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List of Abbreviations

ADR	American Depository Receipt
AMEX	American Stock Exchange (now known as NYSE MKT)
CAPM	Capital Asset Pricing Model
CECF	Closed-End Country Fund
CPIS	Coordinated Portfolio Investment Survey
EMU	European Economic and Monetary Union
ETF	Exchange-Traded Fund
GAAP	Generally Accepted Accounting Principles
HB	Home Bias
ICAPM	International Capital Asset Pricing Model
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
IPI	International Portfolio Investment
LSE	London Stock Exchange
MPT	Modern Portfolio Theory
MSCI	Morgan Stanley Capital International (Index)
MVA	Mean-Variance Analysis
NASDAQ	National Association of Securities Dealers Automated Quotations (System)
NYSE	New York Stock Exchange
SEC	Securities and Exchange Commission
S&P	Standard & Poor's
SPDR	Standard & Poor's Depository Receipt
U.K.	United Kingdom
U.S.	United States of America

1 Introduction

Over the last two decades, one of the most extensively researched area in international finance has been the puzzling tendency of international investors to strongly overweight their home market in their investment portfolios instead of diversifying across international markets. This widely observed phenomenon is commonly referred to as the *home bias puzzle*, which despite numerous tentative explanatory attempts still remains an unresolved matter in the empirical literature.

As will be shown in this paper, the currently observed magnitude of the home bias is largely inconsistent with the development that has occurred in international capital markets since the early 1990s. Over time, the growing liberalization of financial markets in both developed and so-called emerging markets has been steadily accompanied by a dramatic decrease in obstacles to international investment. Globalization and a growth in trade and cross-country capital movements were the result of the substantial elimination of various barriers and restrictions in international financial markets and, consequently, most developed and many emerging markets can nowadays be considered open for foreign investment from all over the world.

While, in the past, the existence of barriers across international markets might have been the most likely impediment to foreign equity ownership, then the dismantling of many of these barriers should have led to a parallel substantial increase in international investment. However, it can also be discerned that a strong reallocation of investors' equity positions towards foreign stocks has largely not materialized, at least not to such a degree as could have been expected.

The empirical literature so far has overwhelmingly pointed to investors' large preference for domestic equity across all countries. There is also evidence that even though the magnitude of the home bias has slightly decreased over time, the phenomenon has still remained persistent and economically significant. At the same time, a plethora of theories has been advanced that tried to explain the causes of international under-diversification.

This paper attempts to review the most important recent empirical explanations that play a useful role in understanding the home bias, and invariably includes a wide range of theories. In my discussion of the home bias puzzle I will address in particular the decisive questions of how prevalent the home bias really is, how the phenomenon has evolved over time, and what the most plausible explanations might actually be. Further, I will also try to analyze whether investors' home bias is determined by a single decisive factor alone, or whether the behavior is more likely explained by a multitude of reasons.

The thesis is organized as follows. First, in Chapter 2 the conceptual foundations of international portfolio investment and the various international investment opportunities available to investors will be discussed in greater detail. In Chapter 3, the empirical evidence on the home bias will be presented, and I will explore how the phenomenon has evolved in various countries over time. There will also be an analysis of whether or not the home bias constitutes a preference among institutional investors as well. The most important empirical explanations of the home bias puzzle will then be examined in Chapter 4, beginning with the hypothesis of information asymmetries between foreign and domestic investors, followed by the theory of investors' local (geographical) bias, and concluding with the various theories of investor behavior. In the final chapter I will attempt to answer whether a general conclusion can be reached as to which one of the many explanations is the most valid one, or whether all of these explanations are important in their own right.

2 International Portfolio Investment

2.1 Principles of Portfolio Investment

The seminal empirical studies by Markowitz (1952, 1959) and Tobin (1958) laid the foundation and established the normative rules of Modern Portfolio Theory (MPT).¹ Their classical investment concepts were most significant and provided a framework within which optimal investment portfolios could be identified that would meet the investment objectives of the investor, or as Markowitz (1959) stated: "A good portfolio is more than a long list of stocks and bonds. It is a balanced whole providing the investor with protections and opportunities with respect to a wide range of contingencies. The investor should build toward an integrated portfolio which best suits his needs."²

According to this theory, *efficient portfolios* can be defined as combinations of investments that potentially provide the highest possible rate of return for a particular level of risk of the overall portfolio (as measured by the variance of portfolio returns), with investors selecting the optimum asset allocation according to the degree of their personal risk aversion. A desired risk-reduction effect can then be achieved by investing in a variety of assets whose returns are not perfectly correlated with each other, and by spreading the risk over a wide number of securities (as it is assumed that the greater the number of securities in the portfolio, the less risky the portfolio in general will be). The *diversification of a portfolio* should therefore allow investors to achieve overall greater portfolio returns, at reduced overall portfolio risk.

