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

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Abstract

We study the effects of social trust on international asset allocation. Using a comprehensive international sample of institutionally managed portfolios from 86 countries, we show that institutional investors from high-trust countries are less prone to foreign bias and exhibit superior cross-country diversification. The results suggest that the informal institution of social trust and formal institutions are substitutes in international portfolio decisions. Using events of exogenous variation in information asymmetry, we find support for an information-based explanation. Our findings have additional implications at the firm-level. Most importantly, we observe a lower cost of equity for firms with more trusting investors.

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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 may 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), Lau 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 deterred 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), Wei and Zhang (2020)).

The propensity to invest in domestic securities also implies that foreign markets are relatively underweighted in investor portfolios. This deviation from the optimal allocation in a particular foreign market is known as "*foreign bias*". Although home bias and foreign bias are closely related from a theoretical point of view, they are not necessarily mutually dependent. In fact, they are only weakly correlated empirically. An investor may assign an optimal weight to his home country (and show no home bias), but at the same time under- or overweight a certain foreign country (and exhibit a positive or negative foreign bias, respectively).

Compared to the home bias, however, 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)). This is largely because of the lack of high-quality cross-border holdings data. Analyzing investors' portfolio choices from a foreign bias perspective is important as it enables us to disentangle the influences of home and host country determinants on international portfolio allocation. Our paper addresses this research gap by introducing a new factor that explains the foreign bias phenomenon: social trust (or the lack thereof). Economists

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

have long recognized that a major component of social capital, the level of social trust, is important for economic success in society (Arrow (1972), Coleman (1990), Fukuyama (1995)). Guiso et al. (2004) argue that financial transactions depend "[...] *not only on the legal enforcement of contracts, but also on the extent to which the financier trusts the financee*" (p. 527). Provided that investors from more trusting countries tend to be less concerned about expropriation by managers, and are more likely to find them trustworthy (Guiso et al. (2008b), they should be more willing to invest in foreign markets where they suffer from informational disadvantages. Our argument appeals to the subjective component of individuals' trusting behavior. We propose that investors from high-social trust countries exhibit 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. Our results confirm this notion: Institutional investors from high-social trust countries are less prone to underinvesting in foreign stocks.[2]

In particular, we use a comprehensive global sample of almost 10,000 institutional investors from 86 countries over the 2000 to 2017 period. We examine the hypothesis that social trust can be a partial solution to the problem of information asymmetry when it comes to investing in foreign stocks. Our analysis rests on two conceptual assumptions. First, people apply the level of trustworthiness of their own compatriots to people from other countries (Glaeser et al. (2002), Guiso et al. (2011)). Second, when making investment decisions, investors rely more heavily on information available to them if they lack social trust. Therefore, any portfolio allocation biases that arise from informational advantages in domestic equity or equity from some foreign markets (compared to all other foreign markets) should be even more pronounced in low-trust countries. This hypothesis is consistent with Guiso et al.'s (2008b) reverse argument that more knowledge can overcome the barriers created by lack of trust. Our main results confirm that higher social trust renders information deficiencies less important for investment decisions abroad and can reduce institutional investors' foreign bias.

Exploiting the heterogeneity in our international data set, we further demonstrate that the effect of the informal institution of social trust (North (1994), Williamson (2000)) on foreign bias in 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 is most pronounced when a host country is characterized by a weak formal-institutional framework.

[2]Extensive robustness tests confirm that our empirical results are robust and remain qualitatively unchanged when we exclude the largest group of investors, U.S.-based institutions, from the sample.

The results suggest that social trust acts as a substitute for formal institutions at the country level (Guiso et al. (2004), Pevzner et al. (2015)). We further assess the economic implications of our empirical results. On the one hand, at the individual investor level, social trust facilitates portfolio diversification of those individuals who put their money in the hands of (delegated) institutional investors. On the other hand, at the firm level, social trust among a firm's foreign institutional investor base is associated with lower equity financing costs.

The paper most closely related to ours is Wei and Zhang (2020), who examine the effect of social trust on local bias. Their analysis is also based on the assumption that social trust, information asymmetry, and portfolio allocation are closely interrelated. 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 use local knowledge, e.g., smaller investors, those with fewer holdings, and those with shorter holding horizons. Moreover, high-trust investors benefit from greater portfolio diversification. However, we note that Wei and Zhang's (2020) innovative study analyzes U.S. states rather than countries, and adopts a home bias framework.

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, building on Wei and Zhang's (2020) analysis, we fill a research gap by expanding our empirical setup to a global sample of institutional investors. We examine the hypothesis that social trust emerges as a partial solution to the problem of information asymmetries when it comes to investing in foreign stocks. Exploiting the considerable cross-country variations in social trust, we are able to run powerful tests on its effect on international portfolio decisions. To ensure this relation is robust, we control for institutional and political determinants, and isolate trust from cultural factors, which are shown by Beugelsdijk and Frijns (2010) to affect foreign bias.

Second, by analyzing international portfolio choices from a foreign bias perspective, we can not only explore how trust serves as a stand-alone determinant of investment behavior, but also observe the interplay between trust and a host country's institutional framework (La Porta et al. (1998), Djankov et al. (2001, 2003)). In particular, we find that social trust, as an informal institution, is a substitute for the quality of the host country's formal-institutional framework.

Third, we extend studies that stress the importance of information asymmetries in explaining investor preference for domestic equity and certain foreign stocks. Based on the idea that

information asymmetries increase during financial crises (as defined in Laeven and Valencia (2020)), we confirm that trust plays a more important role in opaque information environments (Guiso et al. (2008b), e.g., when information asymmetries on equity markets are high due to market turbulence. Therefore, we provide empirical validity for an information-based explanation of the relation between social trust and foreign bias.

Fourth, we contribute to the literature on the impact of social trust on economic outcomes in two different but complementary ways. From an individual investor perspective, we adopt measures of portfolio concentration from Choi et al. (2017) and show that social trust improves international risk sharing. In particular, it helps individual investors who delegate portfolio allocation to institutional managers achieve greater diversification across international markets. From a firm's perspective, we explore whether institutional investors' target firms likewise benefit from a high degree of social trust among their shareholders. To this aim, we apply the models of Claus and Thomas (2001), Gebhardt et al. (2001), Easton (2004), and Ohlson and Juettner-Nauroth (2005) to proxy for firms' cost of equity capital. Recognizing the possibly endogenous nature of the relation between social trust and the cost of equity capital, we adopt instrumental variable and difference-in-differences approaches. We find that the level of trust among a firm's foreign shareholders is associated with a lower cost of equity capital.

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 the measures of foreign bias and social trust used in the subsequent analyses, and provide descriptive statistics of our international sample. 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)), 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 both on the stocks that they can incorporate to their portfolios and on the abilities of the professional portfolio managers in which they 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 may induce 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 better information to foreign investors (Pagano et al. (2001), Ahearne et al. (2004), Hamberg et al. (2013)). Additional 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 nowadays investors, and especially professional portfolio managers, have the possibility to learn about foreign assets, given that it is similarly costly to analyze domestic and foreign markets (Dziuda and Mondria (2012)). If this learning options were exploited, information asymmetries would not sustain over time. However, as argued by Van Nieuwerburgh and Veldkamp (2009), information immobility and the ensuing investment biases persist because investors choose to specialize in assets in which they have an initial information advantage. That is, based on their initial information endowment about specific assets, 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 also partly incentivized by individual investors' more precise assessment of the abilities of funds that specialize in assets about which they know more (i.e., domestic assets), thus making investments in these assets more attractive (Dziuda and Mondria (2012)). Therefore, initial differences in information endowments across investors increase rather than decrease, leading to large, long-lasting cross-country differences in portfolio allocations. Empirical studies use foreign direct investments and trade flows as proxies for information endowments and confirm that differences in initial endowment of information about different countries translate into differences in stock 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

literature is based on Arrow's (1972) notion that "*virtually every commercial transaction has within itself an element of trust*" (p. 357). Guiso et al. (2008a) define social trust as "*the set of beliefs and values that foster cooperation*" (p. 296).[3]

A growing empirical literature identifies social trust as a determinant of economic outcomes and corporate decisions in a variety of contexts.[4] Social trust promotes trade and economic growth (Knack and Keefer (1997), Whiteley (2000), Zak and Knack (2001), Guiso et al. (2009)); encourages financial development and investor participation in the stock market (Guiso et al. (2004)); and 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)), and firm performance (Krishnan et al. (2006), Lins et al. (2017)). 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.

As documented in Guiso et al. (2011), there is 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 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, so it is more difficult for geographically distant investors to punish managers abroad for misbehavior.

[3]It is important to distinguish 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 explained in Guiso et al. (2011), the right measure of trust in empirical analyses is generalized or social trust, i.e., people need to trust strangers for institutions and markets to work properly.

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

2.3 Hypothesis Development

2.3.1 Social Trust and Foreign Bias

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. 2571). They conclude that a lack of trust constitutes an investment barrier that can be overcome with the help of better information. With better knowledge, investors should need to rely less on trust when interacting in markets about which they feel poorly informed.

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 (Van Nieuwerburgh and Veldkamp (2009)), Guiso et al.'s (2008b) line of reasoning should also have implications for international portfolio allocation. 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 the global stock market, 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.

In fact, information asymmetries should not only occur between home and foreign markets, but also when talking about different foreign markets. 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)). Therefore, 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 investment opportunity set. Facing information processing constraints, the model predicts that investors with an initial information endowment and a learning budget exert more effort in acquiring additional information about domestic assets, where they likely have a comparative advantage in learning, and thus have a tendency to invest at home. Similarly, investors might also prefer to invest in foreign markets where they have 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 foreign markets.

In our setup, this rationale might imply 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 optimum. Accordingly, trust not only affects the comparison between domestic versus foreign assets (home bias), but it is also likely to have implications for the comparison between different foreign assets (foreign bias). For example, 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 firms' information disclosure could also work indirectly through its influence on managerial behavior (i.e., by reducing managers' incentives to engage in shareholder expropriation). Such an indirect effect is quite unlikely in our context because we analyze cross-border equity investments, involving countries (and investors) with differing levels of social trust. Therefore, our framework is different from those in earlier studies (including Pevzner et al. (2015)). We recognize that the level of social trust in an investor's home country has little or no effect on the agency incentives of managers in target firms abroad, which in turn depend on the level of social trust in the 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 managers are trustworthy (Guiso et al. (2008b)). An implicit assumption is that investors transfer the level of trustworthiness of their own compatriots to managers of host country firms (Glaeser et al. (2002), Guiso et al. (2011)). In other words, although investors from two countries with different levels of social trust face the same level of expropriation threat when investing in the same foreign country, investors from a high-social trust country are likely to construct their portfolios of foreign stocks less influenced by how much information they have about them and thus exhibit a lower foreign bias than those from a low-social trust country.

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 any 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 the investor's foreign bias.*

Economic theory suggests that the negative relation between social trust and foreign bias could vary with country characteristics. Studies in the trust literature have shown that the informal institution of social trust and formal institutions are substitutes (Guiso et al. (2004), Carlin et al. (2009), Aghion et al. (2010), Pevzner et al. (2015)).[5] A growing body of empirical evidence suggests that 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. Abdelsalam et al. (2020) examine the impact of major shareholders' trust on firm market risk in a global sample. They show that the negative relation between trust and risk is more pronounced for firms in countries with a lack of well-functioning institutions. Using a sample of non-U.S. firms, Brockman et al. (2020) document that the inverse relationship between Yankee bond debt

[5] 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. In our framework, we go a step further and propose a substitution effect between social trust and (a lack of) formal-institutional framework.

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.

In our setup, we expect that a better institutional environment will make it easier to assess the risks of investing in a particular foreign country. This should diminish investors' reliance on trust. Specifically, a better legal framework would attenuate the beneficial role of trust in overcoming information-based barriers to investing in a foreign country. Therefore, and in line with Guiso et al. (2008b), the negative relation between social trust and foreign bias does not necessarily hold unconditionally, but it should be strongest in host countries characterized by poor quality institutions.

Following the literature that proposes a substitution effect between social trust and the formal-institutional framework in different contexts, we formally test our next hypothesis:

Hypothesis 2: *The weaker the formal institutions in the host country, the stronger the trust-related reduction in foreign bias.*

We further extend our analysis by exploring exogenous variations in information asymmetry, i.e., whether it moderates the relation between social trust and foreign bias. As a corollary to our main hypotheses, and again based on Guiso et al.'s (2008b) reasoning, we conjecture that the effect of social trust on foreign bias is strongest during times of crisis (when uncertainty is higher and the knowledge gap between domestic and foreign equity markets should be most pronounced).

Two recent strands of literature support our information-based explanation. On the one hand, uncertainty is strongly countercyclical. Bloom (2009) links most uncertainty periods to negative political, social, and economic shocks. Both Bloom (2014) and Baker et al. (2016) document that uncertainty about the distribution of stock market returns, as measured by implied volatility, is highest during plunging stock markets. Related research finds that macroeconomic forecasts are noisier, forecasters are less confident, and forecasts are more optimistic than actual outcomes during recessionary periods (Bachmann and Bayer (2014), Bloom (2014), Jurado et al. (2015)). Similar patterns are observed at the micro level. For example, Campbell et al. (2001) document that volatility in industry- and firm-level stock returns increases during recessions. On the other hand, there is empirical evidence in the law and finance literature that poor economic prospects

result in more shareholder expropriation because it becomes more difficult for shareholders to fulfill their monitoring roles (Johnson et al. (2000a), Johnson et al. (2000b)).

