International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

A Study of the Determinants of Home Bias Puzzle in Emerging and Developing Economies

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ABSTRACT
The objective of this research paper is to identify the explanatory factors of the Home Bias Puzzle (HBP), which has been widely debated in the literature, Using a sample of 40 countries observed over the period 2006-2021. The econometric results obtained the Ordinary Least Squares (OLS) estimation method suggest that all selected explanatory variables are significant (governance variables (**panel A**), macroeconomic variables (**panel B**), information asymmetry, familiarity, and geographical variables (panel D), Foreign Trade variables (**panel E**), and geopolitical variables (panel F)), except for the variables related to market size and microstructure (**panel C**). It appears that emerging countries exhibit the highest levels of home bias. Indeed, over the entire study period, the average Home Bias in developed countries decreased from 76.39% in 2006 to 47.39% in 2021, representing a decrease of approximately 38%. In contrast, emerging countries display a nearly constant pattern of Home Bias. Specifically, the Home Bias rate was 92.84% in 2006, compared to a rate of 88.47% in 2021. The reasons have been validated within the framework of the six panels A, B, C, D, E, and F.

Keywords: International Diversification, Home Bias, Emerging Markets

JEL Classification: *F3, G1*

1. Introduction

Investment diversification is widely recognized today as a fundamental element of sound asset management. This aspect was addressed by Harry Markowitz, the 1990 Nobel Prize laureate in economics, in his seminal article "Portfolio Selection," published in the Journal of Finance in 1952. He demonstrated that a judicious combination of numerous assets in a portfolio helps reduce the total risk incurred for a given expected rate of return. Markowitz and others showed that the interest in investing in a financial security should not be evaluated separately but within the context of the investor's entire portfolio and a competitive market where various savings vehicles (stocks, bonds, time deposits, real estate, land, etc.) are in competition. The goal of this approach is to define an asset selection process that maximizes the portfolio's return for a given level of risk. This process takes place along an efficiency frontier that represents the set of portfolios composed of financial securities offering the best return for a given level of risk.

Many works in finance extend the modern concept of diversification to the international context (Grubel (1968), Levy and Sarnat (1970), Lessard (1973), and Solnik (1974)). Investors can reduce the volatility of their returns by investing in different countries whose economic cycles are not perfectly correlated. This risk reduction process is then called "geographical diversification." The gains associated with international

diversification have been studied and empirically proven, notably by Solnik (1974), Lee Kumar and Goetzmann (2004), and more recently by Garg, Karmakar, M. and Paul, S. (2023); Lee, J. Lee, K., and Oh, F.D. (2023).

However, despite the knowledge and evident gains from diversification, many empirical studies suggest that investors continue to show a strong preference for domestic assets and subsequently adopt behavior that goes against the traditional teachings of international diversification (Sorensen, 2007). This phenomenon is called "home bias" (French and Poterba, 1991) and persists over time (Amadi, 2004).

In reality, this phenomenon can be observed across various financial markets and is often influenced by a combination of complex explanatory factors. Understanding these factors is important, even paramount, for finance professionals, researchers, and policymakers because home bias can have significant implications for portfolio diversification, market stability, and international capital flows.

The main objective of this research paper lies in our attempt to contribute to the explanation of the home bias puzzle (HBP) observed in international financial markets (developed and emerging). Financial analysis shows a lack of consensus on the issue. We particularly aim to shed light on the various questions raised by the literature, namely:

- **What are the explanatory factors for this under-diversification, and consequently, how can we explain the observed bias in favor of domestic assets?**
- **What is the impact of financial crises on the home bias puzzle (HBP)?**

To address these questions, our research paper will be organized as follows: in the first part, we present a literature review on the explanatory factors for the strong preference for domestic assets. In the second part, we will present the empirical methodology of the research and the financial results obtained.

