chan et al. (2005), Bekaert and Wang (2009)). Following Chan et al. (2005) and Beugelsdijk and Frijns (2010), we include a proxy for restrictions on foreign capital transactions (Investment Freedom$_{j,t}$). As in Wei and Zhang (2020), we use the GDP per capita (GDP per Capita$_{j,t}$) to proxy for economic development. Based on Mishra (2008) and Bekaert and Wang (2009), we include internet availability (Internet Availability$_{j,t}$) to proxy for access to information and information costs.

As in Beugelsdijk and Frijns (2010), we also control for the host country's equity market risk and return characteristics. We use the one-year lagged return of the host country's annual average stock market index (Stock Market Return$_{j,t}$) and the five-year rolling variance of the host country's annual average stock market returns (Stock Market Risk$_{j,t}$). To account for diversification benefits between the investor country and the target country, we include the five-year rolling average of a country pair's correlations of annual average stock market returns (Diversification Potential$_{i,j,t}$). These three controls are computed based on Bloomberg data.

3.5 Descriptive Statistics

3.5.1 Investor-level Portfolio Statistics

To offer a first overview of our sample, and to better understand the investment preferences of institutional investors, Table I provides investor-level portfolio statistics. It presents average investor-level equity allocations (in percentage points) for the top fifteen investor domiciles and their investments in the top twenty target countries. The row "Other" shows the weighted averages

for the remaining countries not listed in the table. We also report the average share of the target countries in the world portfolio, i.e., the market capitalization benchmark weights $w^*_{j,t}$ (as defined by Equation (1)) over our sample period. Our final panel covers 8,088 institutional investors from 33 different countries, and it comprises 69,755 investor-year observations for which our main measure of social trust is available. U.S. institutional investors account for the largest share, at 66.52% (5,380). Investors from our sample allocate equity to 84 different host countries, which allows us to analyze a three-dimensional panel dataset consisting of more than five million investor-target-year observations. Non-shaded fields indicate foreign investments ($i \neq j$), while shaded fields indicate domestic investments ($i = j$), which by definition are not captured by the foreign bias measure (see Equation (3)). To better understand the cross-sectional distribution of foreign equity allocations, we report both the average foreign biases across all countries in the portfolios of investors k from varying home countries i (home-country perspective), and the average foreign biases across all investors k in our sample with respect to various host countries j (host-country perspective). A positive value of $\text{ØFBIAS}_{k,i,t}$ indicates that investors from domicile i, on average, underweight equities across all foreign countries, while a positive value of $\text{ØFBIAS}_{k,j,t}$ implies that target country j is underweighted in the average global investor portfolio.[17]

We observe a strong preference for domestic investments across all investor domiciles. For example, U.S.-based investors allocate an average of 94.09% to their domestic equity market (see shaded cell in column "USA"). The relative share of the country in the world portfolio, $w^*_{USA,t}$, averages only 37.40%. This preference for domestic investments implies that U.S.-domiciled investors, on average, underweight foreign equity markets, leading to an average investor-level foreign bias across all host countries of 0.77 over our sample period (see the value of $\text{ØFBIAS}_{k,i,t}$ in column "USA"). The average investor in each of our sample countries, with the exception of investors from Luxembourg (not shown in Table I), exhibits significant levels of foreign bias. This is not implausible, given that Luxembourg's specific legislative environment is likely to attract the headquarters of international institutional investors, who in turn invest more internationally.

[INSERT TABLE I ABOUT HERE]

Taking the host-country perspective, and focusing on our measure of foreign bias as specified in Equation (3), we find that investors are generally underweighted in foreign markets. Institutions

[17] We focus only on the host-country perspective of investor-level foreign bias. The foreign bias from the home-country perspective serves only for better understanding of the cross-sectional distribution of foreign investments.

are underweighted in the U.S. as the target country throughout all domiciles (see non-shaded cells in the first row). However, we also observe some exceptions, e.g., Hong Kong-domiciled investors allocate 34.02% of their equity holdings to China (not shown in Table I), and investors from Spain allocate 11.44% to the French market, providing preliminary evidence for information advantages in geographically and/or culturally "close" foreign markets as hypothesized in Section 2.[18] We recognize that each country in our sample, with the exception of Ireland (not shown in Table I), is underweighted in the average portfolio of foreign investors (see values of $\text{ØFBIAS}_{k,j,t}$). This is attributable to the fact that investors have incentives to invest in Ireland due to its favorable tax treatment.

3.5.2 Trust Across Sample Countries

Our main variable of interest is social trust. Trust shows considerable variation in the cross-section of countries. To provide an overview of the distribution of the trust variable in our sample, we present country-level boxplot diagrams of social trust across investor domiciles in Figure I. The vertical red line in a box denotes the median value, and the box's left and right edges denotes the 25th and 75th percentiles, respectively. Whiskers indicate variability outside the upper and lower quartiles.

[INSERT FIGURE I ABOUT HERE]

Trust values in our sample range from 3.17% for the Philippines to 77.42% for Denmark. We exploit the heterogeneity of trust across countries with different cultural and political frameworks. We analyze not only the impact of trust as an independent determinant of investment behavior, but also the interplay between social trust and other country-level factors that affect institutional investors' biases.

3.5.3 Summary Statistics

Table II shows summary statistics of the variables used in our empirical analysis. Panel A reports summary statistics of investor characteristics, which refer to investor k from domicile i at time t, or, in the case of FBIAS, to investor k from domicile i toward target country j at time t. Panel B shows summary statistics of investor-country characteristics, which refer either to investor country i or investor country i at time t. Panel C reports summary statistics of target-country

[18] The relative shares of China and France in the world portfolio are 6.94% and 3.88%, on average, over our sample period, respectively.

characteristics, which refer either to host country j or host country j at time t. Finally, Panel D reports summary statistics of country-pairs, which refer either to both investor country i and target country j or to both investor country i and target country j at time t. Because the data exhibit no special features, we do not discuss them further for the sake of brevity. A detailed overview of data sources and construction principles is provided in Table A1 in the Appendix.

[INSERT TABLE II ABOUT HERE]

4 Empirical Results

Our main hypothesis is that social trust is negatively related to institutional investors' foreign bias. To establish a causal inference on the effect of trust on foreign bias in an ideal experiment, we would randomly assign values of trust to investors in our sample, and observe whether there are differences in foreign bias among investors from low vis-à-vis high-trust countries. Implementing such an experiment with random treatment and control groups is impossible, and is a frequent limitation in international finance research (Reeb et al. (2012)). In our regression analyses, we attempt to isolate the relation between trust and foreign bias from unobserved confounders, allowing us to make inferences about the treatment effect of social trust.

4.1 Interaction of Trust, Culture, and Formal Institutions

One concern is that the relation between social trust and foreign bias could be affected by endogeneity. Trust enhances foreign investment, but foreign investments may also breed (bilateral) trust. However, simultaneity is unlikely to affect our findings because generalized (social) trust is considered effectively exogenous. Williamson (2000) argues that a country's "*level-1 institutions of embeddedness*" such as informal institutions, customs, traditions, norms, and religion are deeply rooted, change very slowly over centuries or millennia, and are therefore not subject to social engineering. In our framework, however, violations of the exogeneity condition are conceivable for two reasons: measurement error and omitted variable bias.

We take several steps to achieve valid inferences about a causal effect of social trust on foreign bias. Because endogeneity resulting from measurement error is a common concern in culture-related research (Zingales (2014), Karolyi (2015)), we implement robustness tests with regards to measurement of social trust in Section 5.1. It is also possible that omitted variables correlated

with foreign bias and social trust lead to a spurious relationship between the two. Social trust is associated with the prevailing cultural, political, and institutional frameworks in the investor's country of domicile. As elaborated in Williamson (2000), "*level-2 institutions*", such as an efficient judicial system, likely evolve as a consequence of a country's level of social trust. Similarly, Aghion et al.'s (2010) model of feedback effects between trust and regulation suggests that trust cannot be directly compared in a cross-section of countries without accounting for the prevailing institutional framework. To address this possibility, and to observe the interplay between social trust, culture, and formal institutions, Table III shows country-level pairwise correlation coefficients.

As column (1) of Table III shows, our measure of social trust is significantly associated with a country's cultural, political, and institutional frameworks. We must note that variables representing formal institutions are constructed such that a low score represents a more favorable outcome for an investor (and vice versa).[19] For example, we observe significant negative correlations between social trust and formal institutions like the efficiency and integrity of a country's legal environment or the risk of expropriation. Social trust rooted in a country's society is likely to promote the development of effective law enforcement and stable ownership structures.

[INSERT TABLE III ABOUT HERE]

We find statistically significant negative correlations between social trust and Hofstede's (2001) cultural dimensions of masculinity and individualism. Societies characterized by low values of trust are likely to promote masculine values such as competitiveness and a focus on material success. In contrast, female values that foster interpersonal relationships are the result of high levels of social trust embedded in societies. Similarly, while high-trust countries are likely to develop collectivist societies that emphasize community goals, individualistic members of low-trust societies pursue personal goals, which in turn leads to the observed negative correlation coefficients.

To address endogeneity resulting from omitted variables, and to isolate social trust from related dimensions, we use the following procedure. First, we regress trust as a dependent variable on our measures of institutional, political, and cultural frameworks. We tabulate the first-stage regression estimates in Table A2 in the Appendix. Second, we replace actual trust values with the residuals from the first step, and include residual trust (Residual $\text{Trust}_{i,t}$) instead of social trust in all our regression analyses. Although the literature established that trust is a determinant

[19] For example, a high score of the variable Accounting Standards_i indicates a low degree of transparency of the information available to investors.

rather than a consequence of formal-institutional and political frameworks (Williamson (2000)), this two-stage approach allows us to separate the stand-alone effect of social trust in each country from all related dimensions.[20]

4.2 Baseline Results

We use multivariate regression analysis to examine the effect of social trust on foreign bias at the investor level. Foreign bias ($\text{FBIAS}_{k,i,j,t}$), as our dependent variable, is regressed on the measure of social trust that we isolate from related dimensions ($\text{Residual Trust}_{i,t}$; see Section 4.1). Although we already control for a large set of country-level dimensions via the construction of our residual trust measure, our approach may not account for the omission of other important variables. Therefore, we incorporate all control variables introduced in Section 3.4 into our model. To further allay any concerns about endogeneity from omitted variables that are correlated with both residual trust and foreign bias, we exploit the panel structure of our dataset and test different fixed effects specifications.[21] We cluster heteroscedasticity-robust standard errors at the investor level. Formally, to test Hypothesis 1, we estimate the following baseline regression model:

$$\begin{aligned}\text{FBIAS}_{k,i,j,t} = {} & \alpha_0 + \alpha_1 \text{Residual Trust}_{i,t} + \alpha_2 \text{Investor Size}_{k,i,t} + \alpha_3 \text{Investor Age}_{k,i,t} \\ & + \alpha_4 \text{Number of Stocks}_{k,i,t} + \alpha_5 \text{Stock Market Development}_{j,t} + \alpha_6 \text{Investment Freedom}_{j,t} \\ & + \alpha_7 \text{GDP per Capita}_{j,t} + \alpha_8 \text{Internet Availability}_{j,t} + \alpha_9 \text{Stock Market Return}_{j,t} \\ & + \alpha_{10} \text{Stock Market Risk}_{j,t} + \alpha_{11} \text{Diversification Potential}_{i,j,t} \\ & + \text{year, investor, target, and investor} \times \text{target country fixed effects} + \epsilon_{k,i,j,t}, \end{aligned} \tag{4}$$

where $\text{FBIAS}_{k,i,j,t}$ indicates the foreign bias of investor k from country i toward host country j at the end of year t, as defined in Section 3.1. We present the regression estimates in Table IV. By adding year fixed effects and target country fixed effects, we isolate the influence of aggregate time series trends and control for all time-constant characteristics of the host country, respectively. In the first three specifications (see columns (1) to (3) of Table IV), we further control for all time-constant differences among investor types (column (1)), for all persistent geographic characteristics of the investor's home country (column (2)), and for all time-constant characteristics of the

[20] As shown in robustness tests (see Section 5.1), our findings are robust when using the original measure of social trust ($\text{Social Trust}_{i,t}$) instead of residual trust.

