

Religion and Equity Home Bias

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Abstract

This study aims to examine whether religion influences equity home bias. Large volumes of international portfolio investment and religious characteristics data are obtained from 2001 to 2019. A panel OLS model is used to investigate the relationship between religion and equity home bias. We find that both religiosity and religious hierarchy in a country positively correlate with the level of home bias. In contrast, religious diversity negatively affects the degree of home bias. Overall, our study highlights the role of religion in explaining equity home bias. (JEL G11, G15, Z12)

Keywords: Equity Home Bias; Religion; Religiosity; Religious Diversity; Religious Hierarchy.

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1. Introduction

Traditional portfolio theory states that investors should diversify their portfolio of assets across domestic and foreign markets to maximize their investment efficiency (Adler and Dumas, 1983; Kho et al., 2009; Levy and Sarnat, 1970; Sharpe, 1964). However, contrary to this theory, researchers have reported that investors do not actually diversify their portfolios for international assets; they tend to overweight (underweight) home-country (foreign) assets (Coeurdacier and Rey, 2013; French and Poterba, 1991). This phenomenon is known as “home bias” and has been consistently observed in most countries (Fidora et al., 2007; Kang and Stulz, 1997). Hu (2020) shows that the historical foreign equity ownership shares of the United States and China are approximately 33% and 5% of the optimal portfolio, respectively. Home bias has drawn attention as a major puzzle in international economic literature because it has important implications for investors and countries (Lee et al., 2022; Lewis, 1999; Obstfeld and Rogoff, 2000). Investors can improve their outcomes by holding foreign equities in cases where international diversification decreases portfolio risk (Chiou and Lee, 2013; De Santis and Gerard, 1997; Ziobrowski and Ziobrowski, 1995). Moreover, countries with a high degree of home bias encounter inadequate global risk sharing, and thereby their cost of capital rises (Lau et al., 2010).

Understanding the reasons for the home bias phenomenon is essential in international finance literature. Numerous studies on home bias point out that the optimal foreign weight may not be correct because standard portfolio theories do not consider salient factors in international markets (Ardalan, 2019). For example, international investments are hampered by government-imposed capital controls (Ahearne et al., 2004; Alfaro et al., 2017; Chang et al., 2015) as well as transaction costs associated with foreign investment (Bhamra et al., 2014; Levy and Levy, 2014; Martin and Rey, 2004). Country-specific risks, such as inflation and real exchange rates, may

affect home bias because investors diversify their portfolios to optimally hedge such risks (Adler and Dumas, 1983; Fidora et al., 2007). Moreover, investors hesitate to make foreign investments because of information asymmetry stemming from geographical distance (Portes and Rey, 2005), different accounting standards (Covrig et al., 2007), and varied corporate governance (Dahlquist et al., 2003; Gelos and Wei, 2005). On the whole, these factors decrease the advantages of investing in foreign assets. Thus a home bias can be observed even when investors hold optimal portfolios.

Recent literature focuses on various cultural and psychological factors directly related to investors' personalities and perceptions, which were previously excluded from the traditional portfolio theory (Ardalan, 2019; Gaar et al., 2022). It argues that the actual foreign weight in investors' portfolios may be affected by cultural and behavioral biases, which are not necessarily associated with the market (Gaar et al., 2022). Examples include cultural distance based on cultural dimension theories (Anderson et al., 2011; Beugelsdijk and Frijns, 2010; Choi et al., 2017), ambiguity aversion (Cao et al., 2011; Guidolin and Liu, 2016), competence hypothesis (Abreu et al., 2011; Kilka and Weber, 2000), familiarity bias (Grinblatt and Keloharju, 2001; Konara, 2020), patriotism (Morse and Shive, 2011), and social trust (Shao and Wang, 2021).

Religion is a particularly important aspect of culture (Hong et al., 2022). Religious beliefs influence individuals' attitudes and risk perceptions, which in turn affect financial decisions and their outcomes (Alon and Spitzer, 2003; Altug and Canova, 2014; Hilary and Hui, 2009; Kumar et al., 2011; Oh and Shin, 2021). Indeed, previous studies have investigated how religion affects a wide range of economic behaviors and outcomes. Ouyang and Rajan (2017) control religious differences as one component of psychic costs when they study the influence of terrorism on cross-border mergers and acquisitions (M&As). They find that if two countries share a common

dominant religion, the real gross M&A investment flows between the two countries increase. Jawadi et al. (2016) study Islamic banks that apply specific principles and rules based on Sharia to the financial system, including profit and loss sharing and the prohibition on interest rates. They argue that these principles and rules result in more solidarity and stability. They focus on the reputation of Islamic banks and show that the reputation probability is positively associated with good Islamic banking performance while negatively related to the excess risk-taking by Islamic bankers. Similarly, religion is expected to be an important factor in explaining the home bias puzzle among investors. However, there is limited research on equity home bias and the various aspects of religion.¹

In this study, we examine the role of religion in equity home bias by suggesting three possible channels through which religion can influence the home bias phenomenon: religiosity, religious diversity, and religious hierarchy. First, investors in countries with a higher level of religiosity (i.e., religious practices and faith) have a higher level of risk aversion and uncertainty avoidance (Beugelsdijk and Frijns, 2010; Choi et al., 2017; Hilary and Hui, 2009; Liu, 2010; Tocar, 2019). These investors are less familiar with and, therefore, more uncertain about the risks associated with foreign investment (Baltzer et al., 2015; Boyle et al., 2012; Dimmock et al., 2016), leading to more home bias. Second, countries with diverse religions nurture individual traits to facilitate the integration of various ideas and values from different religious backgrounds (Bennett and Einolf, 2017). This process increases the influx of foreign elements from different cultural backgrounds (Hong et al., 2022). Therefore, investors in religiously diverse countries with a high level of openness to foreign cultures are less hesitant to invest abroad and possess more (less)

¹ Indeed, Leroch et al. (2014) designed a theoretical model that implies a negative influence of religion-induced international altruism on the home bias (Lee et al., 2022).

diversified (home-biased) portfolios. Finally, compared to non-hierarchical religions (e.g., Protestant and Eastern religions), hierarchical religions (e.g., Catholics, Orthodox, and Muslims) negatively influence social trust (La Porta et al., 1997; Oh and Shin, 2022; Putnam, 1993). As social trust decreases the familiarity bias that arises when investors confront unfamiliar investment opportunities (Lee et al., 2022; Shao and Wang, 2021), home bias may be more pronounced in religiously hierarchical countries.

To test our arguments, we match international portfolio investment data and global religious data. We evaluate home bias measures

- based on previous literature (Fidora et al., 2007; Mishra, 2015; Solnik and Zuo, 2012; Wallmeier and Iseli, 2022);
- examining actual portfolio investment data from the Coordinated Portfolio Investment Survey (CPIS) dataset;
- investigating the optimal portfolio investment data calculated by the international capital asset pricing model.

Moreover, we examine several country-level religious variables such as religiosity, religious diversity, and religious hierarchy. Based on the final sample consisting of 67 countries between 2001 and 2019, we find that religiosity positively influences equity home bias, whereas religious diversity reduces home bias. Additionally, investors in countries with largely hierarchical religions tend to exhibit a high degree of home bias. Our study contributes to international literature on economics as the first comprehensive study to examine how religion influences the international equity home bias phenomenon.