¹ This theory is also referred to as Mean-Variance Analysis (MVA).

² Markowitz (1959), p. 3.

Building on the work by Markowitz, the concept of portfolio risk has subsequently been defined in a more precise way with the introduction of the Capital Asset Pricing Model (CAPM) by Sharpe (1964) and Lintner (1965), which effectively extended Markowitz' portfolio theory by proposing the notions of *systematic* and *specific risk*, where the standard deviation alone as a measure of volatility was no longer sufficient.

At the heart of the model is the common observation that through the creation of a fairly large enough portfolio of stocks only one type of risk can essentially be diversified away - the so-called *unsystematic* or *unique risk* of a portfolio, which refers to the risk of a possible bankruptcy of an individual asset (company) held in the portfolio. On the other hand, it is also assumed that even with a larger number of stocks the total portfolio risk can never be reduced below a certain level since all securities in a given market are more or less exposed to the same general macroeconomic movements, such as government policy, inflation or exchange rate changes. This type of risk is commonly called *systematic* or *market risk*. Within the CAPM framework, systematic risk is understood to be the central factor that influences the level of total return of the portfolio. Measured by *beta*, it indicates the covariance between the returns of the shares in a portfolio and the returns of the market as a whole, i.e. the sensitivity of the shares to general market movements.

Further, a so-called *market portfolio* is used in the CAPM as a single benchmark (or guideline) for an optimal, desired portfolio that an investor is expected to hold, and against which the investor is able to measure the performance of his/her own portfolio. This is also called the *normal* or *neutral portfolio*, and the choice of benchmark is considered to be an important part in the analysis of efficient portfolio returns.³

³ In practice, a proxy for the market portfolio is normally used, such as a broadly-based index of shares, or a value-weighted portfolio of all stocks listed on a major stock exchange.

By introducing an international version of the CAPM – the International Capital Asset Pricing Model (ICAPM) - the usual model can then be extended to an international setting where a *world* market portfolio is taken as the benchmark for investors' overall portfolio holdings.⁴ The ICAPM implies that investors should hold equities from countries around the world in a proportion according to the relative size (world market capitalization) of the respective country, based on the assumption that there are no barriers to international investment. Most importantly, it is assumed that by *diversifying internationally* through the investment in stocks from different countries even further portfolio risk reduction can thus be achieved by investors, and more substantial diversification benefits can so be realized.

2.2 International Portfolio Diversification

The benefits of international portfolio diversification across equity markets have been recognized by the finance literature for some time. Based on the assumption that a relatively high degree of positive correlation does exist between assets within an economy (country), international diversification across national financial markets that are not perfectly correlated with each other does represent an important way for investors to reduce their overall portfolio risk and/or to enhance the average expected rate of return of their portfolios.⁵ For example, monetary, institutional, political or economical policies may vary considerably across markets and countries, and can so provide for large, country-specific variations of returns. Thus, if stock markets in different countries do not move together perfectly, the overall risk of the portfolio can be better diversified away, and substantial gains can potentially be achieved from an internationally well diversified portfolio.

⁴ For instance, the Morgan Stanley Capital International Index (MSCI) as a global index.

⁵ Evidence on a pattern of relatively low correlations between major national financial markets was demonstrated, for example, in an early paper by Adler and Dumas (1983), who also suggested the possible reduction of portfolio risk from international diversification.