[21] We also add additional time-varying control variables as part of our robustness tests in Section 5.4 below.

investor (column (3)) via investor type fixed effects[22], domicile fixed effects, and investor fixed effects, respectively. Subsequently, we control further for their combinations with target country fixed effects (columns (4)-(6)). In our most conservative regression model (column (6), hereinafter referred to as the baseline specification), we add investor × target country fixed effects, thereby controlling for all time-constant characteristics within investor-host country pairs, i.e., we explain changes in a particular investor's allocation bias toward a specific host country.[23]

[INSERT TABLE IV ABOUT HERE]

The estimated coefficient on residual trust is negative and statistically significant throughout all model specifications, indicating that investors domiciled in high-trust countries exhibit significantly lower foreign bias.[24] These results are not attributable to investor characteristics, the investor's familiarity with the host country, the attractiveness of the target country, or its risk-return profile. Compared to specifications (1) to (5), we note a substantial increase in the explanatory power (with $R^2 = 0.708$) of the baseline model in column (6), where we use our most conservative specification of fixed effects and control for all time-constant characteristics within investor-host country pairs. The estimated coefficient on residual trust of -1.424 implies that a 1-standard deviation increase in our measure of social trust reduces foreign bias by 10.33% relative to the sample mean ($= -1.424 \times 0.050/0.692$, where 0.692 is the sample mean of $FBIAS_{k,i,j,t}$). Overall, these results confirm Hypothesis 1, suggesting that the negative effect of social trust on foreign bias is not only highly statistically significant but also economically relevant.

Although we are able to examine material cross-country heterogeneity (see below), our analysis rests on the implicit premise that investors use the level of trustworthiness of their own compatriots to people from foreign countries. Guiso et al. (2009) and Glaeser et al. (2002) show that this is not unreasonable even for our (within-country) social norm mechanism of trust. However, with our measure of trust, we cannot distinguish, e.g., whether the Italians trust the Germans more than the French. One way to mitigate this concern is to use bilateral trust measures, which, however, are only available for a substantially smaller sample of European countries (see Section 5.1 for robustness tests). Another simple approach is to re-run the baseline model and apply our residual

[22]The investor type variable comes from FactSet and distinguishes between private firms, public firms, pension funds, mutual funds, hedge funds, and joint ventures, among others.

[23]The control variables on familiarity between countries are omitted in regression specifications (5) and (6) because they are time-invariant and perfectly collinear with the domicile × target country fixed effects and the investor × target country fixed effects, respectively.

[24]Robustness tests in Section 5.2 confirm that our inferences are robust to alternative sample compositions, e.g., when excluding U.S.-based institutions from the sample.

trust measure not only to the investor's home country, but also at the target country level. As reported in column (7) in Table IV, the estimated coefficient on Residual $\text{Trust}_{j,t}$ is negative and statistically significant at -1.790. We conclude that increases in host country trust reduce foreign bias considerably less than increases in investor country trust (given the larger Residual $\text{Trust}_{i,t}$ coefficient of -3.787, which is highly significant at the 1% level).

Finally, we verify whether social trust reduces foreign bias in a particularly interesting case: when people in host countries are less trustworthy than people in the investor's home country. We re-run the baseline regression, but limit the sample to country-pair observations for which it holds that Residual $\text{Trust}_{j,t}$ < Residual $\text{Trust}_{i,t}$. The results are shown in column (8). In spite of a notably smaller sample, the estimated trust coefficient remains negative and statistically significant at the 1% level. With an absolute magnitude of 7.121, the observed trust effect on foreign bias is even higher in magnitude compared to the baseline model. The standardized effect is 31.40% ($= -7.121 \times 0.069/1.557$), indicating that social trust is particularly helpful in reducing foreign bias when the level of investor trust exceeds the level of host country trust. Taken together, we conclude that our baseline results are sensitive neither to considerations of host country trust nor to differences in trust among home-target country pairs.

4.3 The Role of Information Asymmetries

To verify the moderating role of information asymmetry, as formulated in Hypothesis 2, we re-estimate our baseline model and add interaction effects between residual trust and the host-country information asymmetry proxies that we aggregated along the four dimensions explained in Section 3.3. The results are presented in Table V.[25]

[INSERT TABLE V ABOUT HERE]

We observe negative coefficient estimates at the 1% significance level for our measure of social trust as well as for its interaction terms with the four aggregated dimensions of information asymmetry. This result confirms that the trust-related reduction in foreign bias is most pronounced when the information asymmetry on foreign markets is high. Taken together, this test provides additional support for our more general line of reasoning that the effect of social trust on foreign bias depends on the set of information that is available to investors. Investors from countries

[25] To ensure that our inferences are not affected by the process of aggregating individual information asymmetry items, we also conduct robustness tests in Section 5.3, using the stand-alone proxies on host-country information asymmetry that are not aggregated into composite indices.

with higher levels of social trust require less information to make their investment decisions. As a result, they exhibit a higher propensity to invest in foreign markets. Social trust affects foreign bias by compensating for lack of information, encouraging equity investments in foreign markets where investors suffer from information disadvantages.

4.4 Social Trust as a Substitute for Formal Institutions

Next, to test Hypothesis 3, we disentangle whether the effect of social trust on institutional investors' foreign bias is conditional on target countries' institutional quality, i.e., is stronger if host-country institutions are weaker. We re-run the baseline regression and add the interaction effects between investor-country residual trust and the quality of the host-country institutional framework (using the same variables applied for the construction of our investor-country residual trust measure). To enable easier interpretation of the interaction effects, we define the institutional variables so that a low value represents a good outcome (and vice versa). Moreover, we normalize these variables to range from 0 to 1, which allows for direct comparisons of the interaction effects. The results are presented in Table VI.

[INSERT TABLE VI ABOUT HERE]

Throughout all model specifications, we observe that the stand-alone trust effect is no longer significant, but that the interaction terms capture the negative effect at the 1% level of statistical significance in all cases. This result has two implications regarding the interplay between the informal institution of social trust and formal-legal institutions, which we illustrate by using the law and order tradition as an example (see column (1) of Table VI). If the host country provides poor institutional quality (i.e., if Law and Order_{j} approaches a value of 1), the trust-related reduction in foreign bias is determined by the magnitude of the interaction effect of -6.716. However, if host-country institutional quality is high (i.e., if Law and Order_{j} approaches 0), there is no discernable effect of social trust on foreign bias given the lack of statistical significance on the stand-alone trust coefficient.

Our standardization process eases the interpretation of the interaction effects. Focusing on investments in the host country with the weakest tradition of law and order in our sample (i.e., Law and $\text{Order}_{\text{Sri Lanka}} = 1$), we find that a 1-standard deviation (0.323) increase in the law and order tradition reduces foreign bias by more than twice the sample mean ($-6.716 \times 0.323/0.946 = -2.295$,

where 0.946 is the sample mean of $FBIAS_{k,i,j,t}$).[26] Moreover, we compare standardized interaction coefficients for different dimensions of the host-country formal institutional framework. Trust is of particular importance in target countries where shareholders are exposed to higher risk of expropriation. The estimated coefficient on the interaction of residual trust with Expropriation $Risk_j$ of -8.035 implies that a 1-standard deviation increase in the risk of expropriation reduces foreign bias by almost three times the sample mean ($-2.745 = -8.035 \times 0.323/0.946$). In contrast, poor accounting standards enhance the trust effect considerably less, as the coefficient estimate on the interaction with Accounting $Standards_j$ of -4.572 results in a standardized factor of only -0.880 ($= -4.572 \times 0.212/1.101$).

Overall, our tests support Hypothesis 3, suggesting that trust does not reduce foreign bias per se, but only when target countries are characterized by weak formal institutions. Observing that the negative effect of social trust on foreign bias is conditional on the host country's quality of formal institutional framework, we conclude that investor trust can offset (at least partly) the lack of host-country formal institutions in international portfolio allocation.

4.5 Implications for Portfolio Diversification

A question that remains to be answered is whether the lower foreign bias that derives from higher social trust really improves portfolio diversification and international risk sharing. Providing an answer will be economically meaningful to better understand the practical implications of social trust for investors. To check whether more trusting investors benefit from an internationally diversified portfolio, and to test Hypothesis 4, we adopt two measures of portfolio concentration with respect to host countries from Choi et al. (2017). First, global concentration is defined as half the sum of an investor's absolute values of the deviations from the optimal benchmark weights (as defined by Equation (1) and Equation (2)) across all countries in our sample, including the investor's country of domicile. Second, similar to the measure of foreign bias (as defined by Equation (3)), foreign concentration does not take into account the investor's home country. Therefore, foreign concentration corresponds to half the sum of an investor's absolute values of foreign biases across all possible target markets. Formally, our measures of global as well as foreign concentration that indicate the percentage of an investor's portfolio to be reallocated to

[26] No analogous statement about the countries with the best law and order tradition in our sample is possible (e.g., Law and $Order_{US} = 0$), because the stand-alone trust coefficient is not statistically significant.

achieve full diversification across global or foreign markets are as follows:

$$\text{Global Concentration}_{k,i,t} = \frac{\sum_j |w^*_{j,t} - w_{k,i,j,t}|}{2} \tag{5}$$

$$\text{Foreign Concentration}_{k,i,t} = \frac{\sum_j |\text{FBIAS}_{k,i,j,t}|}{2} \tag{6}$$

Next, we regress both measures as dependent variables on residual trust and the control variables at the investor and country levels specified in Equation (4). We include year and investor fixed effects and cluster heteroscedasticity-robust standard errors at the investor level. We estimate the following model for portfolio diversification, where $\text{Concentration}_{k,i,t}$ indicates either global or foreign concentration:

$$\begin{aligned}\text{Concentration}_{k,i,t} = {} & \beta_0 + \beta_1 \text{Residual Trust}_{i,t} + \beta_2 \text{Investor Size}_{k,i,t} + \beta_3 \text{Investor Age}_{k,i,t} \\ & + \beta_4 \text{Number of Stocks}_{k,i,t} + \beta_5 \text{Stock Market Development}_{i,t} \\ & + \beta_6 \text{Investment Freedom}_{i,t} + \beta_7 \text{GDP per Capita}_{i,t} + \beta_8 \text{Internet Availability}_{i,t} \\ & + \beta_9 \text{Stock Market Return}_{i,t} + \beta_{10} \text{Stock Market Risk}_{i,t} \\ & + \text{year and investor fixed effects} + \epsilon_{k,i,t}. \end{aligned} \tag{7}$$

The regression results are presented in Table VII. The estimated trust coefficients for both global (column (1)) and foreign (column (2)) concentration are negative and statistically significant at the 1% level. Therefore, we conclude that, in support of Hypothesis 4, social trust does not encourage naive investor behavior and helps accomplish greater international diversification in institutional investors' portfolios.