Based on these arguments, we test whether the reduction in foreign bias attributable to social trust is strongest during times of financial crisis (using crisis data from the Laeven and Valencia (2020) database). Our third hypothesis is:

> **Hypothesis 3:** *The trust-related reduction in foreign bias is strongest during times of financial crisis.*

2.3.2 Economic Implications of Social Trust

Next, we turn to the economic implications of our main findings. As elaborated on in Cooper et al. (2013), a lower home bias should improve international risk sharing and welfare. Therefore, a first implication of our results is that higher social trust should improve portfolio diversification for individual investors who invest through (delegated) institutional investors, e.g., in mutual funds or pension funds. In contrast, institutional investors from low-social trust countries avoid foreign stocks, about which they have insufficient knowledge. Therefore, plan sponsors and ultimate beneficiaries are less likely to hold and benefit from internationally diversified portfolios. The economic gains that arise from better international diversification will be shared between institutions and their investors depending on the competitive structure of the investment industry.

Calvet et al. (2007) observe that Swedish individual investors enjoy an above-average degree of diversification because popular Swedish investment funds exhibit high international allocation. Bekaert et al. (2017) document that the fraction of international funds available in 401(k) plans constitutes an important determinant of individual investors' international portfolio diversification. Most closely related to our analysis, Wei and Zhang (2020) provide direct support for the role of social trust in portfolio diversification. They proxy for diversification using idiosyncratic portfolio volatility, as well as a Herfindahl concentration measure, and show that high-trust U.S. investors are better diversified across *individual* stocks. However, this observation alone does not allow for more general conclusions about cross-country diversification, because investors may only be diversifying through home-country stocks. In our setting, we expect social trust to help accomplish greater international diversification in institutional investors' portfolios. This leads to our fourth hypothesis:

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

From a corporate finance perspective, a second important economic consequence of our analysis relates to the implications social trust may have for firms' cost of capital. To the extent that higher social trust leads investors to reduce foreign bias, a standard risk sharing argument suggests that firms with higher holding-weighted trust scores among their foreign investors will benefit from a lower cost of equity capital. International asset pricing assumes either fully segmented or fully integrated equity markets when using the CAPM to estimate the cost of equity capital (Stulz (1999)). The fully segmented version implies that a stock's beta should be measured against the home equity index, while the fully integrated version proposes it should be measured against the global index. The existence of a home and foreign bias, however, suggests that neither of these scenarios constitutes reality (Harvey (1995), Bekaert and Harvey (1995)). Therefore, it is important to examine the information in both types of beta in order to estimate the cost of equity capital. With a greater portion of international investors, a firm's assets will become more sensitive to world events. As a result, local pricing will almost always imply a higher expected return than global pricing.[6]

A growing line of research in the finance and international business literature examines how foreign institutional investors shape corporate governance and policies (Aggarwal et al. (2009), Aggarwal et al. (2011), Aguilera et al. (2017), Albuquerque et al. (2019), and Döring et al. (2021), among others). These studies suggest that foreign investors export their home-country governance practices into their host countries. As explained earlier, there are reasons to believe that foreign investors have incentives for active monitoring and engagement, because they are less familiar with domestic firms and their political and socioeconomic environment (Kang and Stulz (1997), Ferreira et al. (2017)). Moreover, they are less likely to have business relationships with the firms in which they invest, and, as a result, are more independent of firm management (Gillan and Starks (2003), Davis and Kim (2007)). Firms have an incentive to acquiesce to information demands from their foreign investors, e.g., by increasing the quantity and quality of financial disclosure (Lel (2019), Kim et al. (2019)), because an improved information environment will help them broaden their investor base and lower their cost of capital (Lambert et al. (2007)).

[6]However, Harris et al. (2003) conclude that the choice between domestic and world CAPM may not be practically important for estimating the cost of equity of many large U.S. firms.

Gupta et al. (2018) find that investors' trust in management constitutes an important determinant of target firms' cost of equity financing. They observe an inverse relation between the cost of equity and the level of social trust in a firm's country of domicile. Their setup and argument differ from ours in that trust represents a form of monitoring by society, i.e., high-trust environments enhance the penalties for managerial misbehavior, and thus reduce the likelihood of managers taking self-interested actions. In contrast, in our international framework, the relation between trust within a firm's foreign shareholders and its cost of equity is a result of improvements in international risk sharing and welfare, as well as the special role and incentive structure of foreign institutional investors in general. Taken together, our final hypothesis is:

Hypothesis 5: *The higher the level of social trust within a firm's foreign shareholders, the lower the cost of equity capital.*

3 Sample and Descriptive Statistics

3.1 Foreign Bias

We obtain data on international institutional equity holdings from the FactSet (LionShares) 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.[7] Security prices and firm-level information come from Compustat. Local currencies are converted to 2010 constant U.S. dollars.

We note that there are different specifications of foreign bias measures commonly used in the literature. So we follow Bekaert and Wang (2009) and Choi et al. (2017) and define our investor-

[7]We apply this restriction for three 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 AG as the underlying stock, or in the case of American Depositary Receipts (ADRs). ADRs are traded on a stock exchange on behalf of a 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 do not change when we re-estimate the main regression model using either all stock types or ordinary shares only.

level measure of institutional foreign bias as the difference between a country-specific optimal benchmark less the actual portfolio weight allocated to a certain target country.[8] In determining the theoretically optimal benchmark weights, we assume a world CAPM, i.e., investors weight a host country as per that country's share of world market capitalization.[9]

Formally, following Chan et al. (2005, 2009), Bekaert and Wang (2009), Beugelsdijk and Frijns (2010), and Choi et al. (2017), we calculate the weights for each investor-country-year combination in our sample as:

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

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

where $MV^*_{j,t}$ is the equity market capitalization of target country j at time t; $\sum_i MV^*_{i,t}$ 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. Therefore, the foreign bias measure ($FBIAS_{k,j,t}$) for investor k toward host country j at the end of year t is calculated as:

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

whereby the investor's home country is defined, in line with Coval and Moskowitz (1999) and Schumacher (2018), as the location of the institution's corporate headquarters instead of its country of incorporation.[10] To calculate country-level market capitalization benchmark weights, we rely on the entire Compustat stock universe, and aggregate the market value of all available

[8] Our baseline results remain qualitatively unchanged when we apply alternative bias measures, for example, 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.

[9] Note that our foreign bias measure is defined inversely, i.e., a positive value of the foreign bias measure indicates an underweighting of foreign equities in the institutional investor's portfolio. Levy and Levy (2014) observe 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 a detailed overview of alternative benchmarks.

[10] This approach avoids overweighting offshore locations (e.g., the Cayman Islands), because 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)). Furthermore, it seems economically meaningful given that the location of the headquarters identifies the location where portfolio decisions are taken (Schumacher (2018)).

shares (defined as the product of the closing price and the number of shares outstanding) for each country as of the end of December.[11] 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)). Because we only consider common and preferred stock when calculating actual portfolio weights, we likewise restrict our sample to these types of securities when calculating the benchmark weights.[12]

Next, we address concerns that global equity market capitalizations calculated via Compustat might be affected by survivorship bias (Kothari et al. (1995)). To this end, we compare our values for the country-level and global equity market capitalizations calculated from the Compustat securities files with the publicly available World Development Indicators provided by the World Bank. These values have been used by prior studies to proxy for global equity market capitalizations (Lau et al. (2010)). The comparison reveals minor deviations in only a few cases.[13] Therefore, we believe 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 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).[14] 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

[11] 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.

[12] 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, e.g., 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.

[13] 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.

[14] 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 as well as 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 wide range of human values. The 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 this survey-based measure of trust is the most promising indicator.

Wei and Zhang (2020) and use linear interpolation to estimate any 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. 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 one case, but treat it as one times its corresponding weighting factor cases instead.[15] Weighted samples aim to ensure representative coverage of religions, gender, and cultural groups. However, higher-status groups may still lack representativeness (Inglehart et al. (2000)). Given that 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.

3.3 Cost of Equity Estimates

To examine whether trusting shareholders lower the cost of equity capital, we construct a measure of the implied cost of equity capital and another measure that captures the degree of trust within a firm's shareholder base. We follow the recent literature (Hail and Leuz (2006), El Ghoul et al. (2011), El Ghoul et al. (2018), Gupta et al. (2018)), and proxy for a firm's cost of equity capital as implied by analysts' earnings forecasts and stock prices using four models. Following El Ghoul et al. (2018), we construct the measure of the implied cost of equity capital (Cost of Equity$_{f,t}$) ten months after the end of the fiscal year. This value is the average predicted by the residual income valuation models of Claus and Thomas (2001) and Gebhardt et al. (2001), and the abnormal growth models of Easton (2004) and Ohlson and Juettner-Nauroth (2005). We provide an overview of the assumptions of the four models and state their valuation equations in Table A3 in the appendix.

[15] 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.

To capture the level of trust within a firm's shareholder base in our cost of equity analyses, we calculate the holding-weighted residual trust score among all foreign institutional investors of a firm (Foreign Shareholders' $\text{Trust}_{f,t}$). We exclude domestic shareholders to ensure that the effect of shareholder trust on the cost of equity capital is not affected by the level of social trust embedded in the society of the firm's country of headquarters.

3.4 Control Variables

Next, we collect a comprehensive set of control variables. An overview of all the variables, together with detailed construction principles and data sources, is 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 associated 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 $\text{Risk}_{i,t}$), as well as a measure of a country's perceived level of public sector corruption ($\text{Corruption}_{i,t}$). Our 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).

The level of familiarity between investor country and host country has also been shown to affect institutional foreign bias (Chan et al. (2005), Bekaert and Wang (2009), Beugelsdijk and Frijns (2010)). Therefore, 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 $\text{Distance}_{i,j}$), and dummy variables indicating whether two countries share a common official language (Common Language $\text{Dummy}_{i,j}$), are contiguous (Contiguity $\text{Dummy}_{i,j}$), ever had a colonial link (Colony $\text{Dummy}_{i,j}$), and are now or were for a long period of time the same state or the same administrative entity (Same Country $\text{Dummy}_{i,j}$).

Following Wei and Zhang (2020), we further add 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 $\text{Size}_{k,t}$), the number of years since the investment entity was founded to proxy for investor expertise (Investor $\text{Age}_{k,t}$), and the number of stocks held in the investor portfolio to proxy for the degree of diversification (Number of $\text{Stocks}_{k,t}$).

Against the background of our international approach, we note it is conceivable that, due to differences in country-level characteristics, some host countries may be more attractive to investors than others. Therefore, we take relative attractiveness of a target country into account, and include a measure of the relative size of the stock market (Stock Market $\text{Development}_{j,t}$) in our baseline regression model. This measure is based on Compustat and World Bank data (Chan et al. (2005), Bekaert and Wang (2009)). We also include a proxy for restrictions on foreign capital transactions (Capital $\text{Controls}_{j,t}$) based on the Economic Freedom index of The Heritage Foundation (Chan et al. (2005), Beugelsdijk and Frijns (2010)). Following Wei and Zhang (2020), we further incorporate data on the host countries' Gross Domestic Product per Capita (GDP per $\text{Capita}_{j,t}$), taken from the World Bank, to proxy for economic development. Finally, as in Mishra (2008) and Bekaert and Wang (2009), we include data on the number of internet users (Internet $\text{Availability}_{j,t}$) to proxy for information asymmetries and information costs. This is important, because a host country's internet availability eases access to financial information, which foreign investors can use for investment decisions.

Following Beugelsdijk and Frijns (2010), we also control for the host country's equity market risk and return characteristics. We proxy for these by using the one-year lagged return of the host country's annual average stock market index (Stock Market $\text{Return}_{j,t}$) and the five-year rolling variance of the host country's annual average stock market returns (Stock Market $\text{Risk}_{j,t}$), respectively. To account for diversification benefits between the equity markets of the investor and target country, we include the five-year rolling average of a country pair's correlations of annual average stock market returns (Diversification $\text{Potential}_{i,j,t}$). We compute these three controls based on Bloomberg data (accessed via the World Bank Global Financial Development Database).

Finally, following El Ghoul et al. (2018) and Döring et al. (2021), in our cost of equity analyses we use control variables that we believe are associated with the cost of equity financing and the level of residual trust prevalent in a firm's country of domicile. Time-varying control variables at the country level comprise the efficiency of the stock market (Stock Market $\text{Efficiency}_{j,t}$), calculated

based on World Bank data, and the realized inflation rate over the next year ($\text{Inflation}_{j,t}$), calculated based on I/B/E/S and Compustat data. Time varying firm-level controls are based on I/B/E/S, Compustat, and FactSet data, and comprise a measure of the volatility of stock returns over the prior twelve months ($\text{Stock Return Volatility}_{f,t}$), the firm's market value to book value of equity ($\text{Market to Book}_{f,t}$), leverage ratio ($\text{Leverage}_{f,t}$), size ($\text{Firm Size}_{f,t}$), a measure of the signed forecast error ($\text{Signed Forecast Error}_{f,t}$), a measure of the dispersion of analyst forecasts ($\text{Analyst Forecasts Dispersion}_{f,t}$), the percentage of the firm's equity capital held by institutional investors ($\text{Institutional Ownership}_{f,t}$), and the firm's capital intensity ($\text{Capital Intensity}_{f,t}$). Because we observe some apparent reporting errors in the firm-level variables drawn from Compustat, we winsorize all of them at the 1% and 99% levels to limit outlier effects.