Over the past 30 years, a strong case for foreign equity investment has been established by a range of important early quantitative studies on international diversification. The study by Grubel (1968) was the first to empirically document significant evidence of possible large benefits available to American investors who incorporated foreign equities into their portfolios. In the paper, two sets of international portfolios were constructed and then compared to a portfolio consisting purely of domestic stocks. The first set was an international portfolio that contained shares from eleven major industrialized countries, while the second international portfolio was comprised of the same countries but not Japan, South Africa, and Australia.⁶ The empirical estimates clearly proved that international diversification would have permitted investors in general to achieve higher rates of return from their international portfolios than from investing in the U.S. market alone, with a significant gain of 68.0 percent in the annual rate of return in the first and a gain of 18.7 percent in the second case, over the period from 1959 to year-end 1966. Based on these results, Grubel already suggested that more international diversification should and would take place in the future.

Similarly, the subsequent study by Levy and Sarnat (1970) also examined international portfolio investment by American investors in 28 countries (over the period from 1951 to 1967), and successfully demonstrated the same and further conclusions as in Grubel (1968). International diversification was not only shown to be beneficial for investors, but also to be especially rewarding after including a relatively high proportion of shares from developing and low-income countries in the composition of diversified portfolios. Considering the relatively low correlation of these markets with the U.S., investment in developing countries such as Venezuela, South Africa, New Zealand or Mexico had a significantly positive effect on the overall portfolio and was shown to materially improve the risk-return trade-off for American investors. On the other hand, investment in common market countries (like Canada) that had very high positive return correlations with the U.S. market could not be shown to be optimal for investors.

⁶ The first set included the U.S., the U.K., Canada, West Germany, France, Italy, Belgium, The Netherlands, Japan, Australia, and South Africa.

The third seminal paper by Solnik (1974) focused specifically on the question of how effective international diversification could be for the reduction of overall portfolio risk in terms of the variability of returns, and showed that over an evaluation period from 1966 to 1979 an internationally well-diversified portfolio would have been only half as risky as a similar portfolio consisting entirely of U.S. securities (with the same number of holdings). That evidence again confirmed that international portfolios could offer a significantly greater risk reduction than purely domestic portfolios.

Later on, Grauer and Hakansson (1987) equally showed that U.S. investors could reap gains from including non-domestic equities in their portfolios that were large and higher than those generated by a portfolio consisting entirely of domestic stocks (over a longer sample period from 1968 to 1985), while yet another paper by Odier and Solnik (1993) even put the annualized total return of an international stock portfolio at 19 percent whereas, in comparison, a purely U.S. (domestic) market portfolio would only have achieved a total return of 13.3 percent.

More recent evidence was also provided by Gerke, Mager, and Roehrs (2005) for a market other than the U.S., namely for Germany. Based on their results, a German investor would have greatly optimized his/her portfolio performance by venturing abroad, over the sample period from January 1980 to October 2001. In fact, it was shown that it would have been optimal for investors to not invest in the German stock market at all, and that even a naïve diversification strategy of an equally-weighted portfolio would have provided far superior results than investing in the German market alone.

Finally, the study by Forbes (2010) showed that U.S. investors could have earned significantly more from their foreign investment in a broad global equity index than from investing in a U.S. equity market index, namely a return of almost 14 percent as compared to less than 8 percent from the purely domestic investment.

As all the papers above have illustrated there is heavy support for the theory that substantial benefits are to be achieved from international diversification, and by now the advantages have been well recognized. The general benefits have not only led to a growth in international portfolio investment over the past couple of years, but also to the establishment of a whole range of international investment strategies that allow investors to access foreign national markets more easily. In the next chapter, I will therefore briefly explore the most important opportunities of international investment available to investors, as well as the question of whether these opportunities can indeed provide the promised benefits.

2.2.1 International Investment Opportunities

Traditionally the concept of International Portfolio Investment (IPI) has only referred to the acquisition of foreign assets that trade in their respective foreign markets. More recently, however, the introduction of so-called *home-made international diversification* has allowed investors to purchase claims on foreign assets that are traded in their home market, which means that diversification benefits can potentially be achieved by simply staying at home and investing internationally from there.

International Mutual Funds, for example, focus exclusively on a broad base of international securities from specific countries or regions. By adding such internationally diversified funds to their existing portfolio, this strategy might enable investors to achieve substantial diversification benefits over a sustained period of time, as has been confirmed early on in the paper by Cumby and Glen (1990), for example. Over a period from January 1982 to June 1988, the performance delivered by a sample of fifteen international funds was shown to have been superior to that by a U.S. national market index, with all the diversified funds offering better benefits than otherwise the mere investment in a U.S. index would have.