[INSERT TABLE VII ABOUT HERE]

5 Robustness Tests

5.1 Measurement of Social Trust

Acknowledging that endogeneity resulting from measurement error is a common concern in culture-related research (Zingales (2014), Karolyi (2015)), we provide robustness tests with respect to the measurement of our trust variable in columns (1) to (4) of Table VIII. Because

survey respondents of certain demographic groups are overrepresented (e.g., city dwellers) or underrepresented (e.g., the illiterate population) in survey samples (Inglehart et al. (2000)), we apply weights to correct for deviations from national population parameters when constructing our measure of social trust (see Section 3.2). To ensure our results are not sensitive to weighting survey responses, we report the results of re-running the baseline model (see column (6) of Table IV) when using a measure of unweighted residual trust. Column (1) shows that the estimated trust coefficient remains qualitatively unchanged and statistically significant at the 1% level.

[INSERT TABLE VIII ABOUT HERE]

In our main empirical analyses, we use data on social trust from the WVS and the EVS, with linear interpolation to estimate missing values between two data points. This is considered a standard procedure in the measurement of trust (Wei and Zhang (2020)). However, despite the fact that both WVS and EVS have been used frequently in the extant literature (Alesina and Giuliano (2011), Bloom et al. (2012), Pevzner et al. (2015), Wei and Zhang (2020)), the surveys were only conducted every five to seven years. To mitigate concerns over noise caused by long interpolation periods, and considering that the majority of institutional investors in our sample are U.S.-headquartered, we employ the General Social Survey (GSS) as a third source of trust. The GSS is a representative survey conducted approximately every two years. It uses identical question framing as the WVS and the EVS. However, its scheme of possible responses is not binary, as there exists a third response option ("Depends"). We apply the same methodology as before for calculating values of U.S. country-level trust. We re-estimate our baseline regression, but use trust scores obtained from the GSS instead of the WVS for U.S.-domiciled investors. Our results, reported in column (2) of Table VIII, remain qualitatively unchanged, and the estimated coefficient on the trust variable even increases slightly (in absolute terms).

Next, to ensure our results are not driven by the process of isolating trust from the related institutional, political, and cultural frameworks described in Section 4.1, we re-estimate the baseline specification applying the original measure of (non-residual) trust (Social $\text{Trust}_{i,t}$) instead of residual trust. The social trust coefficient estimate remains stable and statistically significant at the 1% level, as shown in column (3) of Table VIII. We conclude that our results are not driven by the process of isolating social trust from related dimensions.

Finally, we use a measure of residual bilateral trust as an alternative for our residual trust measure. As in Guiso et al. (2009), Bottazzi et al. (2016), and Pursiainen (2022), we construct a

directional measure of trust from one country towards another country based on Eurobarometer surveys. To isolate country-specific factors, we follow their approach and regress the measure of bilateral trust on home country, host country, and calendar-year dummies in a first step (see equation (1) in Guiso et al. (2009, p. 1103)). In a second step, we compute the residual and re-run our baseline model using this alternative measure as the main explanatory variable. We still observe a negative coefficient estimate, statistically significant at the 1% level in column (4) of Table VIII.[27]

An obvious advantage of using a bilateral trust measure is that the data is more granular. However, we note that there are three major drawbacks. First, the Eurobarometer survey covers only 15 countries, all of which are EU countries, and sample size decreases substantially (almost by a factor of 20). Second, pairwise observations do not vary over time, making it impossible to capture unobserved heterogeneity through the inclusion of investor × target country fixed effects. Third, the data are outdated, originating from the years 1970 and 1995. For these reasons, we do not use bilateral residual trust measures in our main empirical analyses, but conclude that our findings using (unilateral) residual trust in the home country are robust to various alternative measures of trust.

5.2 Sample Composition

To alleviate concerns about our sample composition, we provide additional robustness tests in columns (5) to (10) of Table VIII. First, we acknowledge that investors in our data set rarely diversify their investments across all possible target markets. Portfolio holdings allocated to certain foreign markets often take the value of zero. To test whether excluding observations with zero holdings affects our results, we re-estimate the baseline model but omit these observations from the sample in column (5). Despite the reduced sample size, we still find a negative coefficient estimate, significant at the 1% level. We conclude that our results are robust to the exclusion of zero holdings observations.

Next, a problem could be that sample size varies across our analyses. Our baseline regressions are based on a large sample of investors from 33 countries that invest in equity across 84 target markets over a 18-year period. As a consequence of applying this comprehensive approach, the data required for our analyses in Section 4.3 and Section 4.4 are sometimes not available, leading to a reduced sample when testing Hypotheses 2 and 3. To ensure that the main finding of a

[27] Due to the static nature of the bilateral trust measure, we are not able to implement investor × target country fixed effects in this model.

negative impact of social trust on foreign bias remains unchanged when requiring the availability of the measures that are necessary to test all proposed hypotheses, we re-run the baseline model using the (smaller) sample for which all data are available. The results in column (6) of Table VIII remain qualitatively unchanged. We conclude that our baseline model is not either sensitive to the reduction in sample size.

Next, we limit our sample to institutions not resident in the U.S. to ensure that the trust-related reduction in foreign bias is not driven by U.S. investors alone, which are the largest group of investors in our sample. We re-estimate the baseline regression and present the results in column (7) of Table VIII. Similar in magnitude as compared to the full-sample baseline estimate, we observe a standardized trust-related reduction in foreign bias of 8.61% ($= -0.657 \times 0.069/0.525$). Despite the markedly reduced sample size and a presumably poorer data quality, the coefficient estimate is statistically significant, indicating that the link between trust and foreign bias remains valid in an international framework (i.e., it is not exclusively driven by U.S. domiciled investors).

Given that our inferences might be affected by a financial center bias, we also re-estimate the baseline specification but exclude investors from and investments to Luxembourg and Ireland. Our results, reported in column (8) of Table VIII, remain qualitatively unchanged.

Finally, we limit our sample to institutions domiciled in countries that belong to the Organisation for Economic Co-operation and Development (OECD) or to the Group of Seven (G7), respectively. We report the results in columns (9) and (10) of Table VIII. Both coefficient estimates remain stable and statistically significant at the 1% level. Overall, we conclude that our main findings are robust to alternative sample compositions.

5.3 Measurement of Information Asymmetry

To examine whether the effect of social trust on foreign bias is driven by information asymmetry in the target markets, we use PCA in our baseline analysis to aggregate 18 stand-alone information asymmetry proxies along four dimensions (see Section 3.3), and subsequently estimate interaction effects between residual trust and the corresponding composite indices of information asymmetry (see Section 4.3). To check whether our inferences are affected by the process of aggregating compound dimensions, we re-estimate our information asymmetry analyses but use interaction effects between social trust and the stand-alone proxies on host-country information asymmetry without aggregating them into composite indices.[28] As presented in Table IX, all interaction

[28]Note that these proxies are positively related to information asymmetry by construction.

coefficient estimates between residual trust and the stand-alone information asymmetry proxies are negative and statistically significant. We conclude that our inferences are robust to using stand-alone measures of information asymmetry.

[INSERT TABLE IX ABOUT HERE]

5.4 Omitted Variables

A potential threat to our inferences is endogeneity arising from omitted variables that are correlated with both residual trust and foreign bias. We tackle this concern by applying different fixed effects specifications that control for unobserved time-invariant heterogeneity across different dimensions. We further isolate trust from related institutional, political, and cultural factors (see Section 4.1) and incorporate a set of time-varying control variables that prior literature identified as determinants of foreign bias (see Section 4.2).

To ensure that our results are robust to the inclusion of capital control variables, a particularly strong barrier to foreign investment, we further augment our baseline specification with additional time-varying indicators on capital inflow restrictions and capital outflow restrictions obtained from Fernández et al. (2015).[29] Inflow $\text{Control}_{j,t}$ captures whether a purchase of equity locally by non-residents of host country j is prohibited in year t, while Outflow $\text{Control}_{i,t}$ captures whether a purchase of equity abroad by residents of domicile i is prohibited in year t.

First, we re-run the baseline model and control for capital controls on inflows. Second, we alternatively use the measure on outflow controls. Finally, in model (3), we consider both capital control measures simultaneously. Table X shows that our results remain qualitatively unchanged across all three specifications.

[INSERT TABLE X ABOUT HERE]

6 Conclusion

In this study, we investigate the role of social trust in the equity allocations of 8,088 institutional investors from 33 countries that invest in equity across 84 target markets over the 2000 to 2017 period. An important feature of our data is the extensive cross-sectional variation in the measure

[29] We do not use the variables on capital controls in our baseline model (specified in Equation (4)) because data are only available for 73 out of 84 target countries.

of social trust, allowing reliable estimates of the effects that social trust has on foreign bias in international portfolio allocation.

Our empirical analysis reveals several findings. First, a higher level of social trust in an investor's country of domicile significantly reduces foreign bias in institutionally managed portfolios. Second, proxying for information asymmetry in the target countries along several dimensions, we provide support for an information-based explanation for the relation between social trust and foreign bias. Investors from countries with higher levels of social trust require less information to make their investment decisions, thus they exhibit a higher propensity to invest in foreign markets. The effect of social trust on foreign bias is strongest when investors are unfamiliar with a particular equity market. Third, the informal institution of social trust does not reduce foreign bias per se, but only in connection with host-countries that are characterized by weak formal-institutional frameworks. Our results suggest that social trust, as an informal institution, and the quality of the host country's formal-institutional framework can be substitutes in international portfolio allocation. Finally, our analysis reveals an important economic consequence. Higher social trust leads to better international risk sharing as it helps investors accomplish greater cross-country diversification.