2. Literature Review

In this section, we will provide an overview of the literature regarding the explanatory factors of the home bias puzzle. Specifically, a synthesis of the literature associated with the home bias issue can be attributed to institutional factors on one hand, and behavioral aspects from the investors' perspective on the other. Indeed, several institutional factors influence home biases. These include, but are not limited to: capital controls, taxes, exchange rate risk, information asymmetry, transaction costs, governance, multinational firms, and non-negotiable assets. Advanced research, both theoretical and empirical, seeks to explain to what extent these determinants affect the proportions of securities held by investors and to what extent they challenge the gains from international diversification. It is in this spirit that French and Poterba (1993) indicate that transaction costs are an explanatory factor for the under-diversification observed in the international market. The authors observe that the most liquid markets attract international investors because costs are very low. In contrast, they show that narrow and illiquid emerging markets exhibit relatively high transaction costs; such imperfections hinder investment in these countries. In the same vein, Tesar and Werner (1995) present the impact of transaction costs as a variable hindering capital mobility and subsequently limiting the process of international diversification. Specifically, these authors presented an empirical result based on the composition of portfolios of five investors from the following countries: Canada, Germany, Japan, Great Britain, and the United States, during the period 1970-1990. The authors show that the cumulative diversification gains in these markets are lower than the transaction costs borne by investors. It should be noted that the results of this study could be challenged today. We observe that the issue associated with explaining home bias based on transaction costs has always been a concern for investors and fund managers. In financial theory, it is noted that most financial market equilibrium models were

developed in the absence of any form of imperfections such as taxation or transaction costs. For example, Black F. (1974) was the first to propose an equilibrium model based on the assumption of the existence of explicit barriers on financial assets outside national borders. He assumes that investment barriers take the form of taxes on the value of assets held by an investor in a foreign market. The presence of this taxation means that the expected return on an asset may vary depending on the nationality of the investor (domestic or foreign). Indeed, this domestic preference is also justified by the effects of information asymmetry. Local investors are generally better informed about the securities issued by companies operating in their territory than foreign investors. In this context, local investors may enjoy an informational advantage, encouraging them to prefer these stocks perceived as less risky (Cooper et al., 2012). This perception contributes to increasing their preference for domestic assets (Berkel, 2007). Governance, in this context, refers to the mechanisms and rules governing the operation of companies and the protection of shareholder rights. A high level of governance is generally accompanied by transparent practices, strict regulations, and robust control mechanisms. Conversely, a low level of governance can lead to deficiencies in information disclosure, opaque practices, and weaker protection of investor rights. In fact, investors often tend to increase their preference for domestic assets in countries with strong governance (Kho et al., 2009). Strict regulations and increased transparency reassure investors about the availability of reliable information and adequate protection of their interests (LaPorta, Lopez, and Shleifer, 1999). Thus, a low level of governance can contribute to reinforcing home bias, as investors are more inclined to trust local companies and consider their assets less risky (Giannetti and Simonov, 2006).

Maciejovsky (2003) emphasizes the importance of behavioral factors in explaining home bias. According to Barberis and Thaler (2003), behavioral finance questions two fundamental assumptions of efficient market theory: the rationality of investors and the absence of arbitrage opportunities. Indeed, individual investors, far from acting rationally, are often driven by their emotions, such as fear, envy, overconfidence in their abilities, or the desire to appear. For these authors, the behavior of such agents can explain the formation of market inefficiencies or even speculative bubbles. Therefore, it is interesting to analyze the impact of investors' behavioral characteristics on asset allocation decisions in their portfolio.

Familiarity with companies, markets, and the local economic environment can lead to a sense of comfort, thus encouraging investors to favor domestic assets. The concept of familiarity is also associated with the idea of information asymmetry explained earlier: an investor tends to invest in companies with which they are familiar because they believe they have more information about them (Huberman, 2001).

Familiar companies for investors are often geographically close to their place of residence or work (Portes and Rey, 2005). Consequently, their preference for these securities results in a significant home bias in their investment portfolio (Chan et al., 2005). Along the same lines, Niszczota (2013) shows that investors with an open mind are more inclined to seek investment opportunities beyond their national borders. Conversely, those who lack flexibility may prefer to stay within their comfort zone and invest primarily in domestic assets, avoiding less familiar foreign markets. In this regard, Soto and Jackson (2013) use

one of the dimensions of the famous five-factor personality model to characterize an individual or a group of people. The five factors are extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience.

In this analytical framework, based on the same elements, Morse Shive's study (2011) proves that more patriotic countries, with a strong attachment to the concept of "nation," exhibit a higher home bias. In this context, investors tend to be more comfortable with companies whose practices and values are in line with their own culture, which can promote domestic investments. In this context, Berkel (2007) empirically

demonstrates that certain countries share a stronger attachment and encourage their residents to invest reciprocally in both countries. This phenomenon is called "friendship bias.