On the other hand, *Closed-End Country Funds (CECFs)* are traded on organized stock exchanges similar to common stocks, thereby enabling investors to actively invest in the securities of a particular foreign country.⁷ In contrast to open-end mutual funds that do not limit the amount of outstanding shares available to investors, closed-end funds offer only a fixed number of shares for trading on a stock exchange. This provides for their asset base to be relatively stable and for the fund to be better able to concentrate on less liquid markets. As such, many of these funds are especially relevant for investing in emerging markets. While earlier papers by Chang, Eun and Kolodny (1995) and Errunza, Hogan and Hung (1999) concluded that these funds offered somewhat limited diversification potential and alone were not enough as an investment strategy to fully capture international diversification benefits, more recent empirical evidence by Cao (2005) and Charitou, Makris and Nishiotis (2006) showed that CECFs were a good substitute for investing directly in foreign indices, and that they could indeed provide at least similar benefits to investors.

Exchange-Traded Index Funds (ETFs) are equally traded on a stock exchange. They are designed to replicate the index of a given foreign country in order to track the performance of this market's publicly-traded securities, and generally offer a more efficient and lower-cost alternative to other traditional tools (such as closed-end country funds).⁸ For international investors, especially *country-specific* or *international ETFs* allow for easy access to major international stock markets. However, they appear not to be well-suited as a stand-alone investment, but should rather be included in existing diversified portfolios in order for them to deliver significant diversification benefits, as seen in Miffre (2007) for example.

⁷ U.K. investment trusts are the equivalent to U.S. closed-end funds. While U.S. closed-end funds are primarily held by individual retail investors, U.K. investment trusts are mostly favored by institutional investors. See Bekaert and Urias (1996) for more information.

⁸ In the U.S., the first ETF - the *Standard & Poor's Depository Receipt (SPDR)* – was introduced and traded on the American Stock Exchange (AMEX) in 1993 to passively mimic and track the S&P 500 Index, and soon became quite popular. As of June 2012, there are 1,220 ETFs available in the U.S., with over \$1.166 trillion in assets. Source: Investment Company Institute, at www.ici.org/etf_resources/research/etfs_06_12 (last accessed July 26, 2012).

Another investment alternative are depository receipt programs, which nowadays do exist in many countries. In the United States, for example, *American Depositary Receipts (ADRs)* are issued by a bank to U.S. investors as a financial instrument for owning foreign (non-U.S.) stocks, effectively making those investors unregistered shareholders of companies in foreign countries without the need to directly access the overseas market itself.⁹ ADRs are then listed on a U.S. stock exchange (like the NYSE or NASDAQ), or traded over-the-counter. As such, ADRs offer a relatively easier way for U.S. investors to diversify internationally than buying and selling the actual shares themselves, since all transactions will be carried out in the local currency, and investors will also be able to avoid paying stamp duty. For non-U.S. firms, on the other hand, ADRs represent a great way to raise new money by creating a liquid secondary market in the U.S. and thereby facilitating access to an enlarged and more diverse shareholder base.

There are a variety of empirical papers that have illustrated and confirmed the diversification benefits of ADRs. For example, Jiang (1998) studied 113 ADRs from eight countries over the period from 1980 to 1994, and found that significant diversification benefits could be achieved with ADR portfolios. Also the study by Errunza, Hogan and Huang (1999) supported this evidence. Further on, Kabir, Hassan and Maroney (2011) then showed that the diversification potential of ADRs varied somewhat across different countries and also over different sample periods. During the early period of the 1980s, U.S. investors would have needed to hold both ADRs and foreign country indices in order to achieve diversification benefits, while later on (during the early and late 1990s) – as more and more ADRs were listed in the U.S. – ADRs had become a good substitute to country indices. On the other hand, for diversifying across Asian countries investors should have held both ADRs as well as country portfolios in order to achieve significant diversification benefits; investment in ADRs alone would not have been enough to obtain any higher returns than investing in Asian markets directly.

⁹ The first ADR was introduced by J.P. Morgan in 1927. Source: JP Morgan Chase, at www.adr.com/Home/LoadPDF?CMSID=88b09551120043cfac03554006845cb (last accessed July 20, 2012).