Social trust mitigates inefficiencies in cross-border portfolio allocation created by information asymmetries. Our results have implications for both international business managers and government regulators. Business leaders should be aware that the level of social trust prevailing in their societies significantly influences portfolio investment decisions. Because informal institutions are highly persistent over time (Williamson (2000)), trust is likely to be impervious to top-down social engineering. Government regulators should consider the level of social trust as a measure capable of overcoming information asymmetries, but assess it as a relatively fixed societal feature. Formal and informal institutions are substitutes in cross-border portfolio investments, and regulators are well advised to strengthen formal institutions in order to reduce the costs that arise from asymmetric information and attract foreign investors.

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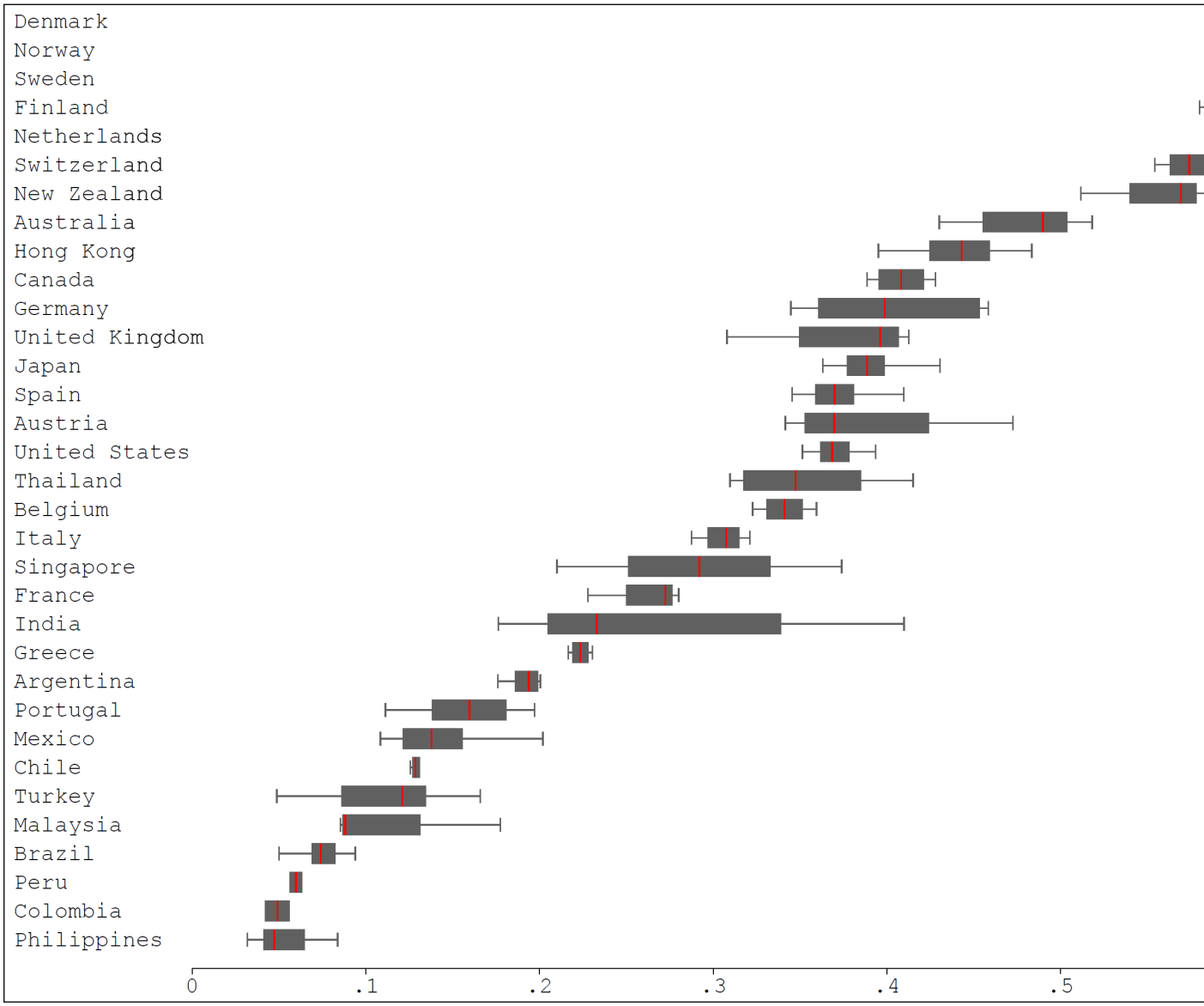
Figures and Tables

Figure I: Social Trust Across Countries



The figure shows boxplot diagrams of social trust across sample countries over the study period of 2000 through 2017. Social trust (of respondents answering "*Can be trusted*" to the survey question "*Generally speaking, would you say that most people can be trust with people?*" For a detailed description of the data, see Table A1 of the Appendix. The vertical red middle line in the box present edges represent the 25th and 75th percentiles, respectively. Whiskers indicate variability outside the upper and lower quartiles.

Table I: Institutional Investor Equity Allocations

The table presents average investor-level equity allocations (in percentage points) for the top 15 investor domiciles (in columns) a measured by the number of distinct institutional investors in the sample (#Investors) for the study period of 2000 through 2017. T for the remaining countries not listed in the table. Ø $w^*_{j,t}$ indicates the average share of the target countries in the world portfolio refer to country i at time t. Target countries refer to country j at time t. The gray shaded fields indicate domestic investments (foreign investments (i ≠ j). The overall sample covers a total of 33 investor domiciles and 84 target countries. We report average host country below. ØFBIAS$_{k,i,t}$ indicates the average foreign bias among all investors from domicile i across all foreign countries ØFBIAS$_{k,j,t}$ expresses the average foreign bias among all investors in the sample toward a particular host country j (host-count defined as follows; USA: United States, GBR: Great Britain, DEU: Germany, CHE: Switzerland, FRA: France, CAN: Canada, BR Hong Kong, AUS: Australia, ITA: Italy, JPN: Japan, AUT: Austria, SGP: Singapore, IND: India, FIN: Finland, DNK: Denmark,

			Investor country i										
	# Investors	Ø $w^*_{j,t}$	USA 5,380	GBR 436	DEU 307	CHE 285	FRA 245	CAN 195	BRA 159	ESP 147	SWE 119	HKG 86	A
Host (target) country j	USA	37.40	94.09	19.79	26.76	22.25	9.90	21.86	0.08	10.12	14.22	1.79	12
	GBR	6.16	0.83	34.56	6.25	5.07	4.70	1.83	0.04	4.60	4.95	1.55	5
	DEU	3.22	0.04	4.67	34.19	9.18	8.03	0.66	0.00	9.25	2.53	0.31	0
	CHE	2.09	0.34	3.32	4.22	28.64	3.05	0.62	0.08	2.59	2.74	0.25	1
	FRA	3.88	0.02	4.30	6.51	5.21	52.99	0.76	0.00	11.44	1.84	0.22	1
	CAN	3.09	2.09	2.05	3.48	5.22	1.75	69.87	0.02	0.44	0.85	0.52	0
	BRA	1.45	0.03	0.67	0.12	0.25	0.08	0.03	98.58	0.09	0.10	0.76	0
	ESP	1.45	0.01	1.28	2.84	1.39	2.56	0.19	0.02	46.49	0.60	0.03	0
	SWE	0.93	0.03	1.36	0.71	0.90	0.58	0.16	0.00	0.44	53.51	0.03	0
	HKG	2.30	0.07	1.91	0.51	1.72	0.28	0.36	0.09	0.07	0.56	27.17	2
	AUS	2.11	0.01	1.31	0.66	0.90	0.16	0.32	0.00	0.04	0.34	2.99	67
	ITA	1.40	0.01	1.69	1.80	3.33	3.26	0.16	0.00	3.02	0.48	0.11	0
	JPN	8.89	0.02	5.26	2.12	4.14	0.90	1.41	0.00	1.38	1.65	5.11	3
	AUT	0.23	0.00	0.35	0.69	0.75	0.33	0.04	0.00	0.20	0.25	0.02	0
	SGP	0.78	0.08	0.46	0.11	0.66	0.04	0.05	0.00	0.01	0.17	3.01	0
	IND	1.87	0.01	1.02	0.12	0.13	0.36	0.03	0.13	0.00	0.47	5.59	0
	FIN	0.55	0.00	0.50	1.03	0.63	0.86	0.11	0.00	1.09	2.06	0.01	0
	DNK	0.44	0.00	0.57	0.64	0.64	0.52	0.06	0.00	0.27	1.66	0.08	0
	NLD	1.76	0.31	3.13	2.72	1.88	3.55	0.53	0.00	3.39	0.80	0.05	0
	PRT	0.16	0.00	0.17	0.18	0.10	0.19	0.02	0.00	1.79	0.06	0.00	0
	Other	19.84	2.01	11.63	4.34	7.01	5.91	0.93	0.96	3.28	10.16	50.4	1
Ø FBIAS$_{k,i,t}$			0.77	0.37	0.38	0.33	0.58	1.07	1.18	0.62	0.71	0.35	0
Ø FBIAS$_{k,j,t}$			17.97	3.99	1.67	1.08	2.41	1.04	1.38	0.97	0.61	2.05	1

Table II: Summary Statistics

The table presents descriptive statistics for variables used in this study based on the baseline regression sample (see column (6) of Table IV). The sample period is 2000 through 2017. We report the number of observations (N), the mean, the standard deviation (SD), the 25% percentile (P25), the median, and the 75% percentile (P75) over the sample period. Panel A reports summary statistics of investor characteristics, which refer either to investor k from domicile i at time t, or, in the case of FBIAS, to investor k from domicile i toward target country j at time t. Panel B reports summary statistics of investor-country characteristics which refer either to investor country i or investor country i at time t. Panel C reports summary statistics of target-country characteristics which refer either to host country j or host country j at time t. Panel D reports summary statistics of country-pairs which refer either to both investor country i and target country j or to both investor country i and target country j at time t. For a detailed description of the data, see Table A1 in the Appendix.