Research on the impact of financial crises on investors' home bias reveals divergent results. Some studies (Broner et al. (2013), Cornand et al. (2015), Fratzscher (2012), Mishra (2015), Forbes and Warnock (2012), Giannetti and Laeven (2012)) indicate an upward trend in home bias during crises. This phenomenon depends on both the integration of financial markets and investors' risk appetite. Uncertainties may encourage investors to favor familiar securities perceived as less risky (Uppal and Wang, 2003). Other studies (Mukherjee et al. (2018) and Wynter (2019)) suggest that home bias may decrease during crises, except in the United States (Wynter, 2019). These studies challenge the idea of investors "retrenching" towards domestic assets, indicating that some investors may adopt a more diversified, even international, approach during crises.

3. Research Methodology

Our objective is to empirically verify the relevance of the explanations regarding the Home Bias Puzzle (HBP) most commonly discussed in the literature. A particular focus will be placed on the relationship between home bias and financial crises. To achieve this, we will estimate a general model using Ordinary Least Squares (OLS) to determine the determinants of HBP over the period 2006-2021.

3.1. Measurement of Home Bias

The measurement of home bias requires choosing a benchmark to define what constitutes an "excessive" weighting of domestic equities in a portfolio. The choice of this benchmark has been examined by Baele et al. (2007) and Mishra (2015), who propose five methods for determining the weights of domestic assets in the reference portfolio. The most recognized method is based on a model (as opposed to methods based on return data), the International Asset Pricing Model (IAPM) (Sercu, 1980; Solnik, 1974). According to this method, the benchmark is measured by the share of assets from other countries in the total global assets. Home bias exists when the share of international assets held by agents of the country remains below this benchmark. In fact, other benchmarks are constructed using mean-variance methods, minimum variance, Bayes-Stein method, or Bayesian method and its corrections.

In our work, we drew inspiration from the Home Bias (HB) measure used by d'Ahearne et al. (2004). Formally: Formally,

$$\boldsymbol{hb_{it} = 1 - \frac{sfe_{it}^{pays}}{sfe_{t}^{monde}}}$$

Where:

sfe_{it}^{pays} , in the numerator, represents the share of foreign assets in the portfolio of country *i* at time *t*;

sfe_{t}^{monde}, in the denominator, represents the share of foreign assets in the global portfolio at time *t*.

3.2. Econometric Specification and Study Hypotheses

3.2.1. Econometric Specification

In order to determine the explanatory factors of home bias, we apply the following linear model:

$$HBP_{i,t} = \alpha_0 + \sum_{i=1}^{N} \beta_i X_i + \varepsilon_{i,t}$$

The home bias $HBP_{i,t}$, for each country i in period t is calculated using the different explanatory variables $x_1 \dots x_{22}$.

The determinants of the endogenous variable HBP have been divided into six panels or Hypothesis (***See Appendix 3,4***):

- Governance variables, consisting of four variables, panel (A)
- Macroeconomic variables, consisting of three variables, panel (B)
- Variables related to market size and microstructure, consisting of two variables, panel (C)
- Informational asymmetry, familiarity, and geographical variables, consisting of seven variables, panel (D)
- Foreign trade variables, consisting of three variables, panel (E)
- Finally, geopolitical variables, consisting of three variables, panel (F)

3.2.2. Study Hypotheses (*See. Appendix 3*)

H1: A high level of governance and favorable regulations increase the domestic bias (Kho et al., 2009).

H2: Sustained and positive economic growth increases the domestic bias.

H3: A liquid and well-diversified market increases the domestic bias (Ferreira and Miguel, 2007).

H4: As international information asymmetry increases, the domestic bias also increases. Conversely, widespread access to the internet decreases the domestic bias (Ahearne et al., 2004; Bae et al., 2008).

H5: Financial liberalization decreases the domestic bias (Cooper et al., 2012).

H6: During financial shocks, the domestic bias increases (Habib & Straca, 2013; Milesi-Ferreti et Tille, 2011)

4. Results and Interpretations

Appendix 1 presents the results of domestic biases of the selected developed countries in our sample. Investors from Japan and Poland exhibit the highest levels of domestic bias, at 88.2% and 65.1% respectively, while Norway has the lowest domestic bias at 15.6%.

On the other hand, among investors from emerging markets (***See Appendix 2***), Ukraine shows the highest rate of domestic bias throughout our study period, with a rate of 100% in 2018. Investors from India, Egypt, and Turkey have domestic biases close to 100%, at 99.5%, 98.9%, and 98.3% respectively for the year 2021. Finally, investors from the Czech Republic have the lowest domestic bias rate among the emerging market countries in our sample, at 42.5%.

Furthermore, based on the obtained results, it emerges that emerging markets exhibit the highest domestic biases. This confirms the first hypothesis of our study, which suggests that domestic biases are as high in emerging markets as they are in developed countries.