3 The Home Bias Phenomenon

3.1 Introduction

The previously discussed literature on international portfolio investment has so far well illustrated the benefits and the numerous opportunities of international diversification that are available to investors. At the same time, however, an even larger part of financial research has also documented that the share of foreign stocks in investment portfolios has, for the most part, remained substantially small compared to the share of domestic equity in investors' portfolios – a phenomenon which, to date, does still represent an unresolved issue in international finance. This encroachment of international portfolio theory became widely known as the *equity home bias phenomenon*, and is commonly referred to as the extent to which portfolio investment is largely concentrated in the domestic equity market of the investor instead of internationally, as well as to the fact that the observed proportions of foreign equities held are too small relative to what is implied by standard portfolio theory. Since a definite answer or explanation as to why domestic investors show this remarkable tendency has yet to be provided, this phenomenon is also frequently called the *home bias puzzle*.¹⁰

3.2 Empirical Evidence on the Home Bias

3.2.1 Home Bias and Private Investors

The first notable study that described and highlighted the extent of investors' equity home bias was presented early on by French and Poterba (1991), who not only empirically demonstrated the existence of incomplete diversification among international portfolios, but who also confirmed that the share of foreign equity holdings was indeed very low. American investors, for example, were shown to invest almost 94 percent of their total equity holdings in the U.S. home market; similarly, Japanese investors even held an astonishing 98 percent of domestic equity in their investment portfolios, while in Britain an estimated 82 percent was held domestically at year-end 1989.

¹⁰ In Obstfeld and Rogoff (2000), for example.

These holding estimates, in turn, thus implied that the international (foreign) equity weights in investors' portfolio only ranged from a low of 1.9 percent for Japan to a high of 18 percent for the U.K. – a result which significantly confirmed investors' home bias.

In the following, the study by Cooper and Kaplanis (1994) documented an even stronger home bias for eight major international markets, from statistical data as early as of December 1987. They reported that, for example, only 2 percent of portfolios in the U.S. market was invested in foreign equities, while the strongest degree of home bias was shown to exist in the country of Sweden, where nearly all equity was held domestically at year-end 1987.

Tesar and Werner (1995) analyzed the evolution of aggregate foreign stock holdings of residents from five major countries over a larger time period from 1970 to 1990. They concluded that even though foreign equity investment had increased since the mid-1970s, the share of overall portfolio investment allocated to foreign securities had still remained substantially lower than what standard models of optimal international portfolio diversification would have suggested. For the U.S. and the U.K., for example, estimated foreign equity holdings (as a fraction of domestic stock market capitalization) were put at about 3.31 percent and 23.5 percent in 1990, respectively, while the estimated share of foreign equities had even been as low as 1.4 percent in the U.S. in 1975.¹¹ These results further confirmed the apparent evidence on the home bias; however, they also showed that the home bias had been declining somewhat over time, which was then equally confirmed in their subsequent study (Tesar and Werner, 1998). Here, the fraction of U.S. investors holdings of foreign equity was shown to have increased to 10 percent by 1996, while for other countries the implied estimated percentages of the non-domestic share in investors' portfolios were reported at 22.5 in the U.K., 18.2 in Germany, 11.2 in Canada, and 5.3 in Japan as of 1996.¹²

¹¹ No data on foreign equity investment in the U.K. was reported for the year 1975.

¹² Similarly, Bohn and Tesar (1996) showed that the share of foreign equities in U.S. portfolios had increased to 8 percent by 1994, suggesting that investors were diversifying more internationally.

Another study by Gerke, Mager, Roehrs (2005) presented evidence on the home bias among private investors in Germany, where the fraction of foreign equities in individual investors' portfolio was reported at 21 percent in 1987, and then much higher at 41 percent, as of year-end 2000. More recently, Coeurdacier and Gourinchas (2011) showed that the foreign equities share in portfolios in that country has even risen to a level of 47 percent as of 2008. Overall, however, they showed evidence that the home bias has persistent all over the world, with percentage shares of home equities in investors' portfolios at 77.2 for the U.S., 80.2 for Canada, 73.5 for Japan, 66 for France, and 52 for Italy in 2008.