Our study contributes to the extant literature in two ways. First, we complement recent research examining the effects of religion on financial markets (Baxamusa and Jalal, 2014; Ghoul et al., 2012; Hilary and Hui, 2009; Jiang et al., 2015; Kumar et al., 2011). For example, Ghoul et al. (2012) find that U.S. firms located in more religious counties have lower equity financing costs. They argue that religiosity lowers the cost of equity capital by increasing trust among market participants. Kumar et al. (2011) show that U.S. investors in regions with higher Catholic-Protestant ratios tend to have more lottery-type stocks, consistent with the conjecture that Catholics are more likely to engage in gambling activities than Protestants due to their religious attitudes. We extend these studies by investigating the role of religion in international financial markets.

Second, our study extends the present research on the relationship between religion and home bias. Specifically, Leroch et al. (2014) propose a theoretical framework that suggests that a country's religion-enhanced international altruism (i.e., cross-border cooperation) is related to a lower home bias. Both theoretical prediction and empirical evidence partially confirm that a tolerant and open attitude towards religion may improve trust and altruism, successively facilitating trade and reducing home bias. Our study includes a broader range of countries that engage in cross-border investment activities and focus on multiple aspects of religion (e.g., religious intensity, diversity, and hierarchy) as important determinants of home bias. Therefore, we can conduct more comprehensive research on this topic. Overall, this is the first study investigating religion's complex and multifaceted influence on equity home bias.

The remainder of this paper is organized as follows: Section 2 explains the data and empirical methodology employed in this study, Section 3 presents and discusses the results, and Section 4 concludes the study.

2. Data and Empirical Methods

2.1 Data and Variables

The dependent variable in our study is HB , a country's level of equity home bias. Following previous studies of home bias (Coeurdacier and Rey, 2013; Fidora et al., 2007; Hu, 2020; Mishra, 2015), we define the home bias variable as follows:

$$HB_{it} = 1 - \frac{w_{it}}{w_{it}^*}, \quad (1)$$

where w_{it} is the weight of the actual foreign equity holdings of country i in year t , and w_{it}^* is the optimal global market weight of foreign equity assets of investors in country i in year t . It is one of the representative measures of home bias in the literature. It measures excessive domestic investment as compared to the proportion of home assets in the global portfolio (Kho et al., 2009; Solnik and Zuo, 2012). A high HB value suggests that investors invest less in foreign equity assets. It is zero when investors hold global market portfolio and one when none of the investors hold foreign assets.

In Equation (1), w_{it} indicates the share of foreign equity holdings to total equity holdings (i.e., foreign holdings plus domestic holdings). As domestic equity holdings can be expressed as market capitalization minus foreign equity liabilities, $Actual_{it}$ is calculated as follows:

$$w_{it} = \frac{Foreign\ Equity\ Asset_{it}}{Foreign\ Equity\ Asset_{it} + MC_{it} - Foreign\ Equity\ Liability_{it}}, \quad (2)$$

where $Foreign\ Equity\ Asset_{it}$ and $Foreign\ Equity\ Liability_{it}$ are the foreign equity assets and liabilities of country i 's investors in year t , respectively, and MC_{it} is the market capitalization

of country i in year t . Both foreign equity assets and liabilities can be obtained from the International Monetary Fund’s (IMF) Coordinated Portfolio Investment Survey (CPIS) dataset (available from 2001 to 2020).² Global market capitalization data comes from the World Development Indicator (WDI) of the World Bank.³

Next, in order to compute w_{it}^* , we use the weight of foreign equities in the global market portfolio based on the international capital asset pricing model, with the assumption that all mean-variance type investors have the same beliefs about the distribution of real asset returns and face the same investment opportunities without transaction costs.⁴ The model implies that every investor holds a portfolio in which each country’s asset weight is proportional to the relative share of the country in world market capitalization (Cooper et al., 2013; Mishra, 2015). Therefore, w_{it}^* can be the share of foreign assets with respect to country i in the global market portfolio. In particular, we calculate each country’s market capitalization proportion in the total worldwide market capitalization from 0 to 1 and aggregate it across all countries, except country i .

Figure 1 describes the time trends of our home bias measure (HB) around the world in the 21st century. Although home bias has gradually decreased in financial globalization, it remains

² The foreign equity assets are obtained from “Table 1: Reported Portfolio Investment Assets by Economy of Nonresident issuer,” and the foreign equity liability data comes from “Table 4: Reported Portfolio Investment Liabilities by Economy of Nonresident Holder.” They are available at <https://data.imf.org/?sk=b981b4e3-4e58-467e-9b90-9de0c3367363&slid=1424963554286>.

³ The worldwide market capitalization data can be obtained from the “Market capitalization of listed domestic companies (current US\$)” series. It can be found at <https://databank.worldbank.org/source/world-development-indicators>.

⁴ Several studies use other home bias measures. For example, Chan et al. (2005) employ the log ratio of the share of foreign equity holdings to the global market capitalization weight (i.e., $\ln(w_{it}) - \ln(w_{it}^*)$). Cooper et al. (2018) integrate home bias and foreign bias and then define “pure” home bias. Mishra (2015) calculates the country-level equity home bias by employing various portfolio models for estimating optimal portfolio, including the international capital asset pricing model, classical mean-variance model, minimum-variance model, and Bayesian mean-variance model. He finds that there is not much change in home bias values for many countries using the various models. In our study, we use the international capital asset pricing model as a benchmark to be consistent with the previous literature (Gaar et al., 2022).

prominent worldwide. In addition, the extent of home bias differs across countries: Germany and United States show a relatively lower level of home bias, whereas Asian countries exhibit higher values of *HB* (especially South Korea, a representative of transition countries). Such heterogeneity emphasizes the importance of country-specific factors in explaining a country's degree of home bias.

[Insert: Figure 1]

Our other major dataset comprises data on religious characteristics, including religiosity, religious diversity, and religious hierarchy. First, religiosity refers to the intensity of religious practices and faith of people in a country (Tocar, 2019). In a higher religiosity country, people actively cultivate values through religious institutions, and their lives are strongly influenced by religion. We measure country-level religiosity based on the survey data provided by the World Values Survey (WVS) Wave 7, the latest WVS survey, which covers most countries during our sample period. In the WVS Wave 7, respondents from 89 countries are asked more than 250 questions about social, political, economic, religious, and cultural values (Hong et al., 2022).⁵ The religiosity measure, *Religiosity*, is based on the following question: “Indicate how important religion is in your life.” Each respondent is asked to choose one of the following answers: “Not at all important,” “Not very important,” “Rather important,” and “Very important,” with scores of 1, 2, 3, and 4 for each corresponding answer, respectively. We calculate *Religiosity* as the weighted average of individual scores for each country. Therefore, *Religiosity* is a time-invariant religious intensity measure during the sample period.

⁵ The survey data used to calculate the level of religiosity can be obtained from the online data analysis in the World Value Survey Data analysis tool. See <https://www.worldvaluessurvey.org/WVSONline.jsp>.

Next, we define a country’s religious diversity level using religious demographic data from the Association of Religion Data Archives (ARDA). It provides the proportion of adherents to 100 religious denominations from 1700 onwards. It obtains religious demographic data from numerous sources and employs linear extrapolation methods to fill in missing values (Brown and James, 2018). Following the same extrapolation method, we calculate the proportion of each religious denomination in missing years and extend the dataset until 2019. ⁶ Following McCleary and Barro (2006), we classify religious denominations into 11 categories: Catholic, Protestant (including Anglican), other Christian, Orthodox, Jews, Muslim, Hindu (including Jains and Sikhs), Buddhist (including Shinto), other Eastern religions, other religions, and no religion (including atheists). We calculate the Herfindahl-Hirschman Index (HHI) of religion in each country, which is the sum of squares of adherence shares for each religious denomination:

$$RelDiversity_{it} = 1 - \sum_{k=1}^n P_{k,it}^2, \quad (3)$$

where $P_{k,it}$ is the proportion of adherents of k -th religion ($k = 1, 2, \dots, 11$) of country i in year t . $RelDiversity_{it}$ is a time-varying religious diversity measure and implies the probability that two randomly selected individuals from a country i will not belong to the same religious group in year t (Oh and Shin, 2021). More religiously diverse countries have a higher value of $RelDiversity$. $RelDiversity$ is equal to zero if everyone adheres to the same religion and one if everyone belongs to a different religion.