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 our 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. Our final panel covers 9,811 distinct institutional investors from 86 different countries, and it comprises 74,567 investor-year observations for which our measure of trust is available. U.S. institutions account for the largest share, at 63.11% (6,192). The investors from our sample allocate equity to 118 different host countries, which allows us to analyze a comprehensive 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), that 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.[16]

We observe a strong preference for domestic investments across all investor domiciles. U.S.-based investors, for example, allocate an average of 93.22% to their domestic equity market (see shaded cell in column "*USA*"). The relative share of the country in the world portfolio averages only 37.40% over our sample period (not shown in Table I). This preference for domestic investments also 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 0.53% over our sample period (see the value of $\text{ØFBIAS}_{k,i,t}$ in column "*USA*"). We note that the average investor in each of our sample countries exhibits significant levels of foreign bias (with the exception of investors from Luxembourg). This finding 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 target-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 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 and investors from Spain allocate 11.07% to the French market.[17] 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 national 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 the top fifty investor

[16] In our empirical analyses, we focus only on the host-country perspective of investor-level foreign bias. The average foreign bias from the home-country perspective serves only for better understanding of the cross-sectional distribution of foreign equity investments.

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

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 (not shown in Figure I) to 77.42% for Denmark. We use 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 trust and other country-level factors that have been shown to affect institutional investment biases (Chan et al. (2005)).

3.5.3 Summary Statistics

Table II provides summary statistics of the variables used in our subsequent analyses. Panel A reports summary statistics of investor-level variables, which refer to investor k at time t. Panel B reports summary statistics of country-level variables, which refer to either investor country i or target country j at time t. Panel C reports summary statistics for bilateral variables on country pairs. Bilateral country-level variables refer to both investor country i and target country j at time t. Finally, Panel D shows summary statistics of firm-level variables, which refer to a specific firm at time t. Because the data show no special features, we do not comment on them further for the sake of brevity. A detailed overview of data sources and construction principles is in Table A1 in the appendix.

[INSERT TABLE II ABOUT HERE]

4 Empirical Results

Our main premise 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 low and high-trust investors. Unfortunately, implementing such an experiment with random treatment and control groups is impossible, and is a frequent limitation in international business research (Reeb et al. (2012)). Nevertheless, in our multivariate

regression analyses, we attempt to isolate the relation between trust and foreign bias from unobserved confounders, allowing us to make meaningful inferences about the treatment effect of social trust.

4.1 Interaction of Trust, Culture, and Formal Institutions

One legitimate concern is that the relation between trust and foreign bias could be affected by endogeneity. In our setting, endogeneity is likely to result from correlations between the explanatory variables included in our regression models and the unobserved factors captured by the error term. In particular, social trust may be associated with the prevailing cultural, political, and institutional frameworks in the investor's country of domicile. A country's level of trust may arise, e.g., as a consequence of an efficient judicial system. To address this possibility, and to observe the interplay between trust and its aforementioned potential determinants, we calculate 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 note that variables representing formal institutions are defined negatively, i.e., a low score represents a favorable outcome for an investor (and vice versa).[18] For example, we observe significant negative correlations between social trust and formal institutions such as the efficiency and integrity of a country's legal environment or the risk of expropriation. Defined as the percentage probability of being cheated (Guiso et al. (2008b)), social trust embedded in a country's society is likely to be determined by both of these country-level variables. It is reasonable to assume that effective law enforcement and stable ownership structures will limit the potential for being cheated.

[INSERT TABLE III ABOUT HERE]

Moreover, we observe statistically significant negative correlation coefficients for Hofstede's (2001) cultural dimensions, e.g., for masculinity and individualism. Societies characterized by masculine values are competitive and focus on material success, while those characterized by feminine values promote interpersonal relationships. It is plausible that the latter countries achieve higher values of social trust. Similarly, collectivist countries that strongly emphasize community goals are likely to promote trust among their members. Conversely, members of

[18] For example, a high score of Accounting Standards$_i$, indicates a low degree of transparency of the information available to investors.

individualist societies pursue personal goals and are likely to hinder the development of high levels of social trust, resulting in the observed negative correlation coefficients.

To address this source of endogeneity, and to isolate trust from related dimensions, we adopt the following procedure in all our tests. 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 our regression analyses. This approach not only mitigates the risk of endogeneity due to omitted variables, but it also ensures that our results are not driven by the possibility that trust is capturing the effects of other country-level formal and informal institutions.

4.2 Baseline Results

We perform multivariate regression analyses to examine the association between social trust and institutional foreign bias at the investor level. We regress foreign bias ($\text{FBIAS}_{k,j,t}$) on the measure of social trust we isolate from related dimensions (Residual $\text{Trust}_{i,t}$), as explained in Section 4.1. Although we already control for country-level dimensions via the construction of our residual trust measure, our regression approach may not fully account for the omission of other important variables. Therefore, we again 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. In addition, we cluster heteroscedasticity-robust standard errors at the investor level. More formally, to test hypothesis 1, we estimate the following baseline regression model:

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

We present the regression estimates in Table IV. By adding year fixed effects and target country fixed effects to all of our models, we isolate the influence of aggregate time series trends, and

control for all time-constant characteristics of the host country (target fixed effect). 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 investor (column (3)) via investor-type fixed effects, domicile fixed effects, and investor fixed effects, respectively. Subsequently, we control further for their combinations with target country fixed effects (see columns (4) to (6) of Table IV). In our most conservative regression model (see column (6), hereinafter referred to as the baseline specification), where we add investor × target fixed effects, we control for all time-constant characteristics within investor-host country pairs, i.e., we explain changes within a particular investors' foreign bias toward a specific host country.[19]

[INSERT TABLE IV ABOUT HERE]

The estimated coefficient on residual trust is negative and statistically significant throughout all specifications, indicating that investors domiciled in high-trust countries exhibit significantly lower foreign bias. These results are not attributable to investor characteristics, the investor's familiarity with the host country, the attractiveness of the target country, or the risk and return profile. Moreover, compared to specifications (1) to (5), we note a substantial increase in the explanatory power of the baseline model ($R^2 = 0.7078$), where we apply our most conservative specification of fixed effects and control for all time-constant characteristics within investor-host pairs. The estimated trust coefficient of -0.0142 implies that a 1-standard deviation increase in our trust measure reduces foreign bias by 10.33% relative to the sample mean ($= -0.0142 \times 0.0502/0.0069$, where 0.0069 is the sample mean of $FBIAS_{k,j,t}$). Overall, these results confirm hypothesis 1, suggesting that the negative effect of trust on foreign bias is not only highly statistically significant but also economically relevant.

4.3 Social Trust as a Substitute for Formal Institutions

Next, we test hypothesis 2, and disentangle whether the effect of social trust on institutional investors' foreign bias is conditional on target countries' institutional quality (i.e., stronger if host-country institutions are weak). We re-run the baseline regression model and add the interaction effects between investor-country residual trust and the quality of the host-country institutional

[19] We note that 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 fixed effects and the investor × target fixed effects, respectively.

framework (using the same variables applied for the construction of our investor-country residual trust measure). To enable a straightforward interpretation of the interaction effects, we define the institutional variables so that a low value represents a good outcome (and vice versa). We normalize these variables to range from 0 to 1 in order to allow for comparisons of the interaction effects. The results of the tests of the hypothesized substitution effect are presented in Table V.

Throughout all specifications, we observe that the stand-alone trust effect is no longer significant, but that the interaction terms capture the negative effects at the 1% level of statistical significance. This finding has two implications for the interplay between the informal institution of social trust and formal-legal institutions, which we illustrate using the law and order tradition as an example (see column (1) of Table V). 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 -0.0672. However, if host-country institutional quality is high (i.e., if Law and Order_j approaches 0), there is no effect of social trust on foreign bias due to the lack of statistical significance of the stand-alone trust coefficient.

[INSERT TABLE V ABOUT HERE]

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., $\text{Law and Order}_{\text{Sri Lanka}} = 1$), we observe that a 1-standard deviation (0.3234) increase in the law and order tradition reduces foreign bias by more than twice the sample mean ($-0.0672 \times 0.3234/0.0095 = -2.2951$, where 0.0095 is the sample mean of Law and Order_j).[20] We also compare the standardized interaction estimates for the different dimensions of the host-country formal institutional framework. We find that trust is of particular importance in countries where shareholders are exposed to higher risk of expropriation. The estimated coefficient on $\text{Expropriation Risk}_j$ of -0.0803 implies that a 1-standard deviation increase in the risk of expropriation reduces foreign bias by almost three times the sample mean ($-2.7449 = -0.0803 \times 0.3233/0.0095$). In contrast, poor accounting standards enhance the trust effect considerably less, as the coefficient estimate on $\text{Accounting Standards}_j$ of -0.0457 results in a standardized factor of only -0.8798 ($= -0.0457 \times 0.2119/0.0110$).

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

Overall, our tests support hypothesis 2, corroborating 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 and host-country formal institutions substitute for each other in international portfolio allocation.

4.4 The Role of Information Asymmetries

To verify the moderating role of information asymmetries, we rely on crisis events to capture exogenous variations in information asymmetry. We test whether the trust-related reduction in foreign bias is strongest during times of financial crisis by drawing data from the Laeven and Valencia (2020) database. It contains country-specific crisis dummies as well as continuous measures for the severity of crisis events. The Crisis $\text{Dummy}_{j,t}$ variable indicates whether a banking crisis was present in the host country at a given year, while the Crisis Output $\text{Loss}_{j,t}$ variable captures relative output losses associated with crisis episodes. Both variables identify opaque information environments, when the knowledge gap in domestic vis-à-vis foreign equity markets is most pronounced. To test hypothesis 3, we re-estimate our baseline specification (specified in Equation (4)), adding interaction effects between residual trust and the variables related to host country crisis events. The results are in Table VI.

[INSERT TABLE VI ABOUT HERE]

We observe negative coefficient estimates at the 1% significance level for our stand-alone measure of social trust, as well as for the interaction terms with the two information asymmetry proxies. Focusing on the Residual $\text{Trust}_{i,t}$ × Crisis $\text{Dummy}_{j,t}$ interaction coefficient estimate of −0.0130 (see column (1)), the magnitude of the trust effect increases on average by 31.78% (= −0.0130/(−0.0279 − 0.0130)) in years where the host country's equity market was hit by a crisis. Furthermore, the Residual $\text{Trust}_{i,t}$ × Crisis Output $\text{Loss}_{j,t}$ coefficient of −0.0263 (see column (2)) implies that the trust-related reduction in foreign bias almost doubles in magnitude when measured output losses due to crisis events reach maximum levels.

Overall, our findings support hypothesis 3 and indicate that the effect of trust on foreign bias is particularly pronounced during crisis times, i.e., when information asymmetries on the foreign equity markets are high. This result provides additional support for our more general notion

that investors from countries with higher levels of social trust require less information to make investment decisions. They therefore exhibit a higher propensity to invest in foreign markets.

4.5 Effect on Diversification

One immediate implication of our findings should be that a lower home bias, as a result of higher social trust, improves portfolio diversification and international risk sharing. To confirm that more trusting investor portfolios 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). 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 (2) and Equation (3)) across all countries in our sample, including the investor's country of domicile. In contrast, and similar to the measure of foreign bias (as defined by Equation (3)), the measure of 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. More formally, our measures of global and foreign concentration that indicate the percentage of an investor's portfolio to be reallocated to achieve full diversification across global or foreign markets, are as follows:

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

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

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

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

We present the regression results 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. We conclude that, in support of hypothesis 4, social trust helps accomplish greater international diversification in institutional investors' portfolios.

[INSERT TABLE VII ABOUT HERE]

4.6 Effect on the Cost of Equity

In a final step, we take a corporate finance perspective, and analyze whether social trust affects firms' cost of equity. As developed in hypothesis 5, we expect that the documented improvements in international risk sharing, as well as the special role of foreign institutional investors, will lead to a reduction in firms' cost of equity capital. To test this hypothesis, we regress our measure of a firm's implied cost of equity capital (Cost of Equity$_{f,t}$) on foreign shareholders' trust (Foreign Shareholders' Trust$_{f,t}$) and on the full set of control variables. We exploit the panel structure of our dataset, and include year fixed effects to isolate the influence of aggregate time series trends and firm fixed effects in order to control for time-constant firm characteristics. Following El Ghoul et al. (2018), we cluster heteroscedasticity-robust standard errors at the firm level. Formally, we estimate the following model:

$$\begin{aligned}\text{Cost of Equity}_{f,t} = \gamma_0 &+ \gamma_1 \text{Foreign Shareholders' Trust}_{f,t} + \gamma_2 \text{Residual Trust}_{j,t} \\ &+ \gamma_3 \text{GDP per Capita}_{j,t} + \gamma_4 \text{Stock Market Efficiency}_{j,t} + \gamma_5 \text{Inflation}_{j,t} \\ &+ \gamma_6 \text{Stock Return Volatility}_{f,t} + \gamma_7 \text{Market to Book}_{f,t} + \gamma_8 \text{Leverage}_{f,t} \\ &+ \gamma_9 \text{Firm Size}_{f,t} + \gamma_{10} \text{Signed Forecast Error}_{f,t} \\ &+ \gamma_{11} \text{Analyst Forecasts Dispersion}_{f,t} + \gamma_{12} \text{Institutional Ownership}_{f,t} \\ &+ \gamma_{13} \text{Capital Intensity}_{f,t} + \text{year and firm fixed effects} + \epsilon_{f,j,t} \end{aligned} \tag{8}$$

The regression result is in column (1) of Table VIII. The estimated coefficient on foreign shareholders' trust is negative and statistically significant at the 1% level, indicating that firms whose foreign shareholders are predominantly domiciled in high-trust countries have significantly lower costs of equity capital. This finding confirms hypothesis 5. We further emphasize that this is not driven by the level of social trust prevalent in a firm's country of domicile. In line with

Gupta et al. (2018), we also observe negative and statistically significant estimates for that (see Residual $\text{Trust}_{j,t}$ coefficient in column (1) of Table VIII).