The econometric results obtained using Ordinary Least Squares (OLS) (***See Table 1***) suggest the following comments:

- Regarding Panel (A) related to Governance variables, both transparency of information (FIT) conveyed by the company to the market and the state of governance (SGOV) are statistically significant at their respective thresholds of 5% and 1%. Indeed, these two variables are important in investors' investment decision-making.
- Per capita income (GDPC) and the degree of economic openness (OER) in Panel (B) appear to play a role in the financial investment decision of economic agents. Indeed, the coefficients associated with these variables are statistically significant at their respective thresholds of 1% and 5%.

- The variables related to market size and microstructure: liquidity (LIQ) and financial development (FDEV) of firms in panel (C), are not statistically significant and do not seem to affect the endogenous variable: Home Bias (HBP).
- Variables reflecting information asymmetry, familiarity, and geography in Panel (D) partially explain the preference behavior of domestic assets displayed by investors in financial markets, particularly common language (COML), internet connectivity (INT), and mobile phone ownership (MOB).
- The openness of the capital account (CAO) and the risk associated with currency convertibility (REXR) in international trade in Panel (E) seem to influence investors' decision to acquire domestic assets in international financial markets, with coefficients associated with these two variables statistically significant at their respective thresholds of 1% and 5%.
- Finally, Panel (F) allows us to highlight two out of three statistically significant explanatory variables that reflect geopolitical domestic bias behavior (EURZ) and emerging markets (EMER) as diversification assets.
- Overall, this econometric specification of the determinants of Domestic Bias behavior has allowed us to understand the motives of investors in international financial markets. Indeed, over the period 2006-2021, the average Domestic Bias in developed countries decreased from 76.39% in 2006 to 47.39% in 2021, representing a decrease of approximately 38%. In contrast, emerging markets exhibit a quasi-permanent behavior of Domestic Bias. Specifically, the Domestic Bias rate was 92.84% in 2006, compared to a rate of 88.47% in 2021. The reasons have been validated within the framework of the six panels A, B, C, D, E, and F.

Panel Governance Determinant (*Panel A*)		**Constante**		**-2.641**
				(0.0022)
	SHR	Share Holders Rights		-0.002

				(0.812)
	PMS	Protection of Minority Share Holders		-0.009
				(0.670)
	FIT	Firm Transparency		0.028**
				(0.0028)
	SGOV	State Governance		-0.072***
				(0.0002)
Macroeconomic Determinant	OER	Open Economie Rate		0.010**
				(0.0022)
(*Panel B*)	GDP	Gross Domestic Product		0.006
				(0.170)
	GDPC	Domestic product Per Capita		0.356***
				(0.000)
Market Size and Microstructure (*Panel C*)	FDEV	Financial Development		-0.0003
				(0.443)
	LIQ	Liquidity		-0.0001
				(0.447)
Asymetric Information, Familiarity and Geography	GEOD	Geographical distance		-0.019
				(0.767)
	COML	Common Langage		0.016***
				(0.000)
(*Panel D*)	NBC	Neigh Boring Country		0.0006
				(0.780)
	FOR	Foreign Resident		-0.017
				(0.000)
	INT	Internet		-0.158***
				(0.000)
	MOB	Mobile		0.168***
				(0.000)
	IDEP	International Departures		-0.035
				(0.14)
International Foreign Trade	BTI	Barriers to investment		-0.010
				(0.186)
	CAO	Capital Account Openness		-0.080***
(*Panel E*)				(0.0007)
	REXR	Risk of Exchange Rate		0.010**
				(0.015)
Geopolitical State	GFCR	Global Financial Crisis		-0.02
				(0.464)
	EURZ	Euro Zone		0.137**
(*Panel F*)				(0.013)
	EMER	Emerging Markets		0.332***

				(0.0001)
		Observations		640
		R^2		0.445
		Adj R^2		0.416

Table 1. Summary of Linear Regression Results

This table presents regression coefficient estimates based on the model described in equations 5.54 Newey and West (1987) corrected standard errors are reported in parentheses. Symbols *, **, and *** represent significance levels of 10%, 5%, and 1%, respectively.

5. Conclusion

To test the thesis of the existence of a Home Bias Puzzle (PHB) in light of facts and figures, which particularly stipulates that American investors would prefer acquiring domestic assets instead of pursuing an international portfolio diversification strategy (Wallmeir M. and Islie (2020); Brandstetter et al (2021)), this type of behavior contradicts the teachings of the mainstream portfolio management on this issue.