Moreover, we generate a variable for religious hierarchy based on the same ARDA data.

⁶ Specifically, the Association of Religion Data Archives (ARDA) uses the extrapolation method to continue increasing the percentage of adherents by the last interpolated increment when the last direct observation is before 2010. For instance, if Protestants were 20% of the total population in 1980 and 23% in 2010, then the population is estimated to be 20.1% Protestant in 1981, 20.2% in 1982, 22.6% in 2006, 23.5% in 2015, and so on. In the same way, we obtain percentage estimates for 2016, 2017, 2018, and 2019.

Following previous studies that classify hierarchical religions (La Porta et al., 1997), we define $RelHierarchy_{it}$ as an indicator variable equal to 1 if the country i 's main religion that the majority of the population (i.e., 50% plus one) follows one of the following in year t : Catholic, Orthodox, or Muslim, and 0 otherwise. Therefore, $RelHierarchy$ is a time-varying variable that proxies the religious hierarchy of a country.

Finally, several country-level control variables that are likely to be correlated with a country's home bias are included in our regression models. GDP_{it} and $GDPperCap_{it}$ is the natural logarithm of GDP and GDP per capita of country i in year t , respectively. They control a country's economic size and individual wealth. MC_{it} is the natural logarithm of the total market capitalization of country i in year t . $TradeOpenness_{it}$ is the sum of exports and imports of goods and services divided by GDP. These four variables are created based on the WDI of the World Bank. $FinOpenness_{it}$ is the capital account openness index derived by Chinn and Ito (2006), which measures a country's financial openness level and includes information on the country's actual regulatory controls on cross-border capital transactions (Hong et al., 2022; Larrain and Stumpner, 2017; Lee and Oh, 2022).⁷ $NumBIT_{i,t}$ is the total number of bilateral investment treaties (BIT) in force between country i and other countries in year t . BIT data can be found in the International Investment Agreements Navigator at the United Nations Conference on Trade and Development (UNCTAD).⁸

⁷ The Chinn-Ito Index is based on the binary indicator variables that codify the restrictions on cross-border financial transactions described in the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions (ARENER)*. It is the first principal component of the four dummy variables related to the existence of multiple exchange rates, restrictions on current account transactions, restrictions on capital account transactions, and the requirements for the surrender of export proceeds. Its value ranges from -1.92 to 2.33 (Lee and Oh, 2022). For more information, see Chinn and Ito (2006).

⁸ The UNCTAD (United Nations Conference on Trade and Development) publicly provides information on worldwide bilateral investment treaties, including its parties (countries), status, date of signature, and date of termination. We make a dummy variable that is equal to 1 if the status is "In force." (Hong et al., 2022)

For cultural factors, we add Dow’s within-country linguistic diversity measure ($LangDiversity_i$) from Dow et al. (2016), colonial experiences ($Colonial_{it}$), and current colonial relationships ($CurColonial_{it}$) from the Centre d’Études Prospectives et d’Informations Internationales (CEPII). Moreover, for institutional characteristics, we include four legal origin dummies (English, French, German, and Scandinavian) from Djankov et al. (2008) and six dimension scores of governance of the Worldwide Governance Indicators (WGI).⁹ Appendix A provides detailed descriptions of the variables.

We incorporate the aforementioned CPIS dataset, religious characteristics data, and control variables into our main sample. Based on the availability of datasets and the coverage of control variables, our final sample comprises 1,002 country-year-level observations of 67 countries from 2001 to 2019.

2.2 Methodology

We examine the impact of our key religion variables on the degree of home bias using the following ordinary least squares (OLS) regression model:

$$HB_{it} = \beta_0 + \beta_1 Religion_{it} + \Theta' X_{it} + \delta_t + \varepsilon_{it}. \quad (4)$$

Regression (4) tests the effect of religion indexes on equity home bias. In detail, the

⁹ The Worldwide Governance Index (WGI) provides aggregate and six individual governance indicators for over 200 countries from 1996 to 2020. The six governance dimensions are ‘Voice and Accountability,’ ‘Regulatory Quality,’ ‘Political Stability and Absence of Violence/Terrorism,’ ‘Rule of Law,’ ‘Government Effectiveness,’ and ‘Control of Corruption.’ Each dimension score ranges from approximately -2.5 to 2.5, and a higher value corresponds to better outcomes.

dependent variable is HB_{it} , the level of equity home bias, as defined in Equation (1). The main independent variable is $Religion_{it}$, one of our three religious variables: $Religiosity_i$, $RelDiversity_{it}$, and $RelHierarchy_{it}$. X_{it} is a set of control variables that capture the country-specific characteristic. δ_t is the year-fixed effects that capture any unobservable year-specific endogenous influence on home bias.¹⁰ Based on previous discussions, we expect $\beta_1 > 0$ when we use either $Religiosity$ or $RelHierarchy$ as $Religion$, and $\beta_1 < 0$ when we use $RelDiversity$.¹¹

We estimate Equation (4) using the panel OLS model. We control for year-fixed effects to capture any unobservable year-specific endogenous influence on home bias. Furthermore, we cluster standard errors at the country level to account for a possible within-country correlation.

3. Empirical Results

3.1 Sample Statistics

Panel A of Table 1 shows the descriptive statistics for the variables used in our analyses, including the means, standard deviations, first quartiles, medians, and third quartiles of the variables used in our analyses. Similar to previous studies on equity home bias (Mishra, 2015), the average (median) value of the home bias measure is 0.739 (0.802). This indicates that the countries

¹⁰ Some independent variables, including a country's religiosity (*Religiosity*), language diversity (*LangDiversity*), and legal system dummies, are time-invariant variables in our analyses. These variables can capture the country-specific characteristics and thus absorb the country-fixed effects.

¹¹ Besides these three variables, religious denominations might also influence the equity home bias. For example, Islam may exhibit a greater home bias if it prohibits certain kinds of non-Islamic investment. To address this issue, we use an Islam variable as the main independent variable *Religion* in Regression (4). The variable is *MainIslam*, an indicator variable equal to one if a country's main religion is Muslim and zero otherwise. The estimation results show that *MainIslam* exhibits a positive and statistically significant coefficient (coefficient = 0.143, t-value = 2.948) on *HB*. Therefore, we confirm the argument that Islamic countries exhibit a higher value of *HB* on average than non-Islamic countries.

in our sample generally show a high degree of home bias. The religiosity variable, in consonance with its definition, mainly ranges from 2.2 to 3.3. Additionally, religious diversity values are widely and almost symmetrically distributed. Moreover, the mean value of the religious hierarchy variable is 0.579, indicating that 57.9% of our observations have hierarchical religions (e.g., Catholic, Orthodox, and Muslim) as the country's main religion. For the control variables, the standard deviation of *NumBIT* (25.404) is greater than its mean (22.835), implying that the BIT number varies widely across countries and years.