	N	Mean	SD	P25	Median	P75
Panel A: Investor characteristics						
FBIAS	5,027,082	0.69	3.22	0.01	0.15	0.66
Investor Size	69,755	19.29	2.30	18.16	19.24	20.64
Investor Age	69,755	2.59	1.01	1.95	2.71	3.26
Number of Stocks	69,755	4.35	1.51	3.50	4.36	5.22
Global Concentration	69,755	64.42	13.15	57.76	62.59	67.94
Foreign Concentration	69,755	38.50	13.26	31.09	33.54	42.66
Panel B: Home country characteristics						
Social Trust	454	0.37	0.21	0.20	0.37	0.51
Residual Trust	454	0.00	0.07	-0.06	-0.00	0.06
Residual Trust (Unweighted)	454	0.00	0.07	-0.06	0.00	0.06
Residual Trust (GSS)	454	0.00	0.07	-0.06	-0.00	0.06
Law and Order	454	0.23	0.26	0.00	0.13	0.40
Judicial Integrity	454	0.22	0.27	0.00	0.20	0.40
Accounting Standards	454	0.31	0.17	0.15	0.32	0.39
Expropriation Risk	454	0.24	0.27	0.06	0.10	0.47
Judicial Efficiency	454	0.23	0.27	0.00	0.07	0.43
Legal System	454	0.29	0.45	0.00	0.00	1.00
Geopolitical Risk	454	93.19	44.24	63.22	74.74	119.05
Corruption	454	0.59	0.28	0.29	0.67	0.82
Power Distance	454	51.17	22.07	35.00	50.00	68.00
Individualism	454	56.60	22.59	37.00	63.00	75.00
Masculinity	454	49.10	22.26	34.00	54.00	66.00
Uncertainty Avoidance	454	61.13	23.50	44.00	59.00	85.00
Long-term Orientation	454	47.47	18.99	31.74	45.59	61.46
Indulgence	454	56.39	16.96	43.53	57.37	68.30
Outflow Control	454	0.38	0.49	0.00	0.00	1.00
Panel C: Host country characteristics						
Stock Market Development	1,274	0.63	0.74	0.21	0.43	0.82
Investment Freedom	1,274	62.77	19.50	50.00	70.00	75.00
GDP per Capita	1,274	0.22	0.21	0.05	0.14	0.36
Internet Availability	1,274	0.49	0.28	0.23	0.52	0.74
Stock Market Return	1,274	0.09	0.27	-0.08	0.07	0.22
Stock Market Risk	1,274	0.08	0.19	0.02	0.04	0.08
Macroeconomy	542	-0.02	1.16	-0.71	-0.18	0.63
Access to Information	728	-0.14	1.57	-1.41	-0.28	1.05

(*continued*)

Table II — *continued*

	N	Mean	SD	P25	Median	P75
Investor Independence	1,274	-0.88	1.36	-1.88	-0.94	0.08
Corporate Transparency	406	0.01	1.90	-1.36	-0.72	1.15
Crisis Output Loss	560	3.33	12.01	0.00	0.00	0.00
Inflation	1,236	0.04	0.05	0.01	0.03	0.05
Access to Media	728	-73.22	20.79	-90.99	-82.47	-59.56
Newspapers	1,274	-29.82	23.82	-37.80	-22.60	-11.80
Cellular Subscriptions	1,274	-97.90	42.07	-124.71	-104.27	-72.86
Economic Freedom	1,274	-66.29	9.06	-72.20	-66.20	-60.10
Financial Freedom	1,274	-60.60	17.30	-70.00	-60.00	-50.00
Disclosure Intensity	678	-71.78	7.86	-79.00	-73.00	-66.00
Financial Disclosures	728	-81.45	20.03	-100.00	-87.32	-68.12
Governance Disclosures	728	-79.05	11.69	-91.30	-76.63	-65.94
Timeliness of Disclosures	728	-69.73	23.03	-86.96	-73.91	-63.04
Credibility of Disclosures	669	-3.25	0.97	-4.00	-4.00	-3.00
Analyst Coverage	728	-13.31	8.35	-19.97	-12.73	-6.10
Insider Trading	728	-0.48	0.50	-1.00	0.00	0.00
Institutional Investors	419	-0.12	0.08	-0.16	-0.10	-0.06
Law and Order	775	0.37	0.32	0.00	0.37	0.64
Judicial Integrity	1,110	0.30	0.27	0.00	0.20	0.40
Accounting Standards	673	0.36	0.21	0.22	0.32	0.47
Expropriation Risk	775	0.38	0.32	0.07	0.36	0.63
Judicial Efficiency	806	0.30	0.28	0.00	0.33	0.53
Legal System	775	0.36	0.48	0.00	0.00	1.00
Inflow Control	1,139	0.31	0.46	0.00	0.00	1.00
Panel D: Country pair characteristics						
Geographic Distance	31,866	8.59	0.97	7.95	8.98	9.26
Common Language	31,866	0.10	0.31	0.00	0.00	0.00
Contiguity	31,866	0.03	0.18	0.00	0.00	0.00
Colony	31,866	0.04	0.19	0.00	0.00	0.00
Same Country	31,866	0.01	0.08	0.00	0.00	0.00
Diversification Potential	32,074	0.53	0.46	0.29	0.69	0.88

Table III: Correlations Among Trust, Institutional, Political, and Cultural Fram

The table shows pairwise correlation coefficients for country-level variables used in the first-stage regression of social trust on institu coefficients were calculated over the sample period of 2000 through 2017. p-values are given in parentheses. For a detailed description

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
Social Trust$_{i,t}$	1.000										
Law and Order$_i$	-0.748	1.000									
	(0.000)										
Judicial Integrity$_i$	-0.689	0.799	1.000								
	(0.000)	(0.000)									
Accounting Standards$_i$	-0.500	0.401	0.329	1.000							
	(0.000)	(0.000)	(0.000)								
Expropriation Risk$_i$	-0.701	0.911	0.780	0.433	1.000						
	(0.000)	(0.000)	(0.000)	(0.000)							
Judicial Efficiency$_i$	-0.695	0.724	0.686	0.555	0.723	1.000					
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)						
Legal System$_i$	-0.019	0.109	-0.094	-0.424	0.048	-0.174	1.000				
	(0.656)	(0.005)	(0.018)	(0.000)	(0.225)	(0.000)					
Geopolitical Risk$_{i,t}$	0.014	0.002	-0.011	-0.020	0.001	-0.014	0.005	1.000			
	(0.696)	(0.952)	(0.751)	(0.619)	(0.984)	(0.723)	(0.899)				
Corruption$_{i,t}$	0.699	-0.869	-0.758	-0.524	-0.838	-0.813	0.026	0.038	1.000		
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.502)	(0.231)			
Power Distance$_i$	-0.669	0.582	0.696	0.183	0.605	0.553	-0.018	-0.021	-0.656	1.000	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.655)	(0.551)	(0.000)		
Individualism$_i$	0.512	-0.659	-0.611	-0.407	-0.677	-0.611	0.097	0.012	0.572	-0.600	1.
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.016)	(0.723)	(0.000)	(0.000)	
Masculinity$_i$	-0.356	0.140	0.146	0.110	0.055	-0.014	0.200	0.002	-0.177	0.163	0.
	(0.000)	(0.001)	(0.000)	(0.008)	(0.172)	(0.729)	(0.000)	(0.959)	(0.000)	(0.000)	(0.
Uncertainty Avoidance$_i$	-0.474	0.205	0.328	0.669	0.215	0.440	-0.535	-0.012	-0.348	0.161	-0.
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.719)	(0.000)	(0.000)	(0.
Long-term Orientation$_i$	0.065	-0.242	-0.084	-0.140	-0.361	-0.211	-0.287	0.004	0.046	0.136	-0.
	(0.074)	(0.000)	(0.014)	(0.001)	(0.000)	(0.000)	(0.000)	(0.897)	(0.173)	(0.000)	(0.
Indulgence$_i$	0.238	-0.301	-0.172	-0.320	-0.201	-0.258	0.048	0.031	0.396	-0.417	0.
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.236)	(0.351)	(0.000)	(0.000)	(0.

Table IV: Baseline Regressions

The table reports estimation results of fixed effects regressions of foreign bias on residual trust in the investor's country of domicil panel contains only observations where investor i's country of domicile differs from host country j ($i \neq j$). Investor-level variables Investor country-level variables refer to the investor's country of domicile i at time t. Bilateral variables on country pairs refer to t host country j at time t. For a detailed description of the data, see Table A1 in the Appendix. All regression specifications include aggregate time series trends and target country fixed effects to control for time-constant characteristics of the host country. In colu differences within investor types via investor type fixed effects. The investor type variable comes from FactSet and distinguishes funds, mutual funds, among others. In column (2), we further control for time-constant characteristics of the investor's country of d (3), we further control for time-constant differences among investors via investor fixed effects. In column (4), we re-run the first speci characteristics within the combination of investor types and host countries via investor type × target country fixed effects. In colum furthermore control for time-constant characteristics of domicile-target pairs via domicile × target country fixed effects. In colu model, we re-run the third specification but control further for all time-constant characteristics within investor-target-country pair In column (7), we re-run the baseline model but add the level of host country residual trust (Residual $\text{Trust}_{j,t}$). Finally, in column the sample to cases where Residual $\text{Trust}_{j,t}$ < Residual $\text{Trust}_{i,t}$. Heteroscedasticity-robust standard errors are clustered at the inve

	(1)	(2)	(3)	(4)	(5)	
					Dependent variable: $\text{FBIAS}_{k,i,j,t}$	
$\text{Residual Trust}_{i,t}$	-1.239	-0.413	-0.442	-1.218	-1.425	
	(0.000)	(0.065)	(0.045)	(0.000)	(0.000)	
$\text{Residual Trust}_{j,t}$						
Familiarity between countries:						
$\text{Geographic Distance}_{i,j}$	0.336	0.126	0.126	0.339		
	(0.000)	(0.000)	(0.000)	(0.000)		
$\text{Common Language}_{i,j}$	-0.173	-0.296	-0.297	-0.171		
	(0.000)	(0.000)	(0.000)	(0.000)		
$\text{Contiguity}_{i,j}$	-0.881	-1.186	-1.186	-0.873		
	(0.000)	(0.000)	(0.000)	(0.000)		
$\text{Colony}_{i,j}$	0.765	1.105	1.105	0.716		
	(0.000)	(0.000)	(0.000)	(0.000)		
$\text{Same Country}_{i,j}$	-4.516	-4.669	-4.671	-4.491		
	(0.000)	(0.000)	(0.000)	(0.000)		
Investor characteristics:						
$\text{Investor Size}_{k,i,t}$	0.011	-0.003	0.007	0.010	-0.004	
	(0.000)	(0.024)	(0.009)	(0.000)	(0.006)	
$\text{Investor Age}_{k,i,t}$	0.015	0.014	-0.000	0.015	0.013	
	(0.000)	(0.000)	(0.935)	(0.000)	(0.000)	

Table IV — *continued*

	(1)	(2)	(3)	(4)	(5)	
					Dependent variable: $FBIAS_{k,i,j,t}$	
Number of $Stocks_{k,i,t}$	-0.015	-0.005	0.000	-0.015	-0.005	
	(0.000)	(0.017)	(0.984)	(0.000)	(0.020)	
Target country attractiveness:						
Stock Market $Development_{j,t}$	0.467	0.466	0.466	0.466	0.466	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	
Investment $Freedom_{j,t}$	-0.012	-0.012	-0.012	-0.011	-0.011	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	
GDP per $Capita_{j,t}$	-0.107	-0.113	-0.112	-0.109	-0.012	
	(0.003)	(0.002)	(0.002)	(0.003)	(0.728)	
Internet $Availability_{j,t}$	0.835	0.834	0.834	0.807	0.818	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	
Risk and return profile:						
Stock Market $Return_{j,t}$	-0.083	-0.080	-0.080	-0.076	-0.080	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	
Stock Market $Risk_{j,t}$	0.083	0.082	0.082	0.086	0.074	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	
Diversification $Potential_{i,j,t}$	-0.083	-0.089	-0.089	-0.079	-0.042	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	
Year FE	Y	Y	Y	Y	Y	
Target country FE	Y	Y	Y	Y	Y	
Investor type FE	Y	-	-	Y	-	
Domicile FE	-	Y	-	-	Y	
Investor FE	-	-	Y	-	-	
Investor type × Target country FE	-	-	-	Y	-	
Domicile × Target country FE	-	-	-	-	Y	
Investor × Target country FE	-	-	-	-	-	
Adjusted R-squared	0.312	0.315	0.318	0.317	0.395	
Observations	5,083,043	5,085,409	5,085,409	5,082,908	5,123,646	5,