Specifically, based on a thorough review of empirical literature regarding the enigma of the Home Bias Puzzle (HBP), we estimated a general model using Ordinary Least Squares (OLS) of the determinants of HBP, covering the period from 2006 to 2021, with a monthly frequency of data, resulting in 640 observations. The determinants of the endogenous variable HBP were divided into six panels or themes:

- Governance variables, consisting of four, in Panel (A)
- Macroeconomic variables, consisting of three, in Panel (B)
- variables related to market size and microstructure, consisting of two, in Panel (C)
- Informational asymmetry, familiarity, and geographical variables, consisting of seven, in Panel (D)
- Foreign Trade variables, consisting of three, in Panel (E)
- Finally, geopolitical variables, consisting of three, in Panel (F)

The econometric results obtained suggest the following comments:

- At the level of Panel (A) regarding Governance variables, the two variables: information transparency (FIT) conveyed by companies to the market and the state of governance (SGOV) are statistically significant at respective thresholds of 5% and 1%. Indeed, these two variables are important in the investment decision-making of investors.
- Per capita income (GDPC) and the degree of economic openness (OER) in Panel (B) appear to play a role in the financial investment decision of economic agents. The coefficients associated with these variables are statistically significant at respective thresholds of 1% and 5%.
- The variables related to market size and microstructure: liquidity (LIQ) and financial development (FDEV) of firms in panel (C), are not statistically significant and do not seem to affect the endogenous variable: Home Bias (HBP).
- Variables that reflect information asymmetry, familiarity, and geography in Panel (D) partially explain the preference behavior of domestic assets displayed by investors in financial markets, particularly common language (COML), internet connectivity (INT), and mobile phone ownership (MOB).
- The openness of the capital account (CAO) and the risk associated with currency convertibility (REXR) in international trade in Panel (E) appear to influence the decision to acquire domestic assets by investors

in international financial markets, with coefficients associated with these two variables being statistically significant at respective thresholds of 1% and 5%.

- Finally, Panel (F) allows us to highlight two out of three statistically significant explanatory variables, reflecting geopolitical home bias behavior (EURZ) and emerging markets (EMER) as diversification assets.
- Overall, this econometric specification of the determinants of Home Bias behavior has allowed us to understand the motives of investors in international financial markets. Indeed, over the period from 2006 to 2021, the average Home Bias in developed countries decreased from 76.39% in 2006 to 47.39% in 2021, representing a decrease of approximately 38%. Conversely, emerging markets exhibit a nearly permanent behavior of Home Bias. Specifically, the Home Bias rate was 92.84% in 2006, compared to a rate of 88.47% in 2021. The reasons for these trends were validated within the framework of the six panels A, B, C, D, E, and F.

APPENDIX 1. Home Bias Measure: Developed Countries

	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**Mean by country**
Canada	72,10%	73,40%	68,70%	72,50%	73,60%	70,80%	68,50%	65,10%	62,60%	56,00%	58,90%	55,90%	53,00%	52,70%	52,10%	50,70%	**62,91%**
USA	66,30%	64,30%	65,00%	63,80%	61,40%	58,80%	58,40%	58,10%	57,90%	55,90%	55,90%	54,10%	54,00%	51,30%	53,00%	52,00%	**58,14%**
Belgium	57,40%	49,60%	32,00%	36,50%	38,00%	36,90%	37,70%	37,10%	47,20%	38,90%	31,50%	28,30%	26,10%				**38,25%**
France	65,00%	65,40%	62,40%	61,90%	61,70%	62,30%	59,10%	60,00%	59,30%	61,00%	61,90%	62,10%	63,50%				**61,97%**
Germany	46,30%	47,60%	48,00%	40,90%	43,20%	39,80%	40,60%	41,00%	35,70%	36,40%	35,30%	36,40%	33,30%	33,40%	30,90%	29,80%	**38,66%**
Ireland	98,30%	97,80%	94,10%	93,80%	81,30%	69,60%	66,00%	79,10%	74,00%	67,00%	69,00%	75,40%	71,40%				**79,75%**