[Insert: Table 1]

Panel B of Table 1 shows the pairwise Pearson's correlation coefficients for the dependent and explanatory variables in our regressions, including home bias, religious characteristics, and country-level control variables except four legal dummies and six governance dimension scores. Our three religious characteristic variables show statistically significant coefficients at the 1% level and possess signs consistent with our predictions. Specifically, *HB* is positively correlated with *Religiosity* (0.513) and *RelHierarchy* (0.216), whereas it is negatively correlated with *RelDiversity* (-0.198). For the control variables, *FinOpenness* is negatively correlated with *HB* (-0.489), and the coefficient is statistically significant. This implies that investors in more financially open countries tend to diversify their portfolios. Moreover, the correlation between *RelHierarchy* and *MC* is significantly negative (-0.331). This finding supports previous studies, including Guiso et al. (2008), which argue that hierarchical religion hinders the development of the stock market.

3.2 Effects of Religion on Equity Home Bias

We now demonstrate the effects of religion on equity home bias. Table 2 reports the estimation results of Equation (4). Column (1) exhibits the impact of country-level religiosity on home bias. It shows that the coefficient estimate for *Religiosity* is positive and statistically significant at the 1% level (coefficient = 0.174, t-value = 4.030) even after we control a battery of economic, cultural, and institutional control variables on home bias. The coefficient indicates that a one standard deviation increase in *Religiosity* (0.638) leads to a 0.111 increase in the level of *HB*, analogous to a 0.420 standard deviation increase in the home bias variable. Therefore, we find evidence that a country's religiosity level is positively correlated with its degree of home bias. This finding is consistent with prior studies that argue that religious investors exhibit a higher level of risk aversion and uncertainty avoidance (Beugelsdijk and Frijns, 2010; Hilary and Hui, 2009; Tocar, 2019) and view foreign investment as more unpredictable (Dimmock et al., 2016).

[Insert: Table 2]

Column (2) displays the regression results when we use *RelDiversity* as the main independent variable and shows the influence of country-level religious diversity on equity home bias. The coefficient estimate for *RelDiversity* is negative and statistically significant at the 5% level (coefficient = -0.303, t-value = -2.152). It indicates that a one standard deviation decrease in *RelDiversity* (0.213) corresponds to a 0.065 decrease (i.e., a 0.246 standard deviation decrease) in the home bias variable. These results support our prediction that investors in religiously diverse countries actively invest in foreign assets and therefore exhibit a low degree of home bias. This evidence parallels the literature on religious diversity in international finance, which shows that religious diversity fosters the integration of various ideas and values of different religious groups, and in turn, facilitates a high level of openness to other groups (Bennett and Einolf, 2017). In

addition, this result is also consistent with the “contact” hypothesis between social heterogeneity and trust, which argues that people trust others in different groups more when they have more chances to contact others (Oh and Shin, 2021; Putnam, 2007).

Column (3) shows the estimation results of when we use *RelHierarchy* as the main independent variable. In Column (3), *RelHierarchy* exhibits positive and largely statistically significant coefficient estimate (coefficient = 0.119, t-value = 3.800) after including other control variables on home bias. This coefficient indicates that religiously hierarchical countries exhibit a higher value of *HB* by 0.119 than others, corresponding to a 0.451 standard deviation increase in the home bias variable. Therefore, we find evidence supporting our prediction that investors in countries where individuals follow a more hierarchical religion tend to prefer more home assets than those in other countries. This result is in accordance with some studies demonstrating that stock investments are less prominent in hierarchical religions because they hamper the creation of the social trust (Knack and Keefer, 1997; Putnam, 1993). Furthermore, it is also consistent with the previous argument that social trust is negatively associated with home bias (Shao and Wang, 2021).

Finally, we simultaneously included all three religious variables together in a regression to capture distinctive dimensions of religion in our analyses. The estimation result is presented in Column (4). Although the coefficient size of *Religiosity* is reduced in half, it is still positive and statistically significant at the 10% level (coefficient = 0.083, t-value = 1.723). Moreover, *RelHierarchy* shows a similar coefficient to Column (3), and it is also statistically significant at the 1% level (coefficient = 0.082, t-value = 2.608). In contrast, *RelDiveristy* has insignificant coefficient estimate even though it is still negative (coefficient = -0.228, t-value = -1.544). Overall,

these findings strengthen the positive influences of a country's religious intensity and hierarchy on the country's level of equity home bias. Regarding control variables, the market capitalization (i.e., the size of the domestic stock market) exerts a positive impact in all columns.

In summary, Table 2 shows the multifaceted effects of a country's religion on equity home bias, focusing on three distinctive dimensions: religiosity, religious diversity, and religious hierarchy. Both religiosity and religious hierarchy strengthens the home bias phenomenon, whereas religious diversity brings the opposite effect and fosters international portfolio diversifications.

3.3 Robustness Checks

In this section, we check the robustness of our main results by considering the influence of the 2007-08 global financial crisis (GFC). The outbreak of GFC brought exogenous structural shock to the world (Hergeueux, 2011; Hong et al., 2022; Stoddard and Noy, 2015). Because GFC is considered a period of panic that generates massive uncertainty and risk in the international market (Lee et al. 2022; Wynter, 2019), it may be possible to affect investors' global equity portfolio diversification, and consequently their home bias behavior.

To investigate whether the GFC significantly affects our main results, we additionally study whether religion's effect on equity home bias significantly differs by the GFC. Specifically, we develop the following regression model with an interaction term between religion variables and GFC indicators:

$$\begin{aligned}
HB_{it} = & \beta_0 + \beta_1 Religion_{it} + \beta_2 GFCIndicator_t \\
& + \beta_3 Religion_{it} \times GFCIndicator_t + \Theta' X_{it} + \delta_t + \varepsilon_{it}.
\end{aligned}
\tag{5}$$

In the model, HB is the level of equity home bias and $Religion$ is one of our three religious variables as previously defined. $GFCIndicator$ is one of the following two dummy variables: GFC and $PostGFC$. They indicate whether the year t is during the GFC (i.e., 2007-2008) and after the GFC (i.e., after 2009), respectively. We focus on β_3 , the coefficient of the interaction variable that captures the difference in the effect of religion on equity home bias between GFC and non-GFC periods or between pre- and post-GFC periods.

Table 3 describes the estimation results of Equation (5). Panel A and B show the results when we use GFC and $PostGFC$ as $GFCIndicator$, respectively. In both Panels, the coefficients of three religious variables show similar results in Table 2. In Panel A, where we compare the religious effects across GFC and non-GFC, none of the interaction terms shows statistically significant coefficients, except $Religiosity \times GFC$ in Column (4) (coefficient = -0.021, t-value = -2.207). Overall, Panel A in Table 3 implies no significant differences in religious effects on home bias across the GFC and non-GFC periods.

[Insert: Table 3]

In Panel B, where we compare the religious effects between pre-GFC and post-GFC, the interaction term $RelDiversity \times PostGFC$ is also insignificant (coefficient = -0.013, t-value = -0.394). Although two interaction terms $Religiosity \times PostGFC$ and $RelHierarchy \times PostGFC$ has positive and statistically significant coefficients in Columns (1) and (3), only one interaction term survives if we simultaneously include all religious variables in Column (4). Overall, Table 3

explains that our main results are not driven simply by the global financial crisis and emphasizes that our main results are robust.

4. Conclusion

This study uses country-level portfolio investment data and religious characteristics data to examine the relationship between equity home bias and religion. We find that both religiosity and religious hierarchy positively affect equity home bias, whereas religious diversity has the opposite effect. Our results are robust even if we consider the impact of the global financial crisis. Future research could look into how religion can play a role in other types of home bias, such as bank loans, bonds, and foreign direct investment (FDI) (Lee et al., 2022).

In short, our study highlights multifaceted aspects of religion to explain cross-country differences in equity home bias and help us better understand how it can affect equity home bias.