Table V: The Contingent Effect of Information Asymmetry

The table re-estimates the baseline regression specification (see column (6) of Table IV) but adds interaction effects between investor-country residual trust and aggregate dimensions of host-country information asymmetry variables. The aggregate information asymmetry variables were obtained via Principal Component Analysis and proxy for information asymmetry along four dimensions: 1) macroeconomic factors related to the information environment, 2) investor access to information, 3) investor independence, and 4) information transparency. Higher levels indicate higher levels of information asymmetry in the target country (see Section 3.3). The panel contains only observations where investor i's country of domicile differs from host country j ($i \neq j$). Investor-level variables refer to investor k from domicile i at time t. Investor-country-level variables refer to the investor's country of domicile i at time t. Host-country variables refer either to target country j or target country j at time t. Bilateral variables on country pairs refer to the investor's country of domicile i as well as host country j at time t. For a detailed description of the data, see Table A1 in the Appendix. All regression specifications include year fixed effects to isolate the influence of aggregate time-series trends, target country fixed effects to control for time-constant characteristics of the host country, investor fixed effects to control for time-constant investor characteristics as well as investor × target country fixed effects to control for time-constant characteristics within investor-target-country pairs. Heteroscedasticity-robust standard errors are clustered at the investor level. *p*-values are given in parentheses.

	(1)	(2)	(3)	(4)
	Dependent variable: $FBIAS_{k,i,j,t}$			
$Residual\ Trust_{i,t}$	-3.091	-2.637	-2.856	-4.308
	(0.000)	(0.000)	(0.000)	(0.000)
$Residual\ Trust_{i,t} \times Macroeconomy_{j,t}$	-1.340			
	(0.000)			
$Macroeconomy_{j,t}$	-0.067			
	(0.000)			
$Residual\ Trust_{i,t} \times Access\ to\ Information_{j,t}$		-1.265		
		(0.000)		
$Access\ to\ Information_{j,t}$		-0.533		
		(0.000)		
$Residual\ Trust_{i,t} \times Investor\ Independence_{j,t}$			-1.497	
			(0.000)	
$Investor\ Independence_{j,t}$			-0.189	
			(0.000)	
$Residual\ Trust_{i,t} \times Corporate\ Transparency_{j}$				-1.418
				(0.000)
$Investor\ Size_{k,i,t}$	0.016	0.010	0.005	0.016
	(0.009)	(0.030)	(0.063)	(0.028)
$Investor\ Age_{k,i,t}$	-0.012	-0.011	-0.005	-0.015
	(0.294)	(0.226)	(0.370)	(0.281)
$Number\ of\ Stocks_{k,i,t}$	-0.001	0.001	0.001	0.005
	(0.912)	(0.904)	(0.807)	(0.675)

(*continued*)

Table V — *continued*

	(1)	(2)	(3)	(4)
	Dependent variable: $FBIAS_{k,i,j,t}$			
Stock Market Development$_{j,t}$	0.561	0.348	0.446	1.161
	(0.000)	(0.000)	(0.000)	(0.000)
Investment Freedom$_{j,t}$	-0.005	-0.004	-0.013	-0.005
	(0.000)	(0.000)	(0.000)	(0.000)
GDP per Capita$_{j,t}$	1.036	0.809	0.080	1.125
	(0.000)	(0.000)	(0.027)	(0.000)
Internet Availability$_{j,t}$	0.120	-0.910	0.607	0.614
	(0.076)	(0.000)	(0.000)	(0.000)
Stock Market Return$_{j,t}$	-0.200	-0.098	-0.024	-0.452
	(0.000)	(0.000)	(0.000)	(0.000)
Stock Market Risk$_{j,t}$	-1.575	-0.671	0.100	-2.315
	(0.000)	(0.000)	(0.000)	(0.000)
Diversification Potential$_{i,j,t}$	0.203	0.113	-0.026	0.226
	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Y	Y	Y	Y
Investor FE	Y	Y	Y	Y
Investor FE	Y	Y	Y	Y
Investor × Target country FE	Y	Y	Y	Y
Adjusted R-squared	0.697	0.696	0.708	0.680
Observations	2,050,338	2,788,035	5,027,082	1,518,013

Table VI: Social Trust as a Substitute for Formal Institutions

The table re-estimates the baseline regression specification (see column (6) of Table IV) but adds interaction effects between inv of formal institutional frameworks in the host country. Institutional framework variables are defined negatively, i.e., higher valu panel contains only observations where investor i's country of domicile differs from host country j ($i \neq j$). Investor-level variables Investor-country-level variables refer to the investor's country of domicile i at time t. Bilateral variables on country pairs refer to t host country j at time t. For a detailed description of the data, see Table A1 in the Appendix. All regression specifications include aggregate time-series trends, target country fixed effects to control for time-constant characteristics of the host country, investor fixe characteristics as well as investor × target country fixed effects to control for time-constant characteristics within investor-targ standard errors are clustered at the investor level. p-values are given in parentheses.

	(1)	(2)	(3)	(4)
			Dependent variable:	$FBIAS_{k,i,j,t}$
$Residual\ Trust_{i,t}$	0.280	0.477	-0.739	0.818
	(0.613)	(0.219)	(0.254)	(0.148)
$Residual\ Trust_{i,t}$	-6.716			
$\times$ $Law\ and\ Order_j$	(0.000)			
$Residual\ Trust_{i,t}$		-6.917		
$\times$ $Judicial\ Integrity_j$		(0.000)		
$Residual\ Trust_{i,t}$			-4.572	
$\times$ $Accounting\ Standards_j$			(0.000)	
$Residual\ Trust_{i,t}$				-8.035
$\times$ $Expropriation\ Risk_j$				(0.000)
$Residual\ Trust_{i,t}$				
$\times$ $Judicial\ Efficiency_j$				
$Residual\ Trust_{i,t}$				
$\times$ $Legal\ System_j$				
$Investor\ Size_{k,i,t}$	0.010	0.006	0.013	0.010
	(0.028)	(0.067)	(0.009)	(0.028)
$Investor\ Age_{k,i,t}$	-0.007	-0.006	-0.008	-0.007
	(0.397)	(0.385)	(0.413)	(0.381)
$Number\ of\ Stocks_{k,i,t}$	-0.001	0.003	-0.003	-0.001
	(0.857)	(0.567)	(0.772)	(0.856)

Table VI — *continued*

	(1)	(2)	(3)	(4)
				Dependent variable: $FBIAS_{k,i,j,t}$
Stock Market Development$_{j,t}$	0.464	0.428	0.544	0.462
	(0.000)	(0.000)	(0.000)	(0.000)
Investment Freedom$_{j,t}$	-0.006	-0.010	-0.007	-0.005
	(0.000)	(0.000)	(0.000)	(0.000)
GDP per Capita$_{j,t}$	0.724	0.179	0.778	0.744
	(0.000)	(0.000)	(0.000)	(0.000)
Internet Availability$_{j,t}$	0.118	0.738	0.238	0.107
	(0.007)	(0.000)	(0.000)	(0.016)
Stock Market Return$_{j,t}$	-0.124	-0.078	-0.160	-0.121
	(0.000)	(0.000)	(0.000)	(0.000)
Stock Market Risk$_{j,t}$	-0.587	0.591	-0.607	-0.569
	(0.000)	(0.000)	(0.000)	(0.000)
Diversification Potential$_{i,j,t}$	0.124	-0.039	0.144	0.119
	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Y	Y	Y	Y
Target country FE	Y	Y	Y	Y
Investor FE	Y	Y	Y	Y
Investor × Target country FE	Y	Y	Y	Y
Adjusted R-squared	0.698	0.708	0.700	0.698
Observations	2,969,996	4,352,980	2,564,743	2,969,996

Table VII: Social Trust and Portfolio Concentration

The table reports estimation results of fixed effects regressions of investor-level measures of portfolio concentration on residual trust in the investor's country of domicile, as well as selected control variables. The Global Concentration and Foreign Concentration measures come from Choi et al. (2017). Global Concentration captures the percentage of an investor's entire portfolio that should be re-allocated to achieve full diversification across global markets. Foreign Concentration captures the percentage of an investor's entire portfolio that should be reallocated to achieve full diversification across foreign markets. Investor-level variables refer to investor k from domicile i at time t. Investor-country-level variables refer to the investor's country of domicile i at time t. For a detailed description of the data, see Table A1 in the Appendix. All regression specifications include year fixed effects to isolate the influence of aggregate time-series trends as well as investor fixed effects to control for time-constant characteristics of the investor. Heteroscedasticity-robust standard errors are clustered at the investor level. p-values are given in parentheses.