International under-diversification has also been documented and evidenced in empirical papers that focused especially on the foreign ownership share of equity within a specific country, and strongly highlighted the home bias to exist all over the world. For example, Kang and Stulz (1997) and Dahlquist and Robertsson (2001) investigated the home bias by analyzing the share of foreign ownership in firms listed on Japanese and Swedish stock exchanges, respectively. Kang and Stulz (1997) revealed that the equally-weighted market value of foreign ownership as a percentage of the total market capitalization of all firms in Japan had never exceeded a value of 6 percent (with an average value of 3.76 percent) over the sample period from 1975 to 1991, a result which significantly confirmed the evidence of low foreign equity holdings among companies in that country. The paper by Dahlquist and Robertsson (2001) studied the foreign ownership of equity in Sweden over the period from 1991 to 1997, which included all Swedish firms listed at that time. During that period, foreign investment holdings were shown to have increased from just 8.2 percent to about 32.4 percent in that country.¹³

¹³ While this increase might seem impressive, it was reported to have been partly due to regulatory changes during the sample period. Before 1993, foreigners were allowed by law to only hold unrestricted shares and not restricted shares, with the proportion of unrestricted shares being limited to 20 percent of the voting rights and 40 percent of the equity of a firm. This restriction was formally abolished in January 1993, that is within the sample period.

For Korea, Choe, Kho and Stulz (2001) noted that foreign investors had owned only roughly 18 percent of the total market capitalization of stocks at the end of 1998, while Kho, Stulz and Warnock (2009) reported that the equally-weighted average of foreign ownership in Korean firms had only been 6.18 percent in 1996, but subsequently almost doubled to 11.25 percent in 2004.

3.2.2 Home Bias and Institutional Investors

The empirical evidence so far has primarily been focusing on the overall poor international portfolio diversification among private investors, however, it is essential that institutional investors should be included in the analysis as well, as institutional investors might first be assumed – given their profession – to be better informed about financial markets in general, and to be able to better understand the advantages of international diversification than individual investors. While the home bias will be shown to be less severe than the bias of private investors, the evidence also proves that institutional investors still do not capture portfolio diversification to its fullest extent.

The early study by Lewis (1999) reported data on mutual and pension funds' holdings of foreign securities from five developed countries from 1980 to 1993. Among pension funds, foreign holdings were shown to have increased slightly to about 5.7 percent in the U.S. and to 19.7 percent in the U.K., for example, while mutual funds' data, in general, presented higher foreign shares of 10.1 percent and 36 percent for the U.S. and the U.K., respectively. German mutual funds even had an astonishingly high level of 45.2 percent invested in foreign securities by 1993.¹⁴ Overall, the foreign portion in both mutual and pension funds was shown to have increased gradually in all countries considered over the period.

¹⁴ The later study by Gerke, Mager and Roehrs (2005) even reported that the proportion of foreign equities in German institutional investors' portfolios had remarkably increased to a high of 70 percent by year-end of 2000.

More recently, the paper by Chan, Covrig, and Ng (2005) tried to establish specifically whether the home bias in mutual funds was indeed a much widespread phenomenon across various developed and emerging countries. The results for all the mutual funds from the 26 countries examined in the study showed that they had allocated on aggregate a much larger share of holdings towards the domestic market than what the world capitalization weight of the country would have implied (as of 1999 and 2000). For example, in Greece funds were shown to exhibit the highest domestic bias with 93.5 percent of holdings allocated towards the home market (as compared to the country's world capitalization weight of merely 0.46 percent), while in Austria a fraction of 6.77 percent of mutual fund allocations was invested in the home market (as opposed to the world market capitalization weight of Austria of only 0.09 percent), as investors were not fully taking advantage of international diversification.

Another study by Huang and Shiu (2009) analyzed the foreign equity ownership of investors classified as "Qualified Foreign Institutional Investors" in Taiwan, a definition that included banks, insurance companies, securities firms, mutual funds, and other institutions. Over the period from beginning of the third quarter of 1994 to year-end of 2001, over 90 percent of the market capitalization of that country was shown to have been held by both domestic individual and institutional investors, as foreign institutional investors accounted on average for a mere 2.2 percent of the share ownership. Also, overall there was little or no foreign ownership in half of the stocks analyzed.