Appendix A: Variable Definitions

Variable	Definition
<u>Dependent variable</u>	
<i>HB</i>	$HB_{it} = 1 - w_{it}/w_{it}^*$, where w_{it} is the weight of the actual foreign equity holdings of country i in year t , and w_{it}^* is the global market weight of foreign equity assets of investors in country i in year t (source: CPIS dataset, WDI).
<u>Independent variables</u>	
<i>Religiosity</i>	We measure <i>Religiosity</i> based on the participants' responses to the following question in the WVS Wave 7: "Indicate how important religion is in your life." Responses are scored 1, 2, 3, and 4, to the answers "Not at all important," "Not very important," "Rather important," and "Very important", respectively. <i>Religiosity</i> is defined as the weighted average of individual scores for country i (source: WVS).
<i>RelDiversity</i>	One minus the HHI based on the religious population data of country i in year t . It implies the probability that two randomly chosen individuals from a country belong to different religious denomination groups (source: ARDA).
<i>RelHierarchy</i>	A dummy variable that is equal to 1 if country i 's main religion (i.e., the majority of the population (i.e., 50% plus one) engages in) is one of the following in year t : Catholic, Orthodox, and Muslim, and 0 otherwise (source: La Porta et al., 1997).
<u>Control variables</u>	
<i>GDP</i>	The natural logarithm of annual GDP of country i in year t (in dollars; source: WDI).
<i>GDPperCap</i>	The natural logarithm of annual GDP per capita of country i in year t (in dollars; source: WDI).
<i>MC</i>	The natural logarithm of market capitalization of country i in year t (in dollars; source: WDI).
<i>TradeOpenness</i>	The ratio of imports plus exports to GDP as a percentage of GDP of country i in year t (source: WDI).
<i>FinOpenness</i>	The capital account openness index of country i in year t (source: Chinn and Ito, 2006).
<i>NumBIT</i>	The total number of bilateral investment treaties (BIT) in force between country i and other countries in year t (source: International Investment Agreements Navigator of UNCTAD).
<i>LangDiversity</i>	Dow's within-country linguistic diversity measure of country i (source: Research page for Douglas Dow).
<i>Colonial</i>	Dummy variable that is equal to 1 if country i has past colonial experience in year t (source: CEPII).
<i>CurColonial</i>	Dummy variable that is equal to 1 if country i has current colonial relationship in year t (source: CEPII).
<i>Legal_English</i>	Dummy variable that is equal to 1 if country i have the English legal origin (source: Djankov et al., 2008).

<i>Legal_French</i>	Dummy variable that is equal to 1 if country <i>i</i> have the French legal origin (source: Djankov et al., 2008).
<i>Legal_German</i>	Dummy variable that is equal to 1 if country <i>i</i> have the German legal origin (source: Djankov et al., 2008).
<i>Legal_Scandinavian</i>	Dummy variable that is equal to 1 if country <i>i</i> have the Scandinavian legal origin (source: Djankov et al., 2008).
<i>Vae</i>	Country <i>i</i> 's 'Voice and Accountability,' dimension score in year <i>t</i> (source: WGI).
<i>Pve</i>	Country <i>i</i> 's 'Political Stability and Absence of Violence/Terrorism' dimension score in year <i>t</i> (source: WGI).
<i>Gee</i>	Country <i>i</i> 's 'Government Effectiveness' dimension score in year <i>t</i> (source: WGI).
<i>Rqe</i>	Country <i>i</i> 's 'Regulatory Quality' dimension score in year <i>t</i> (source: WGI).
<i>Rle</i>	Country <i>i</i> 's 'Rule of Law' dimension score in year <i>t</i> (source: WGI).
<i>Cce</i>	Country <i>i</i> 's 'Control of Corruption' dimension score in year <i>t</i> (source: WGI).

References

- Abreu, M., Mendes, V., Santos, J. A. C., 2011. Home country bias: does domestic experience help investors enter foreign markets? *Journal of Banking and Finance* 35(9), 2330-2340.
- Adler, M., Dumas, B., 1983. International portfolio choice and corporation finance: a synthesis. *Journal of Finance* 38(3), 925-984.
- Ahearne, A. G., Grier, W. L., Warnock, F. E., 2004. Information costs and home bias: an analysis of US holdings of foreign equities. *Journal of International Economics* 62(2), 313-336.
- Alfaro, L., Chari, A., Kanczuk, F., 2017. The real effects of capital controls: firm-level evidence from a policy experiment. *Journal of International Economics* 108(C), 191-210.
- Alon, I., Spitzer, J., 2003. Does religious freedom affect country risk assessment? *Journal of International and Area Studies* 10(2), 51-62.
- Altug, S., Canova, F., 2014. Do institutions and culture matter for business cycles? *Open Economies Review* 25(1), 93-122.
- Anderson, C. W., Fedenia, M., Hirschey, M., Skiba, H., 2011. Cultural influences on home bias and international diversification by institutional investors. *Journal of Banking and Finance* 35(4), 916-934.
- Ardalan, K., 2019. Equity home bias: a review essay. *Journal of Economic Surveys* 33(3), 949-967.
- Baltzer, M., Stolper, O., Walter, A., 2015. Home-field advantage or a matter of ambiguity aversion? Local bias among German individual investors. *European Journal of Finance* 21(9), 734-754.
- Baxamusa, M., Jalal, A., 2014. Does religion affect capital structure? *Research in International Business and Finance* 31(C), 112-131.
- Bennett, M. R., Einolf, C. J., 2017. Religion, altruism, and helping strangers: a multilevel analysis of 126 countries. *Journal for the Scientific Study of Religion* 56(2), 323-341.
- Beugelsdijk, S., Frijns, B., 2010. A cultural explanation of the foreign bias in international asset allocation. *Journal of Banking and Finance* 34(9), 2121-2131.
- Bhamra, H. S., Coeurdacier, N., Guibaud, S., 2014. A dynamic equilibrium model of imperfectly integrated financial markets. *Journal of Economic Theory* 154(C), 490-542.
- Boyle, P., Garlappi, L., Uppal, R., Wang, T., 2012. Keynes meets Markowitz: the trade-off between familiarity and diversification. *Management Science* 58(2), 253-272.
- Brown, D., James, P., 2018. Religious characteristics of state dataset: demographics, version 2.0, <https://www.thearda.com/Archive/Files/Descriptions/RCSDEM2.asp>.

- Cao, H. H., Han, B., Hirshleifer, D., Zhang, H. H., 2011. Fear of the unknown: familiarity and economic decisions. *Review of Finance* 15(1), 173-206.
- Chan, K., Covrig, V., Ng, L., 2005. What determines the domestic bias and foreign bias? Evidence from mutual fund equity allocations worldwide. *Journal of Finance* 60(3), 1495-1534.
- Chang, C., Liu, Z., Spiegel, M. M., 2015. Capital controls and optimal Chinese monetary policy. *Journal of Monetary Economics* 74(C), 1-15.
- Chinn, M. D., Ito, H., 2006. What matters for financial development? Capital controls, institutions, and interactions. *Journal of Development Economics* 81(1), 163-192.
- Chiou, P., Lee, C. F., 2013. Do investors still benefit from culturally home-biased diversification? An empirical study of China, Hong Kong, and Taiwan. *Review of Quantitative Finance and Accounting* 40(2), 341-381.
- Choi, N., Fedenia, M., Skiba, H., Sokolyk, T., 2017. Portfolio concentration and performance of institutional investors worldwide. *Journal of Financial Economics* 123(1), 189-208.
- Coeurdacier, N., Rey, H., 2013. Home bias in open economy financial macroeconomics. *Journal of Economic Literature* 51(1), 63-115.
- Cooper, I., Sercu, P., Vanpée, R., 2013. The equity home bias puzzle: a survey. *Foundations and Trends in Finance* 7(4), 289-416.
- Cooper, I., Sercu, P., Vanpée, R., 2018. A measure of pure home bias. *Review of Finance* 22(4), 1469-1514.
- Covrig, V. M., Defond, M. L., Hung, M., 2007. Home bias, foreign mutual fund holdings, and the voluntary adoption of international accounting standards. *Journal of Accounting Research* 45(1), 41-70.
- Dahlquist, M., Pinkowitz, L., Stulz, R. M., Williamson, R., 2003. Corporate governance and the home bias. *Journal of Financial and Quantitative Analysis* 38(1), 87-110.
- De Santis, G., Gerard, B., 1997. International asset pricing and portfolio diversification with time-varying risk. *Journal of Finance* 52(5), 1881-1912.
- Dimmock, S. G., Kouwenberg, R., Mitchell, O. S., Peijnenburg, K., 2016. Ambiguity aversion and household portfolio choice puzzles: empirical evidence. *Journal of Financial Economics* 119(3), 559-577.
- Djankov, S., La Porta, R., Lopez-de-Silanes, F., Shleifer, A., 2008. The law and economics of self-dealing. *Journal of Financial Economics* 88(3), 430-465.
- Dow, D., Cuyper, I. R., Ertug, G., 2016. The effects of within-country linguistic and religious diversity on foreign acquisitions. *Journal of International Business Studies* 47(3), 319-346.