	(1)	(2)
Dependent variables:	Global Concentration$_{k,i,t}$	Foreign Concentration$_{k,i,t}$
Residual Trust$_{i,t}$	-57.623	-16.052
	(0.000)	(0.005)
Investor Size$_{k,i,t}$	0.199	-0.016
	(0.010)	(0.826)
Investor Age$_{k,i,t}$	-0.218	-0.117
	(0.130)	(0.351)
Number of Stocks$_{k,i,t}$	-2.922	-2.664
	(0.000)	(0.000)
Stock Market Development$_{i,t}$	-3.994	-3.115
	(0.000)	(0.000)
Investment Freedom$_{i,t}$	0.034	0.017
	(0.031)	(0.195)
GDP per Capita$_{i,t}$	-4.602	-8.590
	(0.025)	(0.000)
Internet Availability$_{i,t}$	-7.813	-0.093
	(0.000)	(0.950)
Stock Market Return$_{i,t}$	-5.263	-3.319
	(0.000)	(0.000)
Stock Market Risk$_{i,t}$	3.530	-2.556
	(0.523)	(0.552)
Year FE	Y	Y
Investor FE	Y	Y
Adjusted R-squared	0.812	0.839
Observations	69,725	69,725

Table VIII: Robustness to Measurement of Social Trust and Sample Compos

The table reports the results of robustness tests and re-estimates the baseline regression specification (see column (6) of Table IV). the measurement of social trust and the sample composition in columns (1) to (4) and in columns (5) to (10), respectively. In colu where we do *not* correct for deviations from national population parameters in construction country-level social trust. In column (2 Survey instead of the World Values Survey for U.S.-domiciled investors. In column (3), we use a measure of (non-residual) social tr we apply a measure of residual bilateral trust as an alternative main explanatory variable (see Guiso et al. (2009)). In column (5) column (6), we restrict the data to observations within the intersection of the regression samples used in Section 4.3 and Section regression specification but restrict our global sample to non-U.S.-domiciled investors. In column (8), we exclude investors from and mitigate concerns about financial center bias. In columns (9) and (10), we restrict our sample to investors domiciled in OECD c variables refer to investor k from domicile i at time t. Investor-country-level variables refer to the investor's country of domicile i at refer to the investor's country of domicile i as well as host country j at time t. For a detailed description of the data, see Table A1 in include year fixed effects to isolate the influence of aggregate time-series trends, target country fixed effects to control for time-cor well as investor × target country fixed effects to control for time-constant characteristics within investor-target-country pairs. We do they are perfectly collinear with the bilateral trust measure. Heteroscedasticity-robust standard errors are clustered at the investo

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Global sample						ex USA
	Dependent variable: $FBIAS_{k,i,j,t}$						
Residual Trust (Unweighted)$_{i,t}$	-1.426						
	(0.000)						
Residual Trust (GSS)$_{i,t}$		-1.532					
		(0.000)					
Social Trust$_{i,t}$			-1.237				
			(0.000)				
Residual Bilateral Trust$_{i,j}$				-3.799			
				(0.000)			
Residual Trust$_{i,t}$					-8.098	-5.353	-0.657
					(0.000)	(0.000)	(0.035)
Investor Size	0.005	0.006	0.006	-0.018	0.312	0.023	0.030
	(0.099)	(0.033)	(0.047)	(0.315)	(0.000)	(0.008)	(0.000)
Investor Age$_{k,i,t}$	-0.006	-0.003	-0.004	0.021	-0.095	-0.019	0.016
	(0.334)	(0.590)	(0.449)	(0.577)	(0.082)	(0.262)	(0.276)
Number of Stocks$_{k,i,t}$	0.001	0.001	0.001	0.024	1.945	0.006	-0.028
	(0.782)	(0.892)	(0.821)	(0.457)	(0.000)	(0.714)	(0.008)
Stock Market Development$_{j,t}$	0.449	0.449	0.448	-0.066	0.424	1.411	0.388
	(0.000)	(0.000)	(0.000)	(0.374)	(0.000)	(0.000)	(0.000)

Table VIII — *continued*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Global sample						ex USA
	Dependent variable: $FBIAS_{k,i,j,t}$						
Investment $Freedom_{j,t}$	-0.009	-0.009	-0.009	0.010	-0.002	-0.005	-0.006
	(0.000)	(0.000)	(0.000)	(0.000)	(0.480)	(0.000)	(0.000)
GDP per $Capita_{j,t}$	0.003	0.003	0.017	0.085	1.719	0.947	-0.665
	(0.927)	(0.920)	(0.605)	(0.732)	(0.000)	(0.000)	(0.000)
Internet $Availability_{j,t}$	0.647	0.646	0.657	0.049	4.048	0.873	1.226
	(0.000)	(0.000)	(0.000)	(0.870)	(0.000)	(0.000)	(0.000)
Stock Market $Return_{j,t}$	-0.040	-0.040	-0.038	-0.627	-0.460	-0.562	-0.062
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Stock Market $Risk_{j,t}$	0.093	0.093	0.094	-2.369	1.178	-2.848	0.098
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Diversification $Potential_{i,j,t}$	-0.021	-0.021	-0.020	0.422	0.250	0.217	0.043
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Y	Y	Y	Y	Y	Y	Y
Investor FE	Y	Y	Y	Y	Y	Y	Y
Target country FE	Y	Y	Y	Y	Y	Y	Y
Investor × Target country FE	Y	Y	Y	-	Y	Y	Y
Adjusted R-squared	0.708	0.708	0.718	0.121	0.682	0.683	0.680
Observations	5,027,082	5,027,082	5,231,006	217,915	389,678	1,243,609	1,545,783

Table IX: Robustness to Stand-alone Information Asymmetry Proxies

The table re-estimates the information asymmetry analysis (see Table V but adds interaction effects between investor-country host-country information asymmetry that have not been aggregated into compound dimensions. Higher levels indicate higher levels and stand-alone effects of the interaction terms are included in the models. The panel contains only observations where investor i's j (i ≠ j). Investor-level variables refer to investor k from domicile i at time t. Investor-country-level variables refer to the investor's variables refer either to target country j or target country j at time t. Bilateral variables on country pairs refer to the investor's cou time t. For a detailed description of the data, see Table A1 in the Appendix. All regression specifications include year fixed effects to trends, target country fixed effects to control for time-constant characteristics of the host country, investor fixed effects to control well as investor × target country fixed effects to control for time-constant characteristics within investor-target-country pairs. H clustered at the investor level. p-values are given in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Macroeconomy			Access to information			
	Dependent variable: $FBIAS_{k,i,j,t}$						
Residual $Trust_{i,t}$	-2.817	-2.480	-1.331	-3.324	-4.869	-3.095	-11.262
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Residual $Trust_{i,t}$ × Crisis Output $Loss_{j,t}$	-0.026						
	(0.002)						
Residual $Trust_{i,t}$ × GDP per $Capita_{j,t}$		-4.594					
		(0.000)					
Residual $Trust_{i,t}$ × $Inflation_{j,t}$			-4.241				
			(0.000)				
Residual $Trust_{i,t}$ × Internet $Availability_{j,t}$				-3.586			
				(0.000)			
Residual $Trust_{i,t}$ × $Newspapers_{j,t}$					-0.112		
					(0.000)		
Residual $Trust_{i,t}$ × Cellular $Subscriptions_{j,t}$						-0.016	
						(0.000)	
Residual $Trust_{i,t}$ × Access to $Media_{j}$							-0.123
							(0.000)
Residual $Trust_{i,t}$ × Investment $Freedom_{j,t}$							
Residual $Trust_{i,t}$ × Financial $Freedom_{j,t}$							
Residual $Trust_{i,t}$ × Economic $Freedom_{j,t}$							
Controls	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y
Target country FE	Y	Y	Y	Y	Y	Y	Y
Investor FE	Y	Y	Y	Y	Y	Y	Y
Investor × Target country FE	Y	Y	Y	Y	Y	Y	Y
Adjusted R-squared	0.698	0.708	0.707	0.708	0.708	0.708	0.696
Observations	2,120,079	5,027,082	4,892,308	5,027,082	5,027,082	5,027,082	2,788,03

Table IX — *continued*

	(11)	(12)	(13)	(14)	(15)	
				Corporate transparency		
				Dependent variable: $FBIAS_{k,i,j,t}$		
Residual $Trust_{i,t}$	-22.072	-16.656	-10.327	-4.321	-10.100	-
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(
Residual $Trust_{i,t}$ × $Disclosure\ Intensity_j$	-0.274					
	(0.000)					
Residual $Trust_{i,t}$ × $Financial\ Disclosures_j$		-0.176				
		(0.000)				
Residual $Trust_{i,t}$ × $Governance\ Disclosures_j$			-0.102			
			(0.000)			
Residual $Trust_{i,t}$ × $Timeliness\ of\ Disclosures_j$				-0.029		
				(0.000)		
Residual $Trust_{i,t}$ × $Credibility\ of\ Disclosures_j$					-2.358	
					(0.000)	
Residual $Trust_{i,t}$ × $Analyst\ Coverage_j$						-
						(
Residual $Trust_{i,t}$ × $Insider\ Trading_j$						
Residual $Trust_{i,t}$ × $Institutional\ Investors_j$						
Controls	Y	Y	Y	Y	Y	
Year FE	Y	Y	Y	Y	Y	
Target country FE	Y	Y	Y	Y	Y	
Investor FE	Y	Y	Y	Y	Y	
Investor × Target country FE	Y	Y	Y	Y	Y	
Adjusted R-squared	0.697	0.696	0.696	0.696	0.695	
Observations	2,589,574	2,788,035	2,788,035	2,788,035	2,554,627	2,7

Table X: Robustness to Capital Controls

The table re-estimates the baseline regression specification (see column (6) of Table IV) but adds further time-varying control variables on capital controls obtained from Fernández et al. (2015). Inflow $\text{Control}_{j,t}$ and Outflow $\text{Control}_{i,t}$ capture whether a purchase of equity locally by non-residents of host country j or whether a purchase of equity abroad by residents of domicile i is prohibited in year t. In columns (1) and (2), we subsequently add the measure for restrictions on capital inflows and the measure for restrictions on capital outflows to the model. In column (3), we apply both measures simultaneously. All regression specifications include year fixed effects to isolate the influence of aggregate time-series trends, target country fixed effects to control for time-constant characteristics of the host country, investor fixed effects to control for time-constant investor characteristics as well as investor × target country fixed effects to control for time-constant characteristics within investor-target-country pairs. Heteroscedasticity-robust standard errors are clustered at the investor level. p-values are given in parentheses.

	(1)	(2)	(3)
	Dependent Variable: $\text{FBIAS}_{k,i,j,t}$		
$\text{Residual Trust}_{i,t}$	-1.589	-1.403	-1.565
	(0.000)	(0.000)	(0.000)
$\text{Inflow Control}_{j,t}$	0.052		0.052
	(0.000)		(0.000)
$\text{Outflow Control}_{i,t}$		-0.017	-0.019
		(0.262)	(0.281)
$\text{Investor Size}_{k,i,t}$	0.006	0.005	0.006
	(0.050)	(0.080)	(0.051)
$\text{Investor Age}_{k,i,t}$	-0.006	-0.005	-0.006
	(0.377)	(0.402)	(0.383)
$\text{Number of Stocks}_{k,i,t}$	0.000	0.001	-0.000
	(0.999)	(0.814)	(0.999)
$\text{Stock Market Development}_{j,t}$	0.594	0.449	0.594
	(0.000)	(0.000)	(0.000)
$\text{Investment Freedom}_{j,t}$	-0.010	-0.009	-0.010
	(0.000)	(0.000)	(0.000)
$\text{GDP per Capita}_{j,t}$	0.141	0.003	0.141
	(0.000)	(0.923)	(0.000)
$\text{Internet Availability}_{j,t}$	0.758	0.647	0.758
	(0.000)	(0.000)	(0.000)
$\text{Stock Market Return}_{j,t}$	-0.058	-0.040	-0.058
	(0.000)	(0.000)	(0.000)
$\text{Stock Market Risk}_{j,t}$	0.190	0.093	0.190
	(0.000)	(0.000)	(0.000)
$\text{Diversification Potential}_{i,j,t}$	-0.027	-0.021	-0.027
	(0.000)	(0.000)	(0.000)
Year FE	Y	Y	Y
Investor FE	Y	Y	Y
Target country FE	Y	Y	Y
Investor × Target country FE	Y	Y	Y
Adjusted R-squared	0.708	0.708	0.708
Observations	4,461,331	5,027,082	4,461,331

Appendix

Table A1: Description of Main Variables

This Appendix provides definitions and data sources for the main variables used in the study. FBIAS refers to investor k from domicile i toward host country j at time t, while the remaining investor characteristics refer to investor k from domicile i at time t. Country characteristics refer either to investor country i or host country j at time t. Country pair characteristics refer to both investor country i and host country j at time t.