[INSERT TABLE VIII ABOUT HERE]

However, endogeneity is an important potential concern in our analysis. It may affect the interpretation of the causal relation between foreign shareholders' trust and the implied cost of equity capital. We interpret our finding as evidence that the level of social trust among investors influences firms' cost of capital. However, an alternative interpretation is that causality may run the other way. In this case, if firms with high costs of equity are more likely to attract low-trust than high-trust investors, we should similarly observe a negative relation between foreign shareholders' trust and the cost of equity capital.

To account for this reverse causality explanation, we next perform a two stage least squares (2SLS) estimation and a difference-in-differences analysis. The results are in columns (2)-(3) and column (4) of Table VIII, respectively. Following El Ghoul et al. (2018), in our 2SLS regression, we use lagged values of a firm's foreign shareholders' trust (Foreign Shareholders' $\text{Trust}_{f,t-1}$) and lagged values of its industry mean (Foreign Shareholders' Industry $\text{Trust}_{f,t-1}$) as instruments. If foreign shareholders' trust is path-dependent, we expect past foreign shareholders' trust to affect their contemporaneous trust. Moreover, it is likely that firm-level ownership structures, in particular, the level of trusting foreign investors, are related to industry-level ownership structures. Because lagged values of foreign shareholders' trust are predetermined, i.e., they have already been set before the contemporaneous firm's cost of equity capital is determined, our instruments are unlikely to *directly* affect concurrent firm-level cost of equity capital.

Following Aggarwal et al. (2011), El Ghoul et al. (2018) and Driss et al. (2020), we conduct a series of tests to assess the robustness of our instrumental variables. The results are at the bottom of Table VIII. Our instrumental variables must be highly correlated with the potentially endogenous regressor (i.e., Foreign Shareholders' $\text{Trust}_{f,t}$), but uncorrelated with the unobservable error term. To test whether our instrumental variables are weak, we implement Pearson correlation tests, an F-test, and the Kleibergen-Paap rk LM test. The Pearson correlation tests reveal high correlations between foreign shareholders' trust and the two instruments. The null hypothesis of the F-test, which states that a model containing both instrumental variables fits the data equally as well as a model without them, is strongly rejected. With a value of 21.42, the F-statistic is well above the recommended threshold of 10 (see Stock et al. (2002)), indicating that our instruments

are not weak and meet the relevance condition from a statistical point of view. To further check for relevance, we perform a Kleibergen–Paap rk LM test, and find that the chi-square test statistic strongly rejects the null hypothesis that the model is underidentified. To test for the exogeneity of our instruments, we perform a Sargan test of overidentifying restrictions, and present robust and firm-level clustered chi-square statistics. With a p-value of 0.2142, the Sargan test indicates that our instrumental variables are valid, i.e., uncorrelated with the error term.

Overall, the results of these specification tests confirm that our regression model is well identified and our instrumental variables are appropriate. Most importantly, as can be inferred from column (3) of Table VIII, we continue to find negative coefficient estimates for instrumented foreign shareholders' trust, statistically significant at the 1% level. This result from the 2SLS estimation also supports hypothesis 5.

To further address endogeneity concerns, and to identify the causal effect of foreign shareholders' trust on the cost of equity capital, we perform a difference-in-differences test. During times of financial turmoil, we expect predominantly foreign investors who lack sufficient trust to withdraw from firms, with the result that the remaining foreign investors will exhibit higher average levels of social trust. Based on this conjecture, we use the global financial mortgage crisis of 2007-2009 as a source of exogenous variation in foreign shareholders' trust to study its impact on the firms' cost of equity capital. Accordingly, our Treatment Dummy_{t} variable takes a value of 1 during the three years of the global financial crisis (2007-2009), and 0 for the three years prior to the crisis (2004-2006).

Next, we categorize treatment and control groups to include firms that experience a strong (top tercile) or weak (bottom tercile) increase in foreign shareholders' trust during the crisis years, respectively. Based on this tercile classification, we define a Treated Dummy_{f} variable, which takes a value of either 1 (treatment) or 0 (control). Our difference-in-differences estimator is thus given by the interaction of the two dummy variables (Treatment Dummy_{t} × Treated Dummy_{f}). We again incorporate our set of control variables, including both year and firm fixed effects, and cluster heteroscedasticity-robust standard errors at the firm level. The difference-in-differences estimator captures the difference in the implied cost of equity prior to and during the increase in foreign shareholders' trust between treatment and control groups. Formally, to provide further support for hypothesis 5, we estimate the following difference-in-differences regression model with

our cost of equity measure as the dependent variable:

$$\begin{aligned}\text{Cost of Equity}_{f,t} = \delta_0 &+ \delta_1 \text{Treatment Dummy}_t \times \text{Treated Dummy}_j + \delta_2 \text{Residual Trust}_{j,t} \\ &+ \delta_3 \text{GDP per Capita}_{j,t} + \delta_4 \text{Stock Market Efficiency}_{j,t} + \delta_5 \text{Inflation}_{j,t} \\ &+ \delta_6 \text{Stock Return Volatility}_{f,t} + \delta_7 \text{Market to Book}_{f,t} + \delta_8 \text{Leverage}_{f,t} \\ &+ \delta_9 \text{Firm Size}_{f,t} + \delta_{10} \text{Signed Forecast Error}_{f,t} \\ &+ \delta_{11} \text{Analyst Forecasts Dispersion}_{f,t} + \delta_{12} \text{Institutional Ownership}_{f,t} \\ &+ \delta_{13} \text{Capital Intensity}_{f,t} + \text{year and firm fixed effects} + \epsilon_{f,j,t} \end{aligned} \tag{9}$$

The results are in Table VIII.[21] The estimated interaction coefficient of interest is negative and statistically significant at the 5% level (column (4)). The model in Equation (9) already controls for trends common to and time-invariant differences between the treatment and control groups by including time and firm fixed effects, respectively. Therefore, the difference-in-differences interaction coefficient (δ_1) estimate captures the variation that remains after differencing out. Most importantly, we still find evidence in support of hypothesis 5, arguing that an increase in the level of social trust among a firm's foreign shareholders lowers its cost of equity capital.

5 Robustness Tests

5.1 Measurement of Trust and Sample Composition

To alleviate concerns about our sample composition and the measurement of our trust variable, we provide additional robustness tests in Table A4 in the appendix. 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 (see column (6) of Table IV) 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 (1) of Table A4 in the appendix. We conclude that our results are not driven by the process of isolating social trust from related dimensions.

In our previous analysis, we used 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

[21] We emphasize that our measure of foreign shareholders' trust captures the holding-weighted trust scores among a firm's foreign investors. Because the analysis here focuses on firm-level rather than investor-level results, our sample size decreases compared to our foreign bias analyses in Tables IV-VI.

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 A4 in the appendix, remain qualitatively unchanged, and the estimated coefficient on the trust variable even increases slightly (in absolute terms). Overall, we conclude that our main findings are robust to alternative sources and measures of social trust.

Next, we limit our sample to investors not resident in the U.S. to ensure that the trust-related reduction in foreign bias is not driven by U.S. investors alone. We re-estimate the baseline regression and present the results in column (3) of Table A4. Similar in magnitude when compared to the full-sample estimate obtained in the baseline regression, we observe a standardized trust-related reduction in foreign bias of 8.61% ($= -0.0066 \times 0.0688/0.0053$). Despite the markedly reduced sample size, the coefficient estimate is statistically significant at the 5% level, which indicates that the link between trust and foreign bias remains valid in an international framework (i.e., it is not driven solely by U.S. domiciled investors).

5.2 Alternative Cost of Equity Capital Estimates

To examine whether the results of our cost of equity analyses are robust to alternative cost of equity capital estimates, we use modified model specifications. Because we rely on analysts' earnings forecasts to estimate the cost of equity capital, there may be concerns that analyst forecast sluggishness is leading to biased estimates of the cost of capital (Hail and Leuz (2006)). To tackle this concern, we follow Hail and Leuz (2006) and El Ghoul et al. (2018). We re-estimate the cost of equity while applying the average of the four model estimates as of seven months after the fiscal year (CoE $7m_{f,t}$) and four months after the fiscal year (CoE $4m_{f,t}$), instead of as of ten months after the fiscal year. The results are in columns (1) and (2) of Table A5 in the

appendix. They show that the significant negative relation between foreign shareholders' trust and the cost of equity capital continues to hold and even increases slightly (compared to column (1) in Table VIII).

As outlined in Table A3 in the appendix, the four models that we use in this study to proxy for the implied cost of equity capital are based on a number of assumptions about earnings growth rates. Because estimates of the cost of equity are sensitive to the underlying assumptions (Easton et al. (2002)), we re-estimate the cost of equity financing, but use alternative growth rates. In particular, we again follow Hail and Leuz (2006) and El Ghoul et al. (2018), and use alternative growth assumptions. The first posits that long-term earnings growth is fixed at 3% (CoE $3p_{f,t}$). The second posits that the perpetual growth rate equals the annual real GDP growth rate plus the long-run inflation rate (CoE $GDP_{f,t}$) when computing the cost of equity implied by the Claus and Thomas (2001) and Ohlson and Juettner-Nauroth (2005) models.[22] The results are in columns (3) and (4) of Table A5 in the appendix. In each specification, we observe that the significant negative relation between foreign shareholder trust and the cost of equity capital continues to hold, i.e., trusting investors reduce the firm's cost of equity.

6 Conclusion

In this study, we investigate the role of social trust in the equity allocations of 9,811 institutional investors from 86 countries over the 2000-2017 period. An important feature of our data is the extensive cross-sectional variation in the measure of social trust, allowing reliable estimates of the effects of social trust on foreign bias in international portfolio allocation.

Our empirical analyses reveal several important findings. First, a higher level of social trust in an investor's country of domicile significantly reduces foreign bias in institutionally managed portfolios. Second, 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 thus suggest that social trust, as an informal institution, and the quality of the host country's formal-institutional framework, are substitutes in international portfolio allocation. Third, using events of exogenous variation in information asymmetry, we find support for an information-based explanation. More precisely, investors from countries with higher levels of social trust require less information when making decisions, and they thus exhibit

[22] In our main analyses, we follow El Ghoul et al. (2018) and assume that the perpetual growth rate equals the future inflation rate when estimating the cost of equity implied by the models of Claus and Thomas (2001) and Ohlson and Juettner-Nauroth (2005).

a higher propensity to invest in foreign markets. Fourth, our analyses provide important economic implications: Higher social trust leads to better international risk sharing for individual investors who delegate portfolio allocation decisions to institutional investors. In addition, higher social trust generates welfare benefits in the form of a lower cost of equity capital for firms with a larger portion of trusting foreign institutional investors in their shareholder base. Taken together, our findings strongly suggest that social trust mitigates inefficiencies in cross-border portfolio allocation created by information asymmetries.

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Table A1: Variable Descriptions

This appendix provides definitions and data sources for the main variables used in the study. Investor-level variables refer to investor k at time t. Country-level variables refer either to investor country i or host country j at time t. Country-level (dyadic) variables refer to both investor country i and host country j at time t. Firm-level variables refer to firm f at time t.

Variable	Definition and Data Source
Investor Level:	
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. 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 Level:	
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 (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.
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.
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.

(*continued*)

Table A1 — *continued*

Variable	Definition and Data Source
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	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).
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.
Capital Controls	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.