Italy	**51,80%**	**51,00%**	**49,60%**	**48,60%**	**39,80%**	**37,80%**	**33,40%**	**33,10%**	**30,90%**							**41,78%**
Netherlands	10,90%	27,70%	5,20%	11,80%	18,20%	15,20%	14,10%	17,40%	14,60%	-6,50%	-14,70%	-8,00%				**8,83%**
Norway	50,40%	46,90%	33,80%	29,60%	33,40%	25,80%	22,90%	20,80%	17,40%	16,00%	18,10%	17,80%	17,90%	15,60%		**26,17%**
Portugal	46,60%	49,30%	11,30%	34,50%	27,40%	27,20%	44,10%	47,70%	37,30%	41,40%	41,90%	46,20%	41,70%			**38,20%**
Spain	83,80%	86,40%	87,90%	89,70%	86,80%	87,50%	84,30%	80,00%	75,40%	65,40%	61,40%	57,10%	54,60%	52,10%	46,20%	43,50%	**71,38%**
Switzerland	54,50%	50,70%	49,70%	44,60%	49,30%	45,70%	35,20%	38,20%	37,50%	40,10%	35,70%	38,60%	35,80%	38,20%	36,50%	35,20%	**41,59%**
UK	54,90%	51,30%	46,60%	48,90%	43,00%	50,60%	46,70%	47,80%	43,00%							**48,09%**
Poland	96,00%	93,70%	94,60%	93,60%	93,60%	94,10%	93,80%	93,50%	91,30%	81,40%	85,90%	86,80%	84,10%	82,10%	88,70%	88,20%	**90,09%**
Austria	52,90%	56,40%	34,80%	41,50%	41,80%	33,70%	35,60%	33,80%	29,50%	29,70%	37,40%	31,10%	29,40%	27,20%	22,20%	20,00%	**34,81%**
New Zealand	52,30%	48,90%	48,90%	46,90%			52,60%	52,60%	52,20%	52,10%	49,10%	48,80%	45,40%	45,00%	43,50%	42,40%	**48,62%**
Australia	81,30%	77,90%	75,50%	78,50%	77,80%	73,50%	73,10%	70,50%	67,80%	67,70%	66,80%	65,90%	62,90%	61,30%	62,20%	60,90%	**70,23%**
Japan	85,50%	83,10%	84,10%	79,20%	79,20%	77,20%	77,10%	70,00%	69,40%	70,00%	68,30%	69,40%	66,90%	66,50%	66,50%	65,10%	**73,59%**
Singapore	55,20%	58,80%	51,40%	64,20%	62,60%	60,80%	58,80%	54,80%	54,10%	49,80%	47,70%	46,10%	43,50%	38,90%	34,90%	33,50%	**50,94%**
Mean of total sample	**62,18%**	**62,12%**	**54,93%**	**56,89%**	**56,23%**	**53,74%**	**52,74%**	**52,66%**	**50,37%**	**48,37%**	**47,65%**	**47,76%**	**48,97%**	**47,03%**	**48,79%**	**47,39%**	

APPENDIX 2. Home Bias Measure: Emerging Markets

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Mean by country
Greece	91,60%	89,50%	81,10%	86,00%	80,50%	69,40%	83,40%	90,70%	82,40%	64,10%	66,00%	73,40%	72,90%	76,60%	74,80%	73,60%	**78,50%**
Hungary	81,20%	76,40%	61,50%	60,20%	56,30%	59,50%	59,20%	58,30%	49,40%	50,90%	56,80%	60,00%	60,60%	58,70%	49,40%	47,10%	**59,09%**
Russian				99,20%	99,10%	99,00%	98,70%	98,50%	96,50%	97,00%	98,00%	97,50%	97,30%	97,50%	95,80%	102,60%	**98,21%**
Turkey	98,40%	99,00%	98,60%	99,10%	99,20%	98,90%	99,20%	98,40%	98,50%	98,40%	98,40%	98,40%	98,10%	98,10%	98,30%	98,30%	**98,58%**
Ukraine					99,80%	99,80%		99,60%	99,10%	91,90%	100,60%	98,20%	100,90%				**98,74%**
Czech Rep.	77,20%	79,30%	76,30%											48,80%	45,60%	42,50%	**61,62%**
Korea	93,70%	88,20%	87,70%	89,00%	90,20%	90,70%	88,90%	87,00%	85,30%	84,90%	82,80%	82,40%	78,50%	73,50%	75,70%	74,40%	**84,56%**
Malaysia	97,20%	95,30%	93,20%	92,40%	93,10%	92,50%	92,10%	91,10%	89,20%	87,10%	85,90%	86,80%	83,00%	80,40%	78,30%	76,90%	**88,41%**
Phillippines	97,00%	97,60%	97,70%	98,20%	99,00%	99,10%	99,20%	99,00%	99,00%	98,70%	98,60%	98,30%	98,20%	97,60%	96,80%	96,80%	**98,18%**