- El Ghouli, S., Guedhami, O., Ni, Y., Pittman, J., Saadi, S., 2012. Does religion matter to equity pricing? *Journal of Business Ethics* 111(4), 491-518.
- Fidora, M., Fratzscher, M., Thimann, C., 2007. Home bias in global bond and equity markets: the role of real exchange rate volatility. *Journal of International Money and Finance* 26(4), 631-655.
- French, K. R., Poterba, J. M., 1991. Investor diversification and international equity markets. *American Economic Review* 81(2), 222-226.
- Gaar, E., Scherer, D., Schiereck, D., 2022. The home bias and the local bias: a survey. *Management Review Quarterly* 72(1), 21-57.
- Gelos, R. G., Wei, S. J., 2005. Transparency and international portfolio holdings. *Journal of Finance* 60(6), 2987-3020.
- Grinblatt, M., Keloharju, M., 2001. How distance, language, and culture influence stockholdings and trades. *Journal of Finance* 56(3), 1053-1073.
- Guidolin, M., Liu, H., 2016. Ambiguity aversion and underdiversification. *Journal of Financial and Quantitative Analysis* 51(4), 1297-1323.
- Guiso, L., Sapienza, P., Zingales, L., 2008. Trusting the stock market. *Journal of Finance* 63(6), 2557-2600.
- Hergueux, J., 2011. How does religion bias the allocation of foreign direct investment? The role of institutions. *International Economics* 128(C), 53-76.
- Hilary, G., Hui, K. W., 2009. Does religion matter in corporate decision making in America? *Journal of Financial Economics* 93(3), 455-473.
- Hong, S., Lee, J., Oh, F. D., Shin, D., 2022. Religion and foreign direct investment. *International Business Review*, forthcoming.
- Hu, C., 2020. Industrial specialization matters: a new angle on equity home bias. *Journal of International Economics* 126(C), 103354.
- Jawadi, F., Cheffou, A. I., Jawadi, N., Louhichi, W., 2016. On the reputation of Islamic banks: a panel data qualitative econometrics analysis. *Open Economies Review* 27(5), 987-998.
- Jiang, F., Jiang, Z., Kim, K. A., Zhang, M., 2015. Family-firm risk-taking: does religion matter? *Journal of Corporate Finance* 33(C), 260-278.
- Kang, J. K., Stulz, R. M., 1997. Why is there a home bias? An analysis of foreign portfolio equity ownership in Japan. *Journal of Financial Economics* 46(1), 3-28.
- Kho, B. C., Stulz, R. M., Warnock, F. E., 2009. Financial globalization, governance, and the evolution of the home bias. *Journal of Accounting Research* 47(2), 597-635.
- Kilka, M., Weber, M., 2000. Home bias in international stock return expectations. *Journal of*

Psychology and Financial Markets 1(3-4), 176-192.

Knack, S., Keefer, P., 1997. Does social capital have an economic payoff? A cross-country investigation. *Quarterly Journal of Economics* 112(4), 1251-1288.

Konara, P., 2020. The role of language connectedness in reducing home bias in trade, investment, information, and people flows. *Research in International Business and Finance* 52(C), 101180.

Kumar, A., Page, J. K., Spalt, O. G., 2011. Religious beliefs, gambling attitudes, and financial market outcomes. *Journal of Financial Economics* 102(3), 671-708.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R. W., 1997. Trust in large organizations. *American Economic Review* 87(2), 333-338.

Larrain, M., Stumpner, S., 2017. Capital account liberalization and aggregate productivity: the role of firm capital allocation. *Journal of Finance* 72(4), 1825-1858.

Lau, S. T., Ng, L., Zhang, B., 2010. The world price of home bias. *Journal of Financial Economics* 97(2), 191-217.

Lee, J., Lee, K., Oh, F. D., 2022. International portfolio diversification and the home bias puzzle. Working Paper, Korea Advanced Institute of Science and Technology.

Lee, J., Oh, F. D., 2022. Capital account liberalization and economic performance: evidence from Korea. Working Paper, Korea Advanced Institute of Science and Technology.

Leroch, M. A., Reggiani, C., Rossini, G., Zucchelli, E., 2014. Religious attitudes and home bias: theory and new evidence from primary data. *Review of Development Economics* 18(2), 401-414.

Levy, H., Levy, M., 2014. The home bias is here to stay. *Journal of Banking and Finance* 47(C), 29-40.

Levy, H., Sarnat, M., 1970. International diversification of investment portfolios. *American Economic Review* 60(4), 668-675.

Lewis, K. K., 1999. Trying to explain home bias in equities and consumption. *Journal of Economic Literature* 37(2), 571-608.

Liu, E. Y., 2010. Are risk taking persons less religious? Risk preference, religious affiliation, and religious participation in Taiwan. *Journal for the Scientific Study of Religion* 49(1), 172-178.

Martin, P., Rey, H., 2004. Financial super-markets: size matters for asset trade. *Journal of International Economics* 64(2), 335-361.

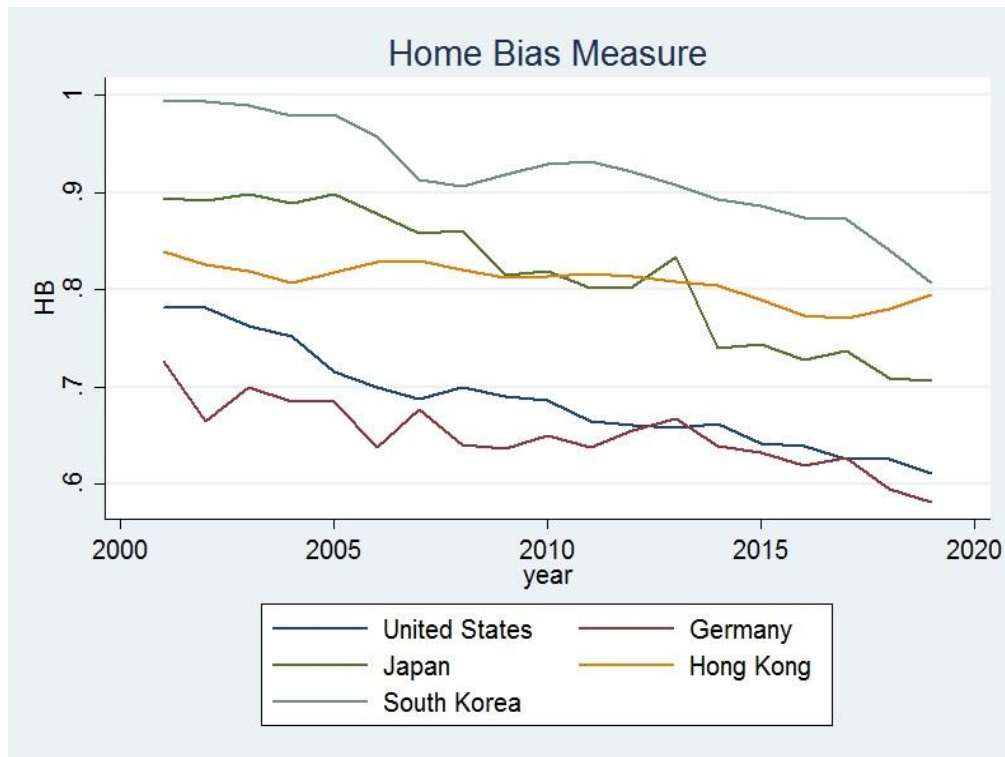
McCleary, R. M., Barro, R. J., 2006. Religion and economy. *Journal of Economic Perspectives* 20(2), 49-72.