(*continued*)

Table A1 — *continued*

Variable	Definition and Data Source
GDP per Capita	Gross domestic product per capita. Measured in 10,000 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).
Crisis Dummy	Dummy variable indicating whether a banking crisis was present in the target country at a given year-end. Banking crises are defined as events that meet two conditions. First, there are significant signs of financial distress in the banking system. Second, there are relevant banking policy intervention measures in response to significant losses in the banking system. Source: Laeven and Valencia (2020).
Crisis Output Loss	Measure of output losses associated with banking crisis episodes. Expressed as a percentage of trend real GDP. Source: Laeven and Valencia (2020).
Stock Market Efficiency	Natural logarithm of the stock market's ratio of the total value of shares traded to gross domestic product times the banking sector's overhead costs. Source: Authors' calculations based on World Bank data.
Inflation	Measure of the realized inflation rate, measured over the next year. Source: Authors' calculations based on I/B/E/S and Compustat data.
Country Level (Dyadic):	
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	Dummy variable indicating whether two countries share a common official language. Source: Center for Research and Expertise on the World Economy.
Contiguity Dummy	Dummy variable indicating whether two countries are contiguous. Source: Center for Research and Expertise on the World Economy.
Colony Dummy	Dummy variable indicating whether two countries ever had a colonial link. Source: Center for Research and Expertise on the World Economy.
Same Country Dummy	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).
Firm Level:	
Cost of Equity	Measure of the implied cost of equity capital ten months after the fiscal year. Calculated as averages of the Claus and Thomas (2001), Gebhardt et al. (2001), Easton (2004), and Ohlson and Juettner-Nauroth (2005) models. Source: Authors' calculations based on I/B/E/S and Compustat data.

(*continued*)

Table A1 — *continued*

Variable	Definition and Data Source
Foreign Shareholders' Trust	Holding-weighted residual trust score among all foreign institutional investors of a firm. Source: Authors' calculations based on FactSet, Compustat, World Values Survey and European Values Study data.
Stock Return Volatility	Measure of the volatility of stock returns over the previous twelve months. Source: Authors' calculations based on Compustat data.
Market to Book	Market value to book value of equity. Source: Authors' calculations based on Compustat data.
Leverage	Measure of leverage ratio. Defined as the ratio of long-term debt to total assets. Source: Authors' calculations based on Compustat data.
Firm Size	Natural logarithm of total assets in million USD. Source: Authors' calculations based on FactSet data.
Signed Forecast Error	Measure of the signed forecast error. Measured as the difference between one-year-ahead consensus earnings forecasts and realized earnings deflated by beginning of period assets per share. Source: Authors' calculations based on I/B/E/S and Compustat data.
Analyst Forecast Dispersion	Measure of the dispersion of analyst forecasts. Measured by the coefficient of variation of one-year-ahead analyst forecasts of earnings per share. Source: Authors' calculations based on I/B/E/S data.
Institutional Ownership	Percentage of the equity capital of a company held by institutional investors. Source: Authors' calculations based on FactSet data.
Capital Intensity	Measure of capital intensity. Calculated as the ratio of capital expenditures to total assets. Source: Authors' calculations based on FactSet data.

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. Country-level variables refer either to country i or to country i at time t. 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. *t*-statistics are given in parentheses. ***,**, and * denote statistical significance at the 1%, 5%, and 10% level, respectively.

Dependent Variable:	(1) Social Trust$_{i,t}$
Institutional and Political Variables:	
Law and Order$_i$	-0.0645 (-0.32)
Judicial Integrity$_i$	0.0211 (0.15)
Accounting Standards$_i$	-0.3750*** (-3.07)
Expropriation Risk$_i$	-0.0716 (-0.59)
Judicial Efficiency$_i$	-0.2440** (-2.57)
Legal System Dummy$_i$	-0.0490 (-0.99)
Geopolitical Risk$_{i,t}$	0.0005* (2.02)
Corruption$_{i,t}$	-0.0023 (-1.47)
Hofstede's Cultural Dimensions:	
Power Distance$_i$	-0.0059*** (-4.05)
Individualism$_i$	-0.0008 (-0.68)
Masculinity$_i$	-0.0030*** (-3.34)
Uncertainty Avoidance$_i$	-0.0003 (-0.33)
Long-term Orientation$_i$	-0.0004 (-0.35)
Indulgence$_i$	-0.0019 (-1.60)
Year FE	Y
Adjusted R-squared	0.8670
Observations	461

Table A3: Cost of Equity Models

This appendix closely follows El Ghoul et al. (2018), and provides a brief overview of the four models used in this study to proxy for the implied cost of equity capital. They comprise the residual income valuation models of Claus and Thomas (2001) and Gebhardt et al. (2001), as well as the abnormal growth models of Easton (2004) and Ohlson and Juettner-Nauroth (2005). We start with a definition of the variables used in the four models, and state the general assumptions on which all four are based. We then address the additional assumptions of each model and provide their valuation equation.

Variable Descriptions	
CoE	Implied cost of equity capital.
P_t	Stock price as of ten months after the end of the fiscal year.
BV_t	Current book value per share.
d_t	Expected dividend payout at time t.
i_t	Expected perpetual earnings growth at time t.
$\widetilde{RoE}_{t+\tau}$	Forecasted return on equity for year t+τ.
$\widetilde{EPS}_{t+\tau}$	Forecasted earnings for year t+τ.
$\widetilde{BV}_{t+\tau}$	Forecasted book value per share for year t+τ.
$\widetilde{LTG}_t$	Forecasted long-term earnings growth at time t.

General Assumptions

(1) We only consider firms with a positive one-year-ahead ($\widetilde{EPS}_{t+1}$) and two-year-ahead ($\widetilde{EPS}_{t+2}$) earnings forecasts available, and either a three-year-ahead forecast ($\widetilde{EPS}_{t+3}$) or a long-term growth forecast ($\widetilde{LTG}_t$).

(2) We impute missing three-year-ahead ($\widetilde{EPS}_{t+3}$), four-year-ahead ($\widetilde{EPS}_{t+4}$), and five-year-ahead ($\widetilde{EPS}_{t+5}$) earnings forecasts from the previous year forecasts and the long-term earnings growth forecast as $\widetilde{EPS}_{t+\tau} = -\widetilde{EPS}_{t+\tau\text{-}1}(1 + \widetilde{LTG}_t)$.

(3) If the forecasted long-term earnings growth rate is missing, we impute it from the growth rate implied by the two-year-ahead ($\widetilde{EPS}_{t+2}$) and the three-year-ahead ($\widetilde{EPS}_{t+3}$) earnings forecasts as $\widetilde{LTG}_t = (\widetilde{EPS}_{t+3} - \widetilde{EPS}_{t+2})/\widetilde{EPS}_{t+2}$.

(4) We estimate the expected dividend payout (d_t) as the average over the previous three years, i.e., $d_t = (d_{t-1} + d_{t-2} + d_{t-3})/3$, and replace the expected dividend payout with the country-year median if its value is missing or outside the interval $[0, 1]$.

(5) We approximate the expected perpetual earnings growth rate (i_t) by the next year's realized inflation rate.

Model 1: Claus and Thomas (2001)

Additional Assumptions:

(1) The requirements for a clean surplus accounting are met, i.e., the clean surplus relationship $\widetilde{BV}_{t+\tau} = \widetilde{BV}_{t+\tau\text{-}1} + \widetilde{EPS}_{t+\tau}(1 - d_{t+\tau})$ holds (see Feltham and Ohlson (1995), Ohlson (1995)).

(2) Forecasted abnormal earnings correspond to forecast earnings less a charge for the cost of equity capital.

(3) A forecast horizon of five years is set. Thereafter, the forecast residual earnings grow at the expected inflation rate.

(*continued*)

Table A3 — *continued*

Valuation Equation:

$$P_t = BV_t + \sum_{\tau=1}^{5} \frac{\widetilde{EPS}_{t+\tau} - CoE \times \widetilde{BV}_{t+\tau-1}}{(1+CoE)^{\tau}} + \frac{(\widetilde{EPS}_{t+5} - CoE \times \widetilde{BV}_{t+5-1})(1+i_t)}{(CoE - i_t)(1+CoE)^{5}}$$

Model 2: Gebhardt et al. (2001)

Additional Assumptions:

(1) The requirements for a clean surplus accounting are met, i.e., the clean surplus relationship $\widetilde{BV}_{t+\tau} = \widetilde{BV}_{t+\tau\text{-}1} + \widetilde{EPS}_{t+\tau}(1 - d_{t+\tau})$ holds (see Feltham and Ohlson (1995), Ohlson (1995)).

(2) A forecast horizon of three years is set. $\widetilde{RoE}_{t+\tau} = (\widetilde{EPS}_{t+\tau})/\widetilde{BV}_{t+\tau\text{-}1}$ holds for the first three years. Thereafter, the forecast return on equity fades linearly to a target return on equity by the twelfth year.

Valuation Equation:

$$P_t = BV_t + \sum_{\tau=1}^{11} \frac{\widetilde{RoE}_{t+\tau} - CoE}{(1+CoE)^{\tau}} \widetilde{BV}_{t+\tau-1} + \frac{\widetilde{RoE}_{t+12} - CoE}{CoE(1+CoE)^{\tau}} \widetilde{BV}_{t+11}$$

Model 3: Easton (2004)

Additional Assumptions:

(1) A forecast horizon of two years is set. Thereafter, forecasted abnormal earnings grow constantly in the amount of the perpetual annuity.

Valuation Equation:

$$P_t = \frac{\widetilde{EPS}_{t+2} - \widetilde{EPS}_{t+1}(1 - CoE \times d_{t+1})}{CoE^2}$$

Model 4: Ohlson and Juettner-Nauroth (2005)

Additional Assumptions:

(1) A forecast horizon of one year is set. Thereafter, forecasted earnings grow at a near-term rate that converges to the perpetual annuity rate. The near-term earnings growth equals the average of the forecasted earnings growth from year t+1 to year t+2 and the forecasted long-term earnings growth.

(2) The perpetual growth rate corresponds to the expected inflation rate.

Valuation Equation:

$$P_t = \frac{\widetilde{EPS}_{t+1}\left(\frac{1}{2}\left(\frac{\widetilde{EPS}_{t+2} - \widetilde{EPS}_{t+1}}{\widetilde{EPS}_{t+1}} + \widetilde{LTG}_t\right) - i_t + CoE \times d_{t+1}\right)}{CoE(CoE - i_t)}$$

Table A4: Robustness to Measurement of Social Trust and Sample Composition

The table reports the results of robustness tests and re-estimates the baseline regression specification (see column (6) of Table IV). In column (1), we apply a measure of (non-residual) social trust instead of residual trust. In column (2), we use trust data from the General Social Survey instead of the World Values Survey for U.S.-domiciled investors. In column (3), we re-run the baseline regression specification but restrict our global sample to non-U.S.-domiciled investors. Investor-level variables refer to investor k at time t. Investor-country-level variables refer to the investor's country of domicile i 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 as well as investor × target fixed effects to control for time-constant characteristics within investor-target-country pairs. Heteroscedasticity-robust standard errors are clustered at the investor level. *t*-statistics are given in parentheses. ***,**, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
	Global Sample		Global S. w/o U.S.
	Dependent Variable: $FBIAS_{k,j,t}$		
$Social\ Trust_{i,t}$	-0.0124***		
	(-6.35)		
$Residual\ Trust\ (GSS)_{i,t}$		-0.0153***	
		(-7.62)	
$Residual\ Trust_{i,t}$			-0.0066**
			(-2.11)
$Investor\ Size_{k,t}$	0.0001**	0.0001**	0.0003***
	(1.98)	(2.14)	(4.67)
$Investor\ Age_{k,t}$	-0.0000	-0.0000	0.0002
	(-0.76)	(-0.54)	(1.09)
$Number\ of\ Stocks_{k,t}$	0.0000	0.0000	-0.0003***
	(0.23)	(0.14)	(-2.65)
$Stock\ Market\ Development_{j,t}$	0.0045***	0.0045***	0.0039***
	(99.08)	(97.63)	(31.05)
$Capital\ Controls_{j,t}$	-0.0001***	-0.0001***	-0.0001***
	(-48.42)	(-47.92)	(-12.68)
$GDP\ per\ Capita_{j,t}$	0.0000	0.0000	-0.0007***
	(0.52)	(0.10)	(-6.71)
$Internet\ Availability_{j,t}$	0.0001***	0.0001***	0.0001***
	(24.28)	(23.49)	(14.14)
$Stock\ Market\ Return_{j,t}$	-0.0004***	-0.0004***	-0.0006***
	(-11.46)	(-11.84)	(-6.57)
$Stock\ Market\ Risk_{j,t}$	0.0009***	0.0009***	0.0010***
	(21.90)	(21.06)	(11.15)
$Diversification\ Potential_{i,j,t}$	-0.0002***	-0.0002***	0.0004***
	(-7.58)	(-7.82)	(6.49)
Year FE	Y	Y	Y
Investor FE	Y	Y	Y
Target FE	Y	Y	Y
Investor × Target FE	Y	Y	Y
Adjusted R-squared	0.7183	0.7078	0.6798
Observations	5,231,006	5,027,082	1,545,783