Finally, Hau and Rey (2008) studied the investment behavior of equity mutual funds from the most developed financial markets across the world, over a period from 1997 to 2002. In that paper the average degree of home bias among the funds was found to be low, and also not to be as pronounced as the aggregate home bias of other investors. The study also showed that generally funds that were larger in size were also more likely to be more internationalized and to invest more in foreign countries (and different sectors) when compared to smaller funds, thus offering investors more potential benefits. Again, the extent of the home bias was proven to be much smaller among institutional investors, which was in line with the majority of the other papers presented earlier.

3.2.3 Development of the Home Bias over Time

Ahearne, Grier and Warnock (2004) was the first study to use higher quality cross-border holdings data from the comprehensive benchmark surveys (also known as *asset surveys*) on U.S. citizens' holdings of foreign securities as conducted by the U.S. Treasury Department and the Federal Reserve Board, which are part of an internationally coordinated effort under the auspices of the International Monetary Fund (IMF) to improve the data and the collection of information on portfolio asset holdings, and also to help demonstrate the development of stock holdings over time.¹⁵ The first three comprehensive benchmark surveys have been conducted by the U.S. as of March 1994, December 1997, and December 2001; beginning in 2003, the surveys were then conducted on an annual basis.

Ahearne et al. argued that prior to these surveys no accurate estimates had existed that would provide both reliable and high quality data on a security-by-security basis. Many previous studies had based their results on cross-border holdings estimates from accumulated capital flows data, which were generally designed to track the flow of money between countries in the balance of payments accounts, rather than to estimate portfolio holdings as such.¹⁶

¹⁵ With many foreign countries still lacking a system for timely and precise estimates on foreign portfolio holdings, the first IMF-sponsored Coordinated Portfolio Investment Survey (CPIS) on cross-border equity holdings initially included a host of only 29 countries in 1997; in contrast, the latest available survey was conducted with an increased participation rate of 75 countries in 2010, covering several industrial countries, transition economies, emerging market economies, as well as small economies with international financial centers. The CPIS set about collecting wide information on the cross-border holdings of equities and long- and short-term debt securities, broken down by the country of residency of the issuer. That way, the CPIS was able to provide comprehensive global information and more precise data on the cross-border ownership of securities, as well as on the geographical distribution of cross-border holdings of securities. Source: International Monetary Fund, at <http://cpis.imf.org> (last accessed July 23, 2012).

¹⁶ See the studies by French and Poterba (1991), Tesar and Werner (1995), or Cooper and Kaplanis (1994), for example.

According to these benchmark surveys, U.S. holdings of foreign equity as a share of total equity market capitalization have increased consistently and strongly over time: while the fraction of U.S. investment in foreign equities had only been about 6 percent in 1994, it was shown to have grown steadily to about 10 percent in 1997, and to 14 percent in 2003.¹⁷ Most recent survey results even indicate that the total market value of U.S. portfolio investment in foreign equities has already reached a level of about \$4,647 billion by year-end 2010, as compared to a value of just \$1,197 billion in 1997, which signals a substantial increase over that period.¹⁸

Table 1 allows for a better illustration of the gradual increase in foreign holdings in investors' portfolios, and shows the overall market value of U.S. holdings of foreign securities from December 2001 to December 2010.

Table 1: Market Value of U.S. Holdings of Foreign Securities, by Type of Security, as of the Survey Dates¹⁹

Billions of dollars								
Type of security	Dec. 2003	Dec. 2004	Dec. 2005	Dec. 2006	Dec. 2007	Dec. 2008	Dec. 2009	Dec. 2010
Long-term securities ¹	2,954	3,553	4,346	5,623	6,863	4,009	5,589	6,362
Equity	2,079	2,560	3,318	4,329	5,253	2,748	3,995	4,647
Long-term debt	874	993	1,028	1,294	1,610	1,261	1,594	1,715
Short-term debt	199	233	263	368	357	282	387	402
Total	3,152	3,787	4,609	5,991	7,220	4,291	5,977	6,763

1. Long-term securities are defined as those without a stated maturity date (such as equities) or with an original term-to-maturity greater than one year.

¹⁷ As reported in Thomas, Warnock and Wongswan (2004), using CPIS data.