Variable	Definition and data source
Investor characteristics:	
FBIAS	Measure of foreign bias as given by Equation (4). Equals the difference between world-CAPM-optimal and actual portfolio weights with respect to a foreign host country. FBIAS is scaled by 100 for exposition. Source: Authors' calculations based on FactSet and Compustat data.
Investor Size	Natural logarithm of the dollar amount of investor portfolio holdings. Source: Authors' calculations based on FactSet data.
Investor Age	Natural logarithm of the number of years since the investment entity was founded. Source: Authors' calculations based on FactSet data.
Number of Stocks	Natural logarithm of the number of stocks in the investor's portfolio. Source: Authors' calculations based on FactSet data.
Global Concentration	Percentage of an investor's entire portfolio that should be reallocated to achieve full diversification across global markets. Source: Authors' calculations based on FactSet and Compustat data.
Foreign Concentration	Percentage of an investor's entire portfolio that should be re-allocated to achieve full diversification across foreign markets. Source: Authors' calculations based on FactSet and Compustat data.
Country characteristics:	
Social Trust	Percentage of respondents answering *"Can be trusted"* to the survey question *"Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?"*. Sample weights applied when available. Source: Authors' calculations based on World Values Survey and European Values Study data.
Residual Trust	Residual of a regression of social trust on country-level institutional, political and cultural variables. Source: Authors' calculations based on World Values Survey, European Values Study, La Porta et al. (1998), Djankov et al. (2001, 2003), Hofstede (2001), Caldara and Iacoviello (2019), and Transparency International data.
Residual Trust (Unweighted)	Residual of a regression of social trust on country-level institutional, political and cultural variables. Weighting factors were not applied. Source: Authors' calculations based on World Values Survey, European Values Study, La Porta et al. (1998), Djankov et al. (2001, 2003), Hofstede (2001), Caldara and Iacoviello (2019), and Transparency International data.
Residual Trust (GSS)	Residual of a regression of social trust on country-level institutional, political and cultural variables, where we use trust data from the General Social Survey instead of the World Values Survey for U.S.-domiciled investors. Source: Authors' calculations based on European Values Study, General Social Survey, La Porta et al. (1998), Djankov et al. (2001, 2003), Hofstede (2001), Caldara and Iacoviello (2019), and Transparency International data.
Residual Bilateral Trust	Residual of a regression of directional trust from one country towards another country on home country, host country, and calendar-year dummies. This approach follows equation (1) in Guiso et al. (2009). Source: Authors' calculations based on Eurobarometer data.
Law and Order	Measure of a country's law and order tradition as measured by the risk rating agency International Country Risk. Rankings are modified to range from 0 (high tradition of law and order) to 1 (low tradition of law and order). Source: Authors' calculations based on La Porta et al. (1998) data.

(*continued*)

Table A1 — *continued*

Variable	Definition and data source
Judicial Integrity	Measure of a country's integrity of its legal system based on the Law and Order Component from the PRS Group's International Country Risk Guide. Rankings are modified to range from 0 (high integrity) to 1 (low integrity). Source: Authors' calculations based on Djankov et al. (2003) data.
Accounting Standards	Measure of the extent and transparency of the information available to investors. Prepared on the basis of an analysis of annual reports covering 90 evaluation criteria. Rankings are modified to range from 0 (high information availability) to 1 (low information availability). Source: Authors' calculations based on La Porta et al. (1998) data.
Expropriation Risk	Measure of the risk of a *"forced nationalization"* or *"outright confiscation"* as assessed by the risk-rating agency International Country Risk. Ranges from 0 (low risk) to 1 (great risk). Source: Authors' calculations based on La Porta et al. (1998) data.
Judicial Efficiency	Measure of the *"efficiency and integrity of the legal environment as it affects business, particularly foreign firms"* produced by the country-risk rating agency Business International Corporation. Rankings are modified to range from 0 (high efficiency) to 1 (low efficiency). Source: Authors' calculations based on Djankov et al. (2001) data.
Legal System	Dummy variable indicating whether a civil-law system is in place. Civil law systems usually provide less legal protection for shareholders, while common-law systems offer higher protection. Source: Authors' calculations based on La Porta et al. (1998) data.
Geopolitical Risk	Measure of global geopolitical risk, based on a tally of newspaper articles that cover geopolitical tensions. The measure is constructed by counting certain keywords (e.g., terrorist attack) in articles published in leading English language newspapers. Source: Caldara and Iacoviello (2019).
Corruption	Measure of a country's perceived level of public sector corruption. Based on surveys of experts and businesspeople. Source: Authors' calculations based on Transparency International data.
Power Distance	Measures of the extent to which less powerful members of a society accept and expect unequal power relations. In societies with low power distance, people strive for a fair distribution of power, while in high-power distance countries, a hierarchical order is generally accepted and does not require further justification. Source: Hofstede (2001).
Individualism	Measure of individualism versus collectivism. Describes the extent to which members of a society prefer personal goals (individualism) to community goals (collectivism). The high and low side of the measure indicate individualism and collectivism, respectively. Source: Hofstede (2001).
Masculinity	Measures of masculinity vs. femininity. Describes the distribution of emotional roles between gender in a society, i.e., the degree of importance a culture attaches to stereotypically masculine (e.g., assertiveness and power) or feminine (e.g., the promotion of interpersonal relationships) values. Source: Hofstede (2001).
Uncertainty Avoidance	Measure of a society's tolerance for uncertainty and ambiguity. Cultures with high levels of uncertainty avoidance are less tolerant of change, and tend to reduce their fear of the unknown by implementing rigid rules, regulations and laws. Source: Hofstede (2001).
Long-term Orientation	Measures long-term orientation versus normative short-term orientation of a society. Long-term cultures emphasize the importance of traditions, loyalty, and commitment, while short-term cultures are characterized by a normative way of thinking, striving for equality, individuality, and creativity. Source: Hofstede (2001).
Indulgence	Measure of the indulgence and restraint of a society. Describes whether a culture satisfies the immediate needs and personal wishes of its members, or regulates the satisfaction of needs by rules and laws. Source: Hofstede (2001).

(*continued*)

Table A1 — *continued*

Variable	Definition and data source
Stock Market Development	Relative size of the stock market. Equals a country's market capitalization divided by its Gross Domestic Product. Source: Authors' calculations based on Compustat and World Bank data.
Investment Freedom	Measure of restrictions on foreign capital transactions based on the Economic Freedom index. Ranges from 0 (strong restrictions) to 100 (weak restrictions). Source: The Heritage Foundation.
GDP per Capita	Gross domestic product per capita. Measured in 100,000 U.S. dollars. Source: World Bank.
Internet Availability	Individuals using the internet as a percentage of total population. Source: World Bank.
Stock Market Return	One year lagged growth rate of the annual average stock market index in percent. The annual average stock market index is constructed by taking the average of the daily stock market indexes available at Bloomberg. Source: Authors' calculations based on Bloomberg data (accessed via the World Bank Global Financial Development Database).
Stock Market Risk	Five-year rolling variance of the yearly values of the stock market return variable. Source: Authors' calculations based on Bloomberg data (accessed via the World Bank Global Financial Development Database).
Macroeconomy	Composite index of Crisis Output Loss, GDP per Capita, and Inflation. Represents information asymmetry due to macroeconomic factors related to the information environment. Source: Authors' calculations based on Laeven and Valencia (2020) and World Bank data.
Access to Information	Composite index of Internet Availability, Access to Media, Newspapers, and Cellular Subscriptions. Represents information asymmetry due to investors' access to information. Source: Authors' calculations based on Bushman and Piotroski (2004) and Worldbank data.
Investor Independence	Composite index of Economic Freedom, Investment Freedom, and Financial Freedom. Represents information asymmetry due to investors' independence. Source: Authors' calculations based on The Heritage Foundation data.
Corporate Transparency	Composite index of Disclosure Intensity, Financial Disclosures, Governance Disclosures, Timeliness of Disclosures, Credibility of Disclosures, Analyst Coverage, Insider Trading, and Institutional Investors. Represents information asymmetry due to information transparency. Source: Authors' calculations based on Bushman and Piotroski (2004) data.
Country pair characteristics:	
Geographic Distance	Simple distance between the capitals of two countries in kilometers. Source: Center for Research and Expertise on the World Economy.
Common Language	Dummy variable indicating whether two countries share a common official language. Source: Center for Research and Expertise on the World Economy.
Contiguity	Dummy variable indicating whether two countries are contiguous. Source: Center for Research and Expertise on the World Economy.
Colony	Dummy variable indicating whether two countries ever had a colonial link. Source: Center for Research and Expertise on the World Economy.
Same Country	Dummy variable indicating whether two countries were or are the same state or the same administrative entity for a long period (25 to 50 years in the 20th century, 75 years in the 19th century, and 100 years before). The definition includes countries that have been divided or that have belonged to the same empire or administrative colonial area. Source: Center for Research and Expertise on the World Economy.
Diversification Potential	Five-year rolling average of a country pair's correlations of yearly values of the stock market return variable. Source: Authors' calculations based on Bloomberg data (accessed via the World Bank Global Financial Development Database).

Table A2: Overlap Between Trust, Institutional, Political and Cultural Frameworks

The table reports the results of a fixed effects regression of social trust on country-level institutional, political, and cultural variables. For a detailed description of the data, see Table A1 in the Appendix. The regression specification includes year fixed effects to isolate the influence of aggregate time-series trends. Heteroscedasticity-robust standard errors are clustered at the country level. p-values are given in parentheses.

Dependent variable:	(1) Social Trust$_{i,t}$
Institutional and political variables:	
Law and Order$_i$	-0.065
	(0.751)
Judicial Integrity$_i$	0.021
	(0.879)
Accounting Standards$_i$	-0.375
	(0.004)
Expropriation Risk$_i$	-0.072
	(0.559)
Judicial Efficiency$_i$	-0.244
	(0.015)
Legal System$_i$	-0.049
	(0.329)
Geopolitical Risk$_t$	0.000
	(0.052)
Corruption$_{i,t}$	-0.180
	(0.152)
Hofstede's cultural dimensions:	
Power Distance$_i$	-0.006
	(0.000)
Individualism$_i$	-0.001
	(0.499)
Masculinity$_i$	-0.003
	(0.002)
Uncertainty Avoidance$_i$	-0.000
	(0.740)
Long-term Orientation$_i$	-0.000
	(0.727)
Indulgence$_i$	-0.002
	(0.119)
Year FE	Y
Adjusted R-squared	0.867
Observations	461