Mishra, A. V., 2015. Measures of equity home bias puzzle. *Journal of Empirical Finance* 34(C), 293-312.

- Morse, A., Shive, S., 2011. Patriotism in your portfolio. *Journal of Financial Markets* 14(2), 411-440.
- Obstfeld, M., Rogoff, K., 2000. The six major puzzles in international macroeconomics: is there a common cause? In: Bernanke, B. S., Rogoff, K. (Ed.), *NBER Macroeconomics Annual 2000*, 15, pp. 339-412. Cambridge, IL: MIT Press.
- Oh, F. D., Shin, D., 2021. Religion and cross-border mergers and acquisitions. Working Paper, Korea Advanced Institute of Science and Technology.
- Oh, F. D., Shin, D., 2022. The role of religion in financial development and structure. Working Paper, Korea Advanced Institute of Science and Technology.
- Ouyang, A. Y., Rajan, R. S., 2017. Impact of terrorism on cross-border mergers and acquisitions (M&As): prevalence, frequency and intensity. *Open Economies Review* 28(1), 79-106.
- Portes, R., Rey, H., 2005. The determinants of cross-border equity flows. *Journal of International Economics* 65(2), 269-296.
- Putnam, R. D., 1993. *Making democracy work: civic traditions in modern Italy*. Princeton, NJ: Princeton University Press.
- Putnam, R. D., 2007. E pluribus unum: diversity and community in the twenty-first century the 2006 Johan Skytte prize lecture. *Scandinavian Political Studies* 30(2), 137-174.
- Shao, R., Wang, N., 2021. Trust and local bias of individual investors. *Journal of Banking and Finance* 133(C), 106273.
- Sharpe, W. F., 1964. Capital asset prices: a theory of market equilibrium under conditions of risk. *Journal of Finance* 19(3), 425-442.
- Solnik, B., Zuo, L., 2012. A global equilibrium asset pricing model with home preference. *Management Science* 58(2), 273-292.
- Stoddard, O., Noy, I., 2015. Fire-sale FDI? The impact of financial crises on foreign direct investment. *Review of Development Economics* 19(2), 387-399.
- Tocar, S. D., 2019. Religiosity and foreign direct investment: the case of Romania. *Cross-Cultural Management Journal* 21(1), 57-66.
- Wallmeier, M., Iseli, C., 2022. Home bias and expected returns: a structural approach. *Journal of International Money and Finance* 124(C), 102634.
- Wynter, M. M., 2019. Why did the equity home bias fall during the financial panic of 2008? *World Economy* 42(5), 1343-1372.
- Ziobrowski, B. J., Ziobrowski, A. J., 1995. Exchange rate risk and internationally diversified portfolios. *Journal of International Money and Finance* 14(1), 65-81.

Figure 1: Home Bias around the World

This figure depicts the annual level of home bias worldwide during the sample period. The blue, red, green, yellow, and gray lines indicate the value of our home bias measure (*HB*) for the United States, Germany, Japan, Hong Kong, and Korea, respectively.



Source: Coordinated Portfolio Investment Survey (CPIS), World Development Indicator (WDI).

Table 1: Descriptive Statistics

This table presents the descriptive statistics of our data sample and the variables from 2001 to 2019. Panel A reports the summary statistics for the variables used. Panel B shows the pairwise Pearson's correlation coefficients for the dependent, independent, and country-pair control variables. In Panel B, the symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. All the variables are defined in Appendix A.

Panel A: Summary Statistics

Variable	Count	Mean	Standard deviation	First quartile	Median	Third quartile
<u>Dependent variable</u>						
<i>HB</i>	1,002	0.739	0.264	0.650	0.802	0.951
<u>Independent variables</u>						
<i>Religiosity</i>	703	2.752	0.638	2.236	2.664	3.247
<i>RelDiversity</i>	1,002	0.497	0.213	0.326	0.500	0.667
<i>RelHierarchy</i>	1,002	0.579	0.494	0.000	1.000	1.000
<u>Control variables</u>						
<i>GDP</i>	960	26.297	1.758	25.421	26.382	27.490
<i>GDPperCap</i>	960	9.676	1.130	8.941	9.878	10.604
<i>MC</i>	1,002	25.448	2.349	23.858	25.658	27.289
<i>TradeOpenness</i>	939	1.011	0.808	0.545	0.727	1.198
<i>FinOpenness</i>	944	1.205	1.366	-0.023	2.322	2.322
<i>NumBIT</i>	1,002	22.835	25.404	6.000	13.000	34.000
<i>LangDiversity</i>	922	0.368	0.278	0.135	0.289	0.609
<i>Colonial</i>	1002	0.786	0.410	1.000	1.000	1.000
<i>CurColonial</i>	1002	0.130	0.336	0.000	0.000	0.000
<i>Legal_English</i>	793	0.286	0.452	0.000	0.000	1.000
<i>Legal_French</i>	793	0.477	0.500	0.000	0.000	1.000
<i>Legal_German</i>	793	0.199	0.400	0.000	0.000	0.000
<i>Legal_Scandinavian</i>	793	0.038	0.191	0.000	0.000	0.000
<i>Vae</i>	943	0.614	0.813	0.127	0.837	1.243
<i>Pve</i>	949	0.270	0.914	-0.268	0.495	0.990
<i>Gee</i>	949	0.838	0.800	0.145	0.958	1.559
<i>Rqe</i>	949	0.823	0.768	0.280	0.949	1.468
<i>Rle</i>	949	0.724	0.882	-0.063	0.871	1.557
<i>Cce</i>	949	0.670	0.994	-0.236	0.607	1.546