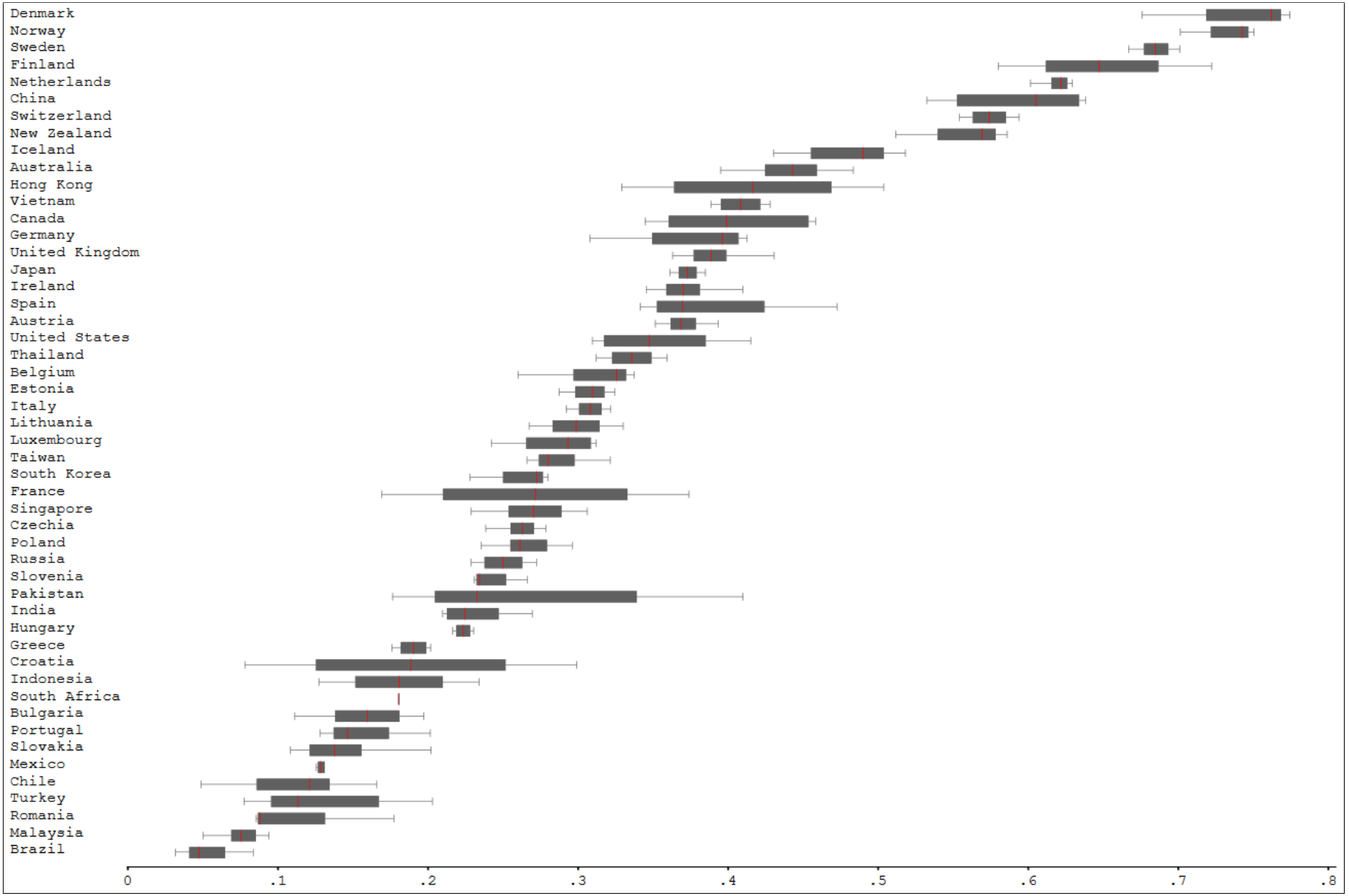
Table A5: Robustness to Alternative Cost of Equity Capital Estimates

The table reports the results of robustness tests and re-estimates the fixed effects regressions of the implied cost of equity capital on foreign shareholders' trust and selected control variables (see column (1) of Table VIII) using alternative cost of equity estimates. CoE $7m_{f,t}$ and CoE $4m_{f,t}$ capture the average of the equity financing costs obtained from the four models developed by Claus and Thomas (2001), Gebhardt et al. (2001), Easton (2004), and Ohlson and Juettner-Nauroth (2005) as per seven months and four month after the end of the fiscal year, respectively. CoE $3p_{f,t}$ and CoE $GDP_{f,t}$ use the assumptions that long-term growth is fixed at 3% and that the perpetual growth rate equals the annual real GDP growth rate plus the long-run inflation rate, respectively. Firm-level variables refer to firm f at time t. Host country-level variables refer to target 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 as well as firm fixed effects to control for time-constant characteristics of the firm. Heteroscedasticity-robust standard errors are clustered at the firm level. t-statistics are given in parentheses. ***,**, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) CoE $7m_{f,t}$	(2) CoE $4m_{f,t}$	(3) CoE $3p_{f,t}$	(4) CoE $GDP_{f,t}$
Foreign Shareholders' $Trust_{f,t}$	-0.0343***	-0.0312***	-0.0259**	-0.0210**
	(-3.47)	(-3.26)	(-2.45)	(-1.99)
Residual $Trust_{j,t}$	-0.0309***	-0.0256**	-0.0297**	0.0425***
	(-2.71)	(-2.28)	(-2.40)	(3.44)
GDP per $Capita_{j,t}$	0.0018***	0.0017**	0.0028***	0.0026***
	(2.58)	(2.33)	(3.37)	(3.06)
Stock Market $Efficiency_{j,t}$	-0.0022***	-0.0017**	-0.0023***	0.0022***
	(-3.21)	(-2.39)	(-3.37)	(3.30)
$Inflation_{j,t}$	0.0325*	0.0133	0.1056***	0.1203***
	(1.74)	(0.73)	(5.35)	(6.95)
Stock Return $Volatility_{f,t}$	0.0969***	0.1020***	0.1613***	0.1616***
	(9.95)	(11.13)	(12.04)	(11.44)
Market to $Book_{f,t}$	-0.0023***	-0.0033***	-0.0018***	-0.0020***
	(-10.47)	(-15.11)	(-7.55)	(-7.93)
$Leverage_{f,t}$	0.0224***	0.0299***	0.0219***	0.0175***
	(4.64)	(6.29)	(3.95)	(3.09)
Firm $Size_{f,t}$	-0.0050***	-0.0110***	0.0002	0.0041***
	(-5.05)	(-10.29)	(0.15)	(3.49)
Signed Forecast $Error_{f,t}$	0.0000***	0.0000***	0.0000	0.0000
	(150.48)	(30.98)	(0.15)	(0.41)
Analyst Forecast $Dispersion_{f,t}$	-0.0000	0.0000	0.0001	0.0001
	(-0.55)	(0.01)	(0.75)	(0.77)
Institutional $Ownership_{f,t}$	-0.0269***	-0.0070	-0.0395***	-0.0408***
	(-5.28)	(-1.37)	(-6.61)	(-6.69)
Capital $Intensity_{f,t}$	0.0011	-0.0043	0.0238**	0.0103
	(0.12)	(-0.51)	(2.31)	(1.00)
Year FE	Y	Y	Y	Y
Investor FE	Y	Y	Y	Y
Adjusted R-squared	0.3891	0.3646	0.4278	0.3790
Observations	56,996	56,462	57,398	57,399

Figures and Tables

Figure I: Social Trust Across Countries



The figure shows boxplot diagrams of social trust across countries over the sample period of 2000 through 2017, displayed for the top fifty domiciles (along the ordinate) as measured by the number of distinct investors in the sample (see Table I). Social trust (on the abscissa) is defined as the 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?*" For a detailed description of the data, see Table A1 of the Appendix. The vertical red middle line in the box presents the median value. The box's left and right 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) and the top 20 target countries (in rows) as measured by the number of distinct institutional investors in the sample (#Investors) for the sample period of 2000 through 2017. The row "*Other*" shows the weighted averages for the remaining countries not listed in the table. Investor domiciles refer to country i at time t. Target countries refer to country j at time t. The gray shaded fields indicate domestic investments (i = j), while the non-shaded fields indicate foreign investments (i ≠ j). The overall sample covers a total of 86 investor domiciles and 118 target countries. We report average foreign biases by investor domicile and by host country below. $\text{ØFBIAS}_{k,i,t}$ indicates the average foreign bias among all investors from domicile i across all foreign countries in the sample (home-country perspective). $\text{ØFBIAS}_{k,j,t}$ expresses the average foreign bias among all investors in the sample toward a particular host country j (host-country perspective). Three-digit ISO codes are defined as follows; USA: United States, GBR: Great Britain, DEU: Germany, CHE: Switzerland, FRA: France, BRA: Brazil, CAN: Canada, ESP: Spain, SWE: Sweden, CHN: China, ZAF: South Africa, HKG: Hong Kong, AUS: Australia, ITA: Italy, LUX: Luxembourg, JPN: Japan, AUT: Austria, SGP: Singapore, IND: India, NLD: Netherlands.

		Investor Country *i*														
	Domicile	USA	GBR	DEU	CHE	FRA	BRA	CAN	ESP	SWE	CHN	ZAF	HKG	AUS	ITA	LUX
	#Investors	6,192	493	337	324	280	235	223	158	128	104	101	96	92	87	74
Host (Target) Country *j*	USA	93.22	20.98	27.68	23.54	10.19	0.34	23.31	10.18	14.37	0.08	5.98	1.47	10.76	36.20	24.92
	GBR	0.78	33.75	6.10	5.53	4.43	0.06	1.49	4.59	4.62	0.01	19.13	1.54	3.59	5.94	6.75
	DEU	0.05	4.62	34.44	8.89	7.68	0.01	0.63	9.05	2.58	0.00	1.25	0.94	0.49	11.00	14.00
	CHE	0.32	3.19	4.21	25.51	3.30	0.14	0.74	2.55	2.67	0.00	0.50	0.20	0.78	2.65	5.41
	FRA	0.02	4.29	6.08	5.67	52.39	0.01	0.69	11.07	1.95	0.00	0.28	0.48	1.56	7.15	13.04
	BRA	0.03	0.57	0.10	0.18	0.07	98.50	0.21	0.09	0.09	0.00	0.04	0.63	0.33	0.07	0.46
	CAN	2.06	2.41	3.33	4.60	1.87	0.01	66.56	0.46	0.78	0.00	0.85	0.44	0.82	1.15	3.44
	ESP	0.01	1.18	2.61	1.50	2.76	0.02	0.15	46.58	0.60	0.00	0.07	0.02	0.32	2.21	2.63
	SWE	0.02	1.26	0.68	0.83	0.52	0.00	0.13	0.45	52.50	0.00	0.06	0.02	0.10	0.55	4.23
	CHN	0.21	1.40	0.43	1.28	0.22	0.11	0.17	0.06	0.73	98.82	0.07	34.02	0.97	0.25	1.04
	ZAF	0.02	0.55	0.13	0.53	0.08	0.00	0.07	0.04	0.15	0.00	68.93	0.16	0.07	0.06	0.22
	HKG	0.06	1.69	0.51	1.97	0.28	0.06	0.47	0.08	0.51	0.76	0.10	25.69	1.78	0.33	0.93
	AUS	0.01	1.42	0.61	0.96	0.19	0.01	0.49	0.05	0.33	0.02	0.43	2.51	69.68	0.24	0.61
	ITA	0.01	1.60	1.79	3.37	3.45	0.01	0.16	2.96	0.59	0.00	0.08	0.09	0.56	23.76	3.31
	LUX	0.13	0.28	0.26	0.22	1.04	0.00	0.04	1.19	0.74	0.00	0.42	0.22	0.01	0.68	0.53
	JPN	0.02	4.80	2.08	4.66	1.20	0.03	1.17	1.45	1.52	0.00	0.29	5.30	2.50	1.69	3.11
	AUT	0.00	0.33	0.64	0.69	0.31	0.00	0.05	0.22	0.23	0.00	0.07	0.02	0.02	0.20	0.44
	SGP	0.08	0.50	0.12	0.60	0.03	0.00	0.10	0.02	0.16	0.01	0.02	3.54	0.65	0.09	0.25
	IND	0.01	0.85	0.11	0.09	0.31	0.09	0.06	0.00	0.43	0.02	0.07	4.69	0.31	0.07	0.05
	NLD	0.32	3.18	2.60	1.98	3.71	0.01	0.40	3.24	0.82	0.00	0.22	0.04	0.24	2.32	3.93
	Other	2.62	11.15	5.49	7.40	5.97	0.59	2.91	5.67	13.63	0.28	1.14	17.98	4.46	3.39	10.70
$\text{ØFBIAS}_{k,i,t}$		0.53	0.25	0.27	0.23	0.40	0.83	0.60	0.43	0.49	0.78	0.63	0.21	0.56	0.16	0.00
$\text{ØFBIAS}_{k,j,t}$		18.60	3.62	1.39	0.93	2.21	1.38	1.05	0.92	0.59	7.16	0.63	1.97	1.79	0.80	0.04