Thailand	98,30%	97,70%	97,20%	97,50%	97,70%	97,10%	97,50%	97,30%	96,40%	94,90%	95,20%	94,00%	93,80%	92,20%	89,50%	88,90%	**95,33%**
China	98,50%	99,20%	98,30%	97,20%	97,00%	96,50%	95,20%	94,70%	96,30%	97,20%	96,10%	95,40%	94,30%	94,10%	93,60%	93,20%	**96,05%**
Indonesia	99,40%	99,40%	99,10%	99,10%	99,40%	99,40%	99,20%	98,60%	98,60%	98,10%	98,30%	97,90%	97,70%	97,30%	96,80%	96,60%	**98,43%**
India	99,80%	99,90%	99,90%	99,90%	99,80%	99,80%	99,70%	99,60%	99,60%	99,70%	99,60%	99,70%	99,80%	99,60%	99,50%	99,50%	**99,71%**
Brazil	99,30%	99,30%	98,90%	99,10%	98,60%	98,00%	98,50%	97,70%	96,20%	93,80%	95,80%	95,30%	95,20%	95,50%	95,00%	94,70%	**96,93%**
Chile	77,90%	74,30%	76,80%	73,80%	75,90%	74,90%	74,20%	68,40%	63,80%	60,20%	63,40%	65,50%	64,10%	55,50%	50,90%	48,90%	**66,78%**
Colombia	96,90%	97,60%	97,30%	96,60%	97,00%	96,20%	96,90%	93,00%	88,20%	81,10%	83,30%	81,40%	80,00%	82,00%	72,40%	70,60%	**88,16%**
Mexico	97,40%	98,50%	97,20%	97,70%	97,50%	96,50%	95,10%	93,40%	91,90%	90,90%	90,20%	87,20%	87,70%	86,10%	81,40%	80,30%	**91,81%**
Peru	78,70%	82,40%	74,60%	79,80%	82,50%	77,00%	78,10%	72,20%	69,20%	62,00%	68,40%	68,30%	67,20%	66,10%	63,20%	62,10%	**71,99%**
Egypt	99,00%	99,20%	98,90%	98,90%	98,80%	98,30%	98,80%	98,80%	98,80%	98,50%	97,70%	97,60%	99,10%	99,10%	98,90%	98,90%	**98,71%**
South Africa	89,7	90,3	86,7	87,8	85,6	84,3	83,8	83,6	84,0	81,6	84,50%	85,3	83,60%	83,9	84,2	83,80%	**85,17%**

	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %		0 %		0 %	0 %		
Tunisia					95,60 %	95,60 %		93,30 %	92,90 %	93,30 %	92,80 %	91,90 %	92,10 %	90,50 %	89,30 %	88,80 %	**92,37 %**
Mean of total sample	**92,84 %**	**92,39 %**	**90,06 %**	**91,75 %**	**92,13 %**	**91,13 %**	**90,98 %**	**90,66 %**	**88,77 %**	**86,22 %**	**87,62 %**	**87,73 %**	**87,21 %**	**83,66 %**	**81,47 %**	**80,93 %**	

APPENDIX 3.Variables Study and Data Source

	Study Variables	Data Sources	Expected sign	
	Panel Governance Determinant (*Panel A*)			
SHR	Share Holders Rights	Word Bank Data Base Doing Business	Investors who benefit from regulations in their country that encourage and support the development of businesses and financial markets are less attracted to investments in countries that do not offer the same legal framework (Cooper et al., 2012; Kho et al., 2009)	Positive
PMS	Protection of Minority Share Holders			
FIT	Firm Transparency			
SGOV	State Governance			
	Macroeconomic Determinant (*Panel B*)			

OER	Open Economie Rate	Word Bank Data Base	A country that is highly open on the economic front, with a significant volume of international transactions, can provide investors with increased diversification opportunities. This could reduce domestic bias, as investors have a broader range of choices beyond national borders	Negative
GDP	Annual GDP growth		A country displaying a high economic growth rate may attract more domestic investors due to positive prospects for national businesses. This can reinforce domestic bias	Positive
GDPC	Gross Domestic Product (GDP) per capita in U.S. dollars			