Panel B: Pairwise Correlation Matrix

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
<i>HB</i>	(1)	1.000												
<i>Religiosity</i>	(2)	0.513***	1.000											
<i>RelDiversity</i>	(3)	-0.198***	-0.511***	1.000										
<i>RelHierarchy</i>	(4)	0.216***	0.629***	-0.586***	1.000									
<i>GDP</i>	(5)	0.336***	-0.345***	0.143***	-0.218***	1.000								
<i>GDPperCap</i>	(6)	-0.627***	-0.737***	0.355***	-0.328***	0.141***	1.000							
<i>MC</i>	(7)	0.230***	-0.313***	0.242***	-0.331***	0.909***	0.246***	1.000						
<i>TradeOpenness</i>	(8)	-0.381***	-0.153***	0.151***	-0.058*	-0.383***	0.303***	-0.135***	1.000					
<i>FinOpenness</i>	(9)	-0.489***	-0.536***	0.262***	-0.201***	0.079**	0.704***	0.156***	0.269***	1.000				
<i>NumBIT</i>	(10)	0.106***	-0.317***	0.157***	-0.137***	0.440***	0.197***	0.337***	-0.164***	0.206***	1.000			
<i>LangDiversity</i>	(11)	0.019	0.387***	-0.012	-0.088***	0.011	-0.190***	0.155***	0.105***	-0.261***	-0.243***	1.000		
<i>Colonial</i>	(12)	-0.067**	0.014	0.142***	-0.001	0.219***	0.119***	0.215***	-0.024	0.133***	0.202***	-0.183***	1.000	
<i>ConColonial</i>	(13)	-0.068**	0.016	0.154***	-0.122***	-0.182***	0.017	-0.130***	0.178***	-0.178***	-0.061*	0.156***	-0.125***	1.000

Table 2: Religion and Equity Home Bias

This table reports the results of the panel OLS regressions for Equation (4) and shows the effects of religious variables on equity home bias. The dependent variable is *HB*, the extent of home bias. The main independent variable is one of the followings: *Religiosity* (i.e., the level of religiosity of a country); *RelDiversity* (i.e., one minus the HHI of the religious population in a country); and *RelHierarchy* (i.e., an indicator variable equal to one if a country's main religion is hierarchical (e.g., Catholic, Orthodox, and Muslim) and zero otherwise). Appendix A provides detailed descriptions of the variables. In all columns, the inclusion of fixed effects is indicated. Standard errors are heteroskedasticity-robust and clustered at the country level. The T-statistics are shown in parentheses. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Variable	<i>HB</i>			
	(1)	(2)	(3)	(4)
<i>Religiosity</i>	0.174*** (4.030)			0.083* (1.723)
<i>RelDiversity</i>		-0.303** (-2.152)		-0.228 (-1.544)
<i>RelHierarchy</i>			0.119*** (3.800)	0.082*** (2.608)
<i>GDP</i>	-0.007 (-0.246)	0.000 (-0.008)	0.009 (0.312)	0.004 (0.143)
<i>GDPperCap</i>	-0.004 (-0.120)	-0.002 (-0.073)	-0.014 (-0.487)	-0.006 (-0.202)
<i>MC</i>	0.047*** (3.036)	0.055*** (3.787)	0.058*** (3.958)	0.045*** (2.934)
<i>TradeOpenness</i>	0.022 (0.992)	0.022 (1.287)	0.014 (0.874)	0.044* (1.895)
<i>FinOpenness</i>	-0.011* (-1.844)	-0.009 (-1.543)	-0.009 (-1.554)	-0.009 (-1.588)
<i>NumBIT</i>	-0.001* (-1.730)	0.000 (-1.534)	0.000 (-1.351)	-0.001* (-1.778)
<i>LangDiversity</i>	-0.165** (-2.265)	-0.032 (-0.346)	-0.034 (-0.363)	-0.164** (-2.163)
<i>Colonial</i>	-0.011 (-1.332)	0.006 (0.567)	0.005 (0.468)	-0.011 (-1.271)
<i>CurColonial</i>	0.014 (0.977)	-0.011 (-0.843)	-0.010 (-0.729)	0.009 (0.705)
<i>Legal_English</i>	0.109 (1.333)	0.196 (1.510)	0.082 (0.869)	0.170 (1.573)
<i>Legal_French</i>	0.186** (2.085)	0.278*** (2.962)	0.140* (1.745)	0.168* (1.659)
<i>Legal_German</i>	0.265*** (3.061)	0.319*** (2.896)	0.193** (2.326)	0.278*** (2.704)
<i>Vae</i>	-0.026 (-1.266)	-0.003 (-0.143)	-0.011 (-0.523)	-0.028 (-1.415)
<i>Pve</i>	-0.012 (-0.845)	-0.015 (-1.004)	-0.018 (-1.302)	-0.010 (-0.689)
<i>Gee</i>	0.009 (0.329)	0.014 (0.601)	0.021 (0.845)	-0.003 (-0.141)
<i>Rqe</i>	-0.038 (-1.062)	-0.061** (-2.101)	-0.058* (-1.861)	-0.043 (-1.247)
<i>Rle</i>	-0.003 (-0.104)	-0.031 (-0.971)	-0.027 (-0.924)	-0.006 (-0.188)
<i>Cce</i>	0.021	0.012	0.012	0.021

	(0.869)	(0.496)	(0.476)	(0.865)
<i>Constant</i>	-0.657	-0.558	-0.831*	-0.556
	(-1.272)	(-1.280)	(-1.734)	(-1.2)
Year fixed effects	Yes	Yes	Yes	Yes
R-squared	0.607	0.339	0.317	0.604
Observations	590	734	734	587

Table 3: Religion, Equity Home Bias, and the Global Financial Crisis (GFC)

This table reports the results of the panel OLS regression for Equation (5). Panel A shows the results with the GFC indicator (i.e., 2007-2008). Panel B shows the results with the post-GFC indicator (i.e., after 2009). The main independent variable is one of the followings: *Religiosity* (i.e., the level of religiosity of the country); *RelDiversity* (i.e., one minus the HHI of the religious population); and *RelHierarchy* (i.e., an indicator variable equal to one if country *i*'s main religion is hierarchical (e.g., Catholic, Orthodox, and Muslim) and zero otherwise). In all columns, the inclusion of other control variables used in the main results and fixed effects is indicated at the end. Appendix A provides detailed descriptions of the variables. Standard errors are heteroskedasticity-robust and clustered at the country level. The T-statistics are shown in parentheses. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: GFC vs non-GFC

Variable	<i>HB</i>			
	(1)	(2)	(3)	(4)
<i>Religiosity</i>	0.147*** (3.670)			0.080* (1.804)
<i>RelDiversity</i>		-0.304** (-2.160)		-0.180 (-1.534)
<i>RelHierarchy</i>			0.118*** (3.583)	0.068* (1.767)
<i>GFC</i>	-0.030 (-1.301)	-0.073*** (-4.012)	-0.072*** (-3.757)	0.010 (0.313)
<i>Religiosity</i> × <i>GFC</i>	-0.010 (-1.559)			-0.021** (-2.207)
<i>RelDiversity</i> × <i>GFC</i>		0.001 (0.059)		-0.032 (-1.290)
<i>RelHierarchy</i> × <i>GFC</i>			-0.005 (-0.611)	0.008 (0.651)
Other control variables	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
R-squared	0.701	0.334	0.336	0.681
Observations	590	734	734	587

Panel B: Pre-GFC vs Post-GFC

Variable	<i>HB</i>			
	(1)	(2)	(3)	(4)
<i>Religiosity</i>	0.142*** (3.228)			0.045 (0.883)
<i>RelDiversity</i>		-0.299** (-2.019)		-0.252* (-1.819)
<i>RelHierarchy</i>			0.107*** (3.630)	0.080** (2.509)
<i>PostGFC</i>	-0.258*** (-5.364)	-0.174*** (-5.177)	-0.211*** (-7.141)	-0.290*** (-4.312)
<i>Religiosity</i> × <i>PostGFC</i>	0.032*** (2.625)			0.035** (2.433)
<i>RelDiversity</i> × <i>PostGFC</i>		-0.013 (-0.394)		0.051 (0.915)
<i>RelHierarchy</i> × <i>PostGFC</i>			0.027* (1.711)	0.020 (0.803)
Other control variables	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
R-squared	0.627	0.337	0.335	0.627
Observations	590	734	734	587