Table II: Summary Statistics of Main Variables

The table presents descriptive statistics for the main variables used in this study. 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-level variables, which refer either to investor k at time t, or, in the case of FBIAS, to investor k and target country j at time t. Panel B reports summary statistics of country-level variables. Country-level variables refer either to investor country i or target country j at time t. Panel C reports summary statistics for dyadic variables on country pairs. Dyadic country-level variables refer to both investor country i and target country j at time t. Panel D reports summary statistics of firm-level variables, which refer to firm f 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-level Variables						
FBIAS	5,123,646	0.01	0.03	0.00	0.00	0.01
Investor Size	74,567	19.21	2.33	18.06	19.19	20.59
Investor Age	74,567	2.55	1.02	1.95	2.64	3.22
Number of Stocks	74,567	4.34	1.51	3.50	4.34	5.21
Global Concentration	74,567	0.65	0.14	0.58	0.63	0.69
Foreign Concentration	74,567	0.39	0.14	0.31	0.34	0.45
Panel B: Country-level Variables						
Social Trust	773	0.33	0.18	0.20	0.30	0.41
Residual Trust	461	0.00	0.07	-0.06	-0.00	0.06
Residual Trust (GSS)	461	-0.00	0.07	-0.06	0.00	0.06
Law and Order	547	0.27	0.28	0.00	0.18	0.47
Judicial Integrity	716	0.27	0.26	0.00	0.20	0.40
Accounting Standards	513	0.31	0.17	0.20	0.32	0.39
Expropriation Risk	547	0.28	0.29	0.07	0.13	0.52
Judicial Efficiency	539	0.27	0.29	0.00	0.13	0.53
Legal System Dummy	547	0.30	0.46	0.00	0.00	1.00
Geopolitical Risk	773	91.46	42.56	63.22	74.74	113.41
Corruption	639	0.28	0.24	0.10	0.20	0.50
Power Distance	714	55.92	22.06	38.00	57.00	69.00
Individualism	714	50.93	23.24	30.00	52.00	71.00
Masculinity	714	49.43	22.31	36.00	50.00	64.00
Uncertainty Avoidance	714	64.20	22.75	48.00	69.00	85.00
Long-term Orientation	756	52.58	22.18	34.51	51.13	69.02
Indulgence	757	49.08	19.82	31.47	49.11	66.07
Stock Market Development	742	0.73	0.85	0.27	0.53	0.96
Capital Controls	760	66.48	18.09	50.00	70.00	80.00
GDP per Capita	755	2.65	2.08	0.93	2.21	4.11
Internet Availability	752	56.63	26.05	37.00	61.52	78.71
Stock Market Return	718	0.08	0.25	-0.07	0.07	0.22
Stock Market Risk	702	0.06	0.09	0.02	0.04	0.07
Crisis Dummy	465	0.08	0.28	0.00	0.00	0.00
Crisis Output Loss	465	2.29	8.39	0.00	0.00	0.00
Stock Market Efficiency	618	3.69	1.73	2.97	3.98	4.79

(*continued*)

Table II — *continued*

	N	Mean	SD	P25	Median	P75
Panel C: Country-level (Dyadic) Variables						
Geographic Distance	75,350	7,271.30	4,574.70	3,213.87	7,366.27	9,951.11
Common Language Dummy	75,350	0.10	0.30	0.00	0.00	0.00
Contiguity Dummy	75,350	0.03	0.16	0.00	0.00	0.00
Colony Dummy	75,350	0.03	0.17	0.00	0.00	0.00
Same Country Dummy	75,350	0.01	0.10	0.00	0.00	0.00
Diversification Potential	51,087	0.50	0.46	0.25	0.66	0.87
Panel D: Firm-level Variables						
Cost of Equity	136,495	0.13	0.07	0.09	0.11	0.15
Foreign Shareholders' Trust	136,495	-0.01	0.04	-0.04	-0.01	0.01
Stock Return Volatility	135,681	0.11	0.07	0.06	0.09	0.13
Market to Book	136,495	2.64	2.67	1.13	1.84	3.14
Leverage	136,495	0.15	0.16	0.01	0.11	0.24
Inflation	135,850	0.02	0.02	0.01	0.02	0.03
Firm Size	136,495	7.19	1.82	5.91	7.10	8.37
Signed Forecast Error	132,016	0.02	3.57	-0.00	0.00	0.00
Analyst Forecast Dispersion	117,937	0.24	2.01	0.03	0.07	0.17
Institutional Ownership	136,495	0.23	0.29	0.02	0.08	0.35
Capital Intensity	136,495	0.05	0.06	0.01	0.04	0.07

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

The table shows pairwise correlation coefficients for country-level variables used in the first-stage regression of social trust on institutional, political, and cultural variables. The coefficients were calculated over the sample period of 2000 through 2017. p-values are given in parentheses. Correlations that differ significantly from zero at the 1%, 5%, and 10% levels are denoted by ***,**, and *, respectively. For a detailed description of the data, see Table A1 in the appendix.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Social Trust$_{i,t}$	1.00														
Law and Order$_i$	-0.75^{***}	1.00													
	(0.00)														
Judicial Integrity$_i$	-0.69^{***}	0.80^{***}	1.00												
	(0.00)	(0.00)													
Accounting Standards$_i$	-0.50^{***}	0.40^{***}	0.33^{***}	1.00											
	(0.00)	(0.00)	(0.00)												
Expropriation Risk$_i$	-0.70^{***}	0.91^{***}	0.78^{***}	0.43^{***}	1.00										
	(0.00)	(0.00)	(0.00)	(0.00)											
Judicial Efficiency$_i$	-0.70^{***}	0.72^{***}	0.69^{***}	0.55^{***}	0.72^{***}	1.00									
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)										
Legal System Dummy$_i$	-0.02	0.11^{***}	-0.09^{**}	-0.42^{***}	0.05	-0.17^{***}	1.00								
	(0.66)	(0.01)	(0.02)	(0.00)	(0.23)	(0.00)									
Geopolitical Risk$_{i,t}$	-0.01	0.00	0.01	0.02	0.00	0.01	-0.01	1.00							
	(0.70)	(0.95)	(0.75)	(0.62)	(0.98)	(0.72)	(0.90)								
Corruption$_{i,t}$	-0.70^{***}	0.87^{***}	0.76^{***}	0.52^{***}	0.84^{***}	0.81^{***}	-0.03	0.04	1.00						
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.50)	(0.23)							
Power Distance$_i$	-0.67^{***}	0.58^{***}	0.70^{***}	0.18^{***}	0.60^{***}	0.55^{***}	-0.02	0.02	0.66^{***}	1.00					
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.66)	(0.55)	(0.00)						
Individualism$_i$	0.51^{***}	-0.66^{***}	-0.61^{***}	-0.41^{***}	-0.68^{***}	-0.61^{***}	$0.10**$	-0.01	-0.57^{***}	-0.60^{***}	1.00				
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.02)	(0.72)	(0.00)	(0.00)					
Masculinity$_i$	-0.36^{***}	0.14^{***}	0.15^{***}	0.11^{***}	0.06	-0.01	0.20^{***}	0.00	0.18^{***}	0.16^{***}	0.05	1.00			
	(0.00)	(0.00)	(0.00)	(0.01)	(0.17)	(0.73)	(0.00)	(0.96)	(0.00)	(0.00)	(0.12)				
Uncertainty Avoidance$_i$	-0.47^{***}	0.20^{***}	0.33^{***}	0.67^{***}	0.22^{***}	0.44^{***}	-0.53^{***}	0.01	0.35^{***}	0.16^{***}	-0.15^{***}	0.06^{***}	1.00		
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.72)	(0.00)	(0.00)	(0.00)	(0.09)			
Long-term Orientation$_i$	0.07^{*}	-0.24^{***}	-0.08^{***}	-0.14^{***}	-0.36^{***}	-0.21^{***}	-0.29^{***}	0.00	-0.05	0.14^{***}	-0.06^{*}	0.09^{***}	0.10^{***}	1.00	
	(0.07)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.9)	(0.17)	(0.00)	(0.08)	(0.01)	(0.00)		
Indulgence$_i$	0.24^{***}	-0.30^{***}	-0.17^{***}	-0.32^{***}	-0.20^{***}	-0.26^{***}	0.05	-0.03	-0.40^{***}	-0.42^{***}	0.27^{***}	-0.02	-0.17^{***}	-0.51^{***}	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.24)	(0.35)	(0.00)	(0.00)	(0.00)	(0.65)	(0.00)	(0.00)	

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 domicile, as well as selected control variables. 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 at time t. Investor country-level variables refer to the investor's country of domicile i 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 and target country fixed effects to control for time-constant characteristics of the host country. In column (1), we further control for time-constant differences within investor types via investor type fixed effects. In column (2), we further control for time-constant characteristics of the investor's country of domicile via domicile fixed effects. In column (3), we further control for time-constant differences among investors via investor fixed effects. In column (4), we re-run the first specification but control further for time-constant characteristics within the combination of investor types and host countries via investor-type × target fixed effects. In column (5), we re-run the second specification but furthermore control for time-constant characteristics of domicile-target pairs via domicile × target fixed effects. In column (6), we re-run the third specification but control further for all time-constant characteristics within investor-target-country pairs via investor × target fixed effects. Heteroscedasticity-robust standard errors are clustered at the investor level. t-statistics are given in parentheses. ***,**, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent Variable: $FBIAS_{k,j,t}$					
Residual $Trust_{i,t}$	-0.0124***	-0.0041*	-0.0044**	-0.0122***	-0.0143***	-0.0142***
	(-12.65)	(-1.85)	(-2.00)	(-12.51)	(-6.11)	(-6.11)
Familiarity Between Countries:						
Geographic $Distance_{i,j}$	0.0034***	0.0013***	0.0013***	0.0034***		
	(40.82)	(10.99)	(11.03)	(41.21)		
Common Language $Dummy_{i,j}$	-0.0017***	-0.0030***	-0.0030***	-0.0017***		
	(-8.11)	(-13.88)	(-13.95)	(-7.86)		
Contiguity $Dummy_{i,j}$	-0.0088***	-0.0119***	-0.0119***	-0.0087***		
	(-16.16)	(-21.30)	(-21.45)	(-15.67)		
Colony $Dummy_{i,j}$	0.0076***	0.0110***	0.0110***	0.0072***		
	(23.09)	(30.85)	(31.06)	(21.52)		
Same Country $Dummy_{i,j}$	-0.0452***	-0.0467***	-0.0467***	-0.0449***		
	(-7.63)	(-7.78)	(-7.76)	(-7.76)		
Investor Characteristics:						
Investor $Size_{k,t}$	0.0001***	-0.0000**	0.0001***	0.0001***	-0.0000***	0.0001*
	(6.71)	(-2.26)	(2.62)	(6.19)	(-2.74)	(1.75)
Investor $Age_{k,t}$	0.0002***	0.0001***	-0.0000	0.0002***	0.0001***	-0.0000
	(5.55)	(5.09)	(-0.08)	(5.43)	(5.32)	(-0.85)
Number of $Stocks_{k,t}$	-0.0002***	-0.0000**	0.0000	-0.0001***	-0.0000**	0.0000
	(-6.87)	(-2.38)	(0.02)	(-6.68)	(-2.32)	(0.24)

(*continued*)

Table IV — *continued*

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent Variable: $FBIAS_{k,j,t}$					
Target Country Attractiveness:						
Stock Market Development$_{j,t}$	0.0047***	0.0047***	0.0047***	0.0047***	0.0047***	0.0045***
	(89.14)	(89.15)	(89.55)	(87.49)	(91.43)	(97.63)
Capital Controls$_{j,t}$	-0.0001***	-0.0001***	-0.0001***	-0.0001***	-0.0001***	-0.0001***
	(-57.10)	(-57.68)	(-57.85)	(-54.92)	(-57.44)	(-47.89)
GDP per Capita$_{j,t}$	-0.0001***	-0.0001***	-0.0001***	-0.0001***	-0.0000	0.0000
	(-2.94)	(-3.12)	(-3.10)	(-2.97)	(-0.35)	(0.10)
Internet Availability$_{j,t}$	0.0001***	0.0001***	0.0001***	0.0001***	0.0001***	0.0001***
	(26.57)	(26.69)	(26.76)	(25.74)	(29.13)	(23.50)
Risk and Return Profile:						
Stock Market Return$_{j,t}$	-0.0008***	-0.0008***	-0.0008***	-0.0008***	-0.0008***	-0.0004***
	(-19.17)	(-18.59)	(-18.60)	(-17.78)	(-20.30)	(-11.83)
Stock Market Risk$_{j,t}$	0.0008***	0.0008***	0.0008***	0.0009***	0.0007***	0.0009***
	(17.97)	(17.76)	(17.71)	(18.46)	(16.58)	(21.06)
Diversification Potential$_{i,j,t}$	-0.0008***	-0.0009***	-0.0009***	-0.0008***	-0.0004***	-0.0002***
	(-23.18)	(-23.70)	(-25.75)	(-21.86)	(-14.62)	(-7.67)
Year FE	Y	Y	Y	Y	Y	Y
Target FE	Y	Y	Y	Y	Y	Y
Investor-type FE	Y	-	-	Y	-	-
Domicile FE	-	Y	-	-	Y	-
Investor FE	-	-	Y	-	-	Y
Investor-type × Target FE	-	-	-	Y	-	-
Domicile × Target FE	-	-	-	-	Y	-
Investor × Target FE	-	-	-	-	-	Y
Adjusted R-squared	0.3120	0.3151	0.3182	0.3169	0.3949	0.7078
Observations	5,083,043	5,085,409	5,085,409	5,082,908	5,123,646	5,027,082