	Market Size and Microstructure (*Panel C*)			
FDEV	Financial Development	WDI, OMX Nordic Exchange, Thomson Reuters Eikon	A country with a larger stock market capitalization implies a broader offering of domestic equity diversification. Consequently, investors in this country might tend to invest an excessively high proportion in domestic stocks compared to what the Capital Asset Pricing Model (CAPM) theory recommends	Positive
LIQ	Liquidity			
	Asymetric Information, Familiarity and Geography (*Panel D*)			
GEOD	Geographical distance	CEPII website Word Bank Data Base	The more an investor feels 'distant' from another country, both culturally and linguistically as well as financially	Positive
COML	Common Langage			
NBC	NeighBoring Country			
FOR	Foreign Resident			
INT	Internet			
MOB	Mobile			
IDEP	International Departures			

			and legally, the more they tend to rely on domestic assets in which they believe to have an informational advantage over foreign investors. Consequently , there is a tendency to overinvest in countries that are close and underinvest in countries about which they have less information (Ahearne et al., 2004; Bae et al., 2008) The information asymmetry between two countries could be reduced through the Internet and the abundant source of information that this tool provides at a very low cost	

			(Barron and Ni, 2008)	
	International Foreign Trade (*Panel E*)			
BTI	Barriers to investment	Economic freedom network website Site heritage foundation website Bank for International Settlements Database	Direct barriers to foreign investment positively influence the domestic bias of investors in a country (Cooper et al., 2012). Conversely, the financial liberalization of a country encourages its savers to invest abroad.	Positive
CAO	Capital Account Openness		A more open capital account provides investors with increased access to foreign markets and investment opportunities. This may influence investors to diversify their portfolios internationally, potentially	Negative

			reducing domestic bias.	
REXR	Risk of Exchange Rate		Investors may exhibit a domestic bias due to concerns about currency risk. Exchange rate fluctuations can impact the returns on foreign investments when translated back into the investor's domestic currency. Investors may prefer domestic assets to avoid exposure to currency volatility	Negative
	Geopolitical State (*Panel F*)			
GFCR	Global Financial Crisis		Dummy variable taking the value of 1 if the reference year was marked by a global financial crisis (considering	

			COVID-19 as well) and 0 otherwise	
EURZ	Euro Zone		Dummy variable taking the value of 1 if the country is part of the Eurozone and 0 otherwise	
EMER	Emerging Markets		Dummy variable taking the value of 1 if the country is classified as an emerging market and 0 otherwise	

	Study Variables	Measurement
	Panel Governance Determinant (*Panel A*)	
SHR	Share Holders Rights	Index that assesses shareholder rights on a scale from 0 to 10.5
PMS	Protection of Minority Share Holders	Index that evaluates protection for minority shareholders on a scale from 0 to 10
FIT	Firm Transparency	Index that assesses corporate transparency on a scale from 0 to 9
SGOV	State Governance	Governance index constructed using principal component analysis based on six governance indicators
	Macroeconomic Determinant (*Panel B*)	
OER	Open Economie Rate	
GDP	GDP Growth	Annual GDP Growth

GDPC	Gross Domestic Product (GDP)	Gross Domestic Product (GDP) per capita in U.S. dollars
	Market Size and Microstructure (Panel C)	
FDEV	Financial Development	Market Capitalisation as a percentage of GDP
LIQ	Liquidity	Ratio of the total value of shares traded on a market to the overall market capitalization
	Asymetric Information, Familiarity and Geography (*Panel D*)	
GEOD	Geographical distance	Average distance between the capital of a given country and the capital of every other country in the sample
COML	Common Langage	Share of countries with a common official language with multiple countries
NBC	NeighBoring Country	Sum of the market capitalization weights of neighboring markets for each country
FOR	Foreign Resident	Share of the population born abroad
INT	Internet	
MOB	Mobile	
IDEP	International Departures	
	International Foreign Trade (*Panel E*)	
BTI	Barriers to investment	Index measuring restrictions imposed on capital inflows and outflows on a scale from 0 to 10
CAO	Capital Account Openness	The Chinn-Ito Index (KAOPEN) measures the degree of openness of the capital account derived from the

		balance of payments of each country
REXR	Risk of Exchange Rate	This refers to the annualized volatility of monthly variations in the real exchange rate index of each country
	Geopolitical State (*Panel F*)	
GFCR	Global Financial Crisis	Dummy variable taking the value of 1 if the reference year has been marked by a global financial crisis (COVID-19 has also been considered), and 0 otherwise
EURZ	Euro Zone	Dummy variable taking the value of 1 if the country is part of the Eurozone, and 0 otherwise
EMER	Emerging Markets	Dummy variable taking the value of 1 if the country is classified as an emerging market, and 0 otherwise

APPENDIX 4: Measurement

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