Table V: Social Trust as a Substitute for Formal Institutions

The table re-estimates the extended baseline regression specification (see column (6) of Table IV) but adds interaction effects between investor-country residual trust and the quality of formal institutional frameworks in the host country. Institutional framework variables are defined negatively, i.e., higher values imply poorer institutional quality. 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 at time t. Investor-country-level variables refer to the investor's country of domicile i 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 fixed effects to control for time-constant characteristics within investor-target-country pairs. Heteroscedasticity-robust standard errors are clustered at the investor level. *t*-statistics are given in parentheses. ***,**, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent Variable: $FBIAS_{k,j,t}$					
Residual $Trust_{i,t}$	0.0028	0.0048	-0.0074	0.0082	-0.0031	-0.0016
	(0.51)	(1.23)	(-1.14)	(1.45)	(-0.60)	(-0.60)
Investor $Size_{k,t}$	0.0001**	0.0001*	0.0001***	0.0001**	0.0001**	0.0001**
	(2.20)	(1.83)	(2.61)	(2.20)	(2.21)	(2.20)
Investor $Age_{k,t}$	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	(-0.85)	(-0.87)	(-0.82)	(-0.88)	(-0.83)	(-0.82)
Number of $Stocks_{k,t}$	-0.0000	0.0000	-0.0000	-0.0000	-0.0000	-0.0000
	(-0.18)	(0.57)	(-0.29)	(-0.18)	(-0.13)	(-0.18)
Stock Market $Development_{j,t}$	0.0046***	0.0043***	0.0054***	0.0046***	0.0046***	0.0046***
	(78.84)	(89.25)	(79.63)	(78.27)	(80.33)	(74.08)
Capital $Controls_{j,t}$	-0.0001***	-0.0001***	-0.0001***	-0.0001***	-0.0001***	-0.0001***
	(-20.50)	(-43.95)	(-21.51)	(-19.85)	(-22.32)	(-19.94)
GDP per $Capita_{j,t}$	0.0007***	0.0002***	0.0008***	0.0007***	0.0006***	0.0005***
	(12.69)	(4.39)	(14.08)	(13.33)	(12.09)	(10.26)
Internet $Availability_{j,t}$	0.0000***	0.0001***	0.0000***	0.0000**	0.0000***	0.0000***
	(2.67)	(21.71)	(4.37)	(2.41)	(5.12)	(4.33)
Stock Market $Return_{j,t}$	-0.0012***	-0.0008***	-0.0016***	-0.0012***	-0.0015***	-0.0015***
	(-21.40)	(-19.32)	(-23.95)	(-21.11)	(-30.79)	(-29.15)
Stock Market $Risk_{j,t}$	-0.0059***	0.0059***	-0.0061***	-0.0057***	-0.0056***	-0.0063***
	(-49.55)	(29.39)	(-40.65)	(-46.67)	(-41.47)	(-46.23)
Diversification $Potential_{i,j,t}$	0.0012***	-0.0004***	0.0014***	0.0012***	0.0011***	0.0012***
	(26.42)	(-12.10)	(23.54)	(24.69)	(27.13)	(25.44)

(*continued*)

Table V — *continued*

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent Variable: $FBIAS_{k,j,t}$					
$Residual\ Trust_{i,t}$	-0.0672***					
$\times$ $Law\ and\ Order_j$	(-11.12)					
$Residual\ Trust_{i,t}$		-0.0692***				
$\times$ $Judicial\ Integrity_j$		(-14.05)				
$Residual\ Trust_{i,t}$			-0.0457***			
$\times$ $Accounting\ Standards_j$			(-5.94)			
$Residual\ Trust_{i,t}$				-0.0803***		
$\times$ $Expropriation\ Risk_j$				(-13.05)		
$Residual\ Trust_{i,t}$					-0.0599***	
$\times$ $Judicial\ Efficiency_j$					(-9.22)	
$Residual\ Trust_{i,t}$						-0.0581***
$\times$ $Legal\ System\ Dummy_j$						(-13.26)
Year FE	Y	Y	Y	Y	Y	Y
Target FE	Y	Y	Y	Y	Y	Y
Investor FE	Y	Y	Y	Y	Y	Y
Investor $\times$ Target FE	Y	Y	Y	Y	Y	Y
Adjusted R-squared	0.6976	0.7077	0.6992	0.6976	0.6975	0.6976
Observations	2,969,996	4,352,980	2,564,743	2,969,996	3,098,785	2,969,996

Table VI: Social Trust During Crisis Times

The table re-estimates the extended baseline regression specification (see column (6) of Table IV) but adds interaction effects between investor-country residual trust and host-country measures of financial crises. The panel contains only observations where investor i's country of domicile differs from host country j ($i \neq j$). 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 fixed effects to control for time-constant characteristics within investor-target-country pairs. Heteroscedasticity-robust standard errors are clustered at the investor level. t-statistics are given in parentheses. ***,**, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)
	Dependent Variable: $FBIAS_{k,j,t}$	
$Residual\ Trust_{i,t}$	-0.0279***	-0.0282***
	(-5.83)	(-5.87)
$Crisis\ Dummy_{j,t}$	-0.0023***	
	(-7.99)	
$Residual\ Trust_{i,t} \times Crisis\ Dummy_{j,t}$	-0.0130***	
	(-3.27)	
$Crisis\ Output\ Loss_{j,t}$		-0.0044***
		(-7.85)
$Residual\ Trust_{i,t} \times Crisis\ Output\ Loss_{j,t}$		-0.0263***
		(-3.12)
$Investor\ Size_{k,t}$	0.0002***	0.0002***
	(2.70)	(2.67)
$Investor\ Age_{k,t}$	-0.0001	-0.0001
	(-0.90)	(-0.90)
$Number\ of\ Stocks_{k,t}$	-0.0000	-0.0000
	(-0.11)	(-0.11)
$Stock\ Market\ Development_{j,t}$	0.0055***	0.0055***
	(78.72)	(77.95)
$Capital\ Controls_{j,t}$	-0.0001***	-0.0001***
	(-16.28)	(-15.90)
$GDP\ per\ Capita_{j,t}$	0.0010***	0.0010***
	(16.56)	(16.47)
$Internet\ Availability_{j,t}$	0.0000***	0.0000***
	(5.34)	(4.47)
$Stock\ Market\ Return_{j,t}$	-0.0015***	-0.0015***
	(-18.60)	(-18.14)
$Stock\ Market\ Risk_{j,t}$	-0.0144***	-0.0148***
	(-38.47)	(-38.98)
$Diversification\ Potential_{i,j,t}$	0.0016***	0.0016***
	(20.24)	(20.73)
Year FE	Y	Y
Target FE	Y	Y
Investor FE	Y	Y
Investor × Target FE	Y	Y
Adjusted R-squared	0.6981	0.6980
Observations	2,120,079	2,120,079

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 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. t-statistics are given in parentheses. ***,**, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)
Dependent Variables:	Global Concentration$_{k,t}$	Foreign Concentration$_{k,t}$
Residual Trust$_{i,t}$	-0.5762***	-0.1605***
	(-9.01)	(-2.83)
Investor Size$_{k,t}$	0.0020**	-0.0002
	(2.57)	(-0.22)
Investor Age$_{k,t}$	-0.0022	-0.0012
	(-1.51)	(-0.93)
Number of Stocks$_{k,t}$	-0.0292***	-0.0266***
	(-21.15)	(-21.43)
Stock Market Development$_{i,t}$	-0.0399***	-0.0311***
	(-12.46)	(-11.37)
Capital Controls$_{i,t}$	0.0003**	0.0002
	(2.16)	(1.30)
GDP per Capita$_{i,t}$	-0.0046**	-0.0086***
	(-2.24)	(-4.84)
Internet Availability$_{i,t}$	-0.0008***	-0.0000
	(-4.37)	(-0.06)
Stock Market Return$_{i,t}$	-0.0526***	-0.0332***
	(-6.72)	(-5.04)
Stock Market Risk$_{i,t}$	0.0353	-0.0256
	(0.64)	(-0.59)
Year FE	Y	Y
Investor FE	Y	Y
Adjusted R-squared	0.8122	0.8392
Observations	69,725	69,725

Table VIII: Firm-level Foreign Shareholders' Trust and the Cost of Equity

The table reports estimation results of fixed effects and two stage least squares (2SLS) regressions of the implied cost of equity capital on foreign shareholders' trust and selected control variables as well as estimation results for the difference-in-differences model. The cost of equity capital, our dependent variable, captures the average of the equity financing costs obtained from the four models developed by Claus and Thomas (2001), Gebhardt et al. (2001), Easton (2004), and Ohlson and Juettner-Nauroth (2005) as per 10 months after the end of the fiscal year. Firm-level variables refer to firm f at time t. Host-country-level variables refer to target country j at time t. For a detailed description of the data, see Table A1 in the appendix. In 2SLS, we use lagged values of a firms foreign shareholders' trust as well as lagged values of a firms shareholders' trust industry mean as instruments. To test for the robustness of our instrumental variables, we perform Pearson correlation tests, an F-test, the Kleibergen-Paap rk LM test for underidentification, and Sargan's overidentification test. Person correlation tests, F-tests, and the Kleibergen-Paap rk LM test are to confirm that our instrumental variables are not weak, i.e., that they are highly correlated with the potentially endogenous regressor (i.e., foreign shareholders' trust) and should not be excluded from regression, respectively. The Sargan test of overidentifying restrictions tests the joint null hypothesis that our instrumental variables are valid, i.e., uncorrelated with the error term. We present robust and firm-level clustered chi-square statistics. For the difference-in-differences model, we utilize a shock to foreign shareholders' trust, caused by the global financial crisis, as a treatment. The Treatment Dummy$_t$ variable equals 1/0 during the three years of/in the three years prior to the global financial crisis. The Treated Dummy$_f$ equals 1/0 for all firms that show a strong/weak increase in foreign shareholders' trust during the financial crisis as measured by the upper/lower tercile in terms of foreign shareholders' trust. The difference-in-differences effect is captured by Treatment Dummy$_t$ × Treated Dummy$_f$. All regression specifications include year fixed effects to isolate the influence of aggregate time-series trends as well as firm fixed effects to control for time-constant characteristics of the firm. Heteroscedasticity-robust standard errors are clustered at the firm level. t-statistics are given in parentheses. ***,**, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	Ordinary Least Squares	Two Stage Least Squares		Difference-in-Differences
		First Stage	Second Stage	
Dependent Variables:	Cost of Equity$_{f,t}$	For. Sha. Trust$_{f,t}$	Cost of Equity$_{f,t}$	Cost of Equity$_{f,t}$
Foreign Shareholders' Trust$_{f,t}$	-0.0260***			
	(-2.92)			
Foreign Shareholders' Trust$_{f,t}$			-0.0257***	
			(-2.67)	
Foreign Shareholders' Trust$_{f,t-1}$		0.2168***		
		(29.37)		
Foreign Shareholders' Industry Trust$_{f,t-1}$		0.0254		
		(0.49)		
Treatment Dummy$_t$ × Treated Dummy$_f$				-0.0053**
				(-2.28)
Residual Trust$_{j,t}$	-0.0329***	-0.0223***	-0.0421***	0.1313***
	(-2.90)	(-2.83)	(-3.30)	(2.95)
GDP per Capita$_{j,t}$	0.0029***	-0.0014***	0.0035***	0.0122***
	(4.06)	(-3.31)	(4.49)	(4.31)
Stock Market Efficiency$_{j,t}$	-0.0019***	-0.0014***	-0.0025***	-0.0002
	(-3.35)	(-3.89)	(-4.10)	(-0.18)

(*continued*)

Table VIII — *continued*

	(1)	(2)	(3)	(4)
	Ordinary Least Squares	Two Stage Least Squares		Difference-in-Differences
		First Stage	Second Stage	
Dependent Variables:	Cost of Equity$_{f,t}$	For. Sha. Trust$_{f,t}$	Cost of Equity$_{f,t}$	Cost of Equity$_{f,t}$
Inflation$_{j,t}$	0.0356**	-0.0037	0.0072	-0.1022**
	(2.06)	(-0.46)	(0.40)	(-2.41)
Stock Return Volatility$_{f,t}$	0.1358***	0.0221***	0.1415***	0.1239***
	(12.73)	(5.60)	(11.21)	(3.77)
Market to Book$_{f,t}$	-0.0017***	-0.0002**	-0.0017***	0.0005
	(-8.27)	(-2.09)	(-7.25)	(1.10)
Leverage$_{f,t}$	0.0212***	0.0045*	0.0195***	0.0078
	(4.62)	(1.85)	(4.06)	(0.83)
Firm Size$_{f,t}$	-0.0003	0.0002	-0.0001	0.0041*
	(-0.39)	(0.45)	(-0.06)	(1.86)
Signed Forecast Error$_{f,t}$	0.0018*	-0.0006	0.0018	0.0042
	(1.80)	(-1.32)	(1.49)	(0.91)
Analyst Forecast Dispersion$_{f,t}$	0.0005**	-0.0001	0.0004**	0.0003*
	(2.39)	(-1.08)	(2.24)	(1.66)
Institutional Ownership$_{f,t}$	-0.0358***	-0.0154***	-0.0413***	-0.0298***
	(-6.88)	(-4.66)	(-7.15)	(-4.41)
Capital Intensity$_{f,t}$	0.0136	-0.0115**	0.0126	0.0238
	(1.60)	(-2.39)	(1.34)	(1.28)
Year FE	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y
Correlation of Instruments		0.6272/0.2733		
(p)		(0.0000)/(0.0000)		
F-Test of Instruments		21.4230		
(p)		(0.0000)		
Kleibergen-Paap rk LM Statistic		433.2291		
(p)		(0.0000)		
Sargan Overidentification Test			3.0814	
(p)			(0.2142)	
Observations	57,042	49,844	49,844	15,354