¹⁸ In comparison, total foreign equity holdings in Austria were measured at a level of \$11,5 billion in 1997 versus \$86,6 billion in 2010, equally showing an increase over the period. Source: International Monetary Fund, at <http://elibrary-data.imf.org/Report.aspx?Report=9492637&Country=111> (last accessed July 23, 2012).

¹⁹ Source: Department of the U.S. Treasury and Board of Governors of the Federal Reserve System, at <http://treasury.gov/resource-center/data-chart-center/tic/Documents/shc2010r.pdf> (last accessed July 23, 2012).

After Ahearne et al. (2004), a growing number of authors have especially used the CPIS in their studies to conduct *measures* of the extent of the home bias in order to illustrate its evolution over time. As such, the magnitude of the home bias of a country is most frequently computed within the ICAPM framework as the *deviation* from the world market portfolio (the benchmark portfolio) which implies that international investors should hold the equity of a given country in a proportion that is equal to that country's share of world market capitalization. The measure of the extent of a country's home bias can then be calculated as one minus the ratio of the share of foreign equity holdings in domestic portfolios to the foreign equity share in the world market portfolio - or, in other words, as the relative difference between the actual (ACT_i) and optimal (OPT_i) foreign portfolio holdings of a given country i (with actual portfolio holdings as determined by CPIS data):

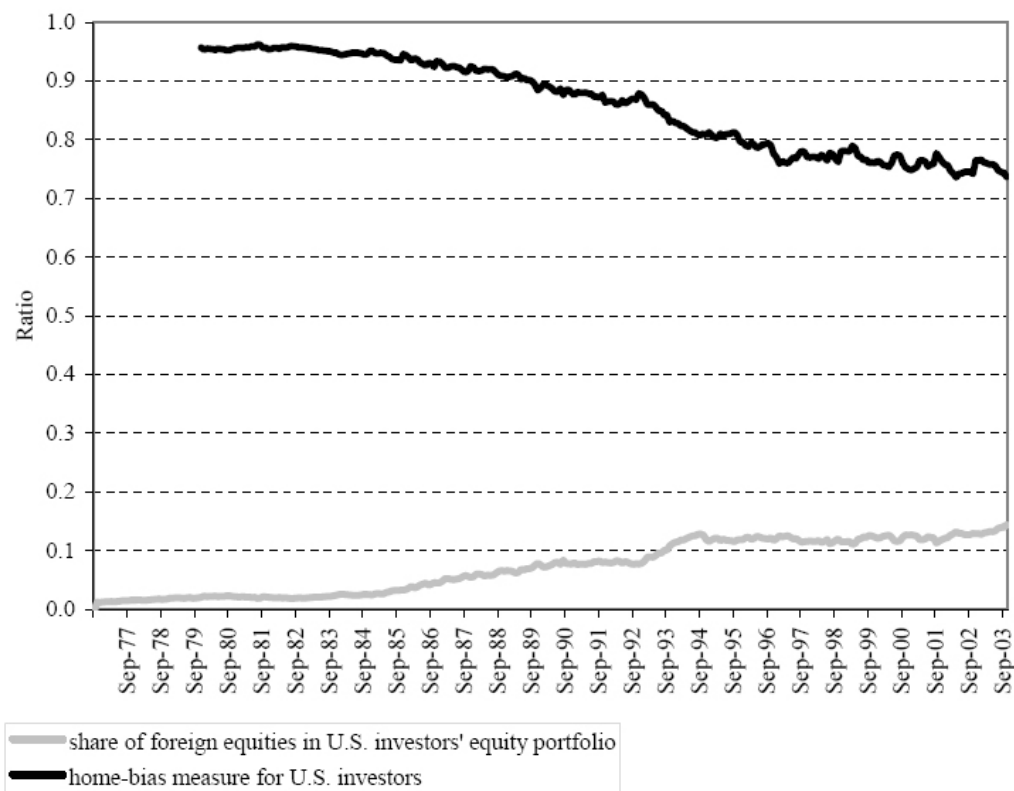
$$HB_i = 1 - \frac{ACT_i}{OPT_i}$$

This measure will take the value of *one* if no foreign equities are held by domestic investors, and the value of *zero* if the weight of foreign equities is given by their world market capitalization, i.e. when investors do not exhibit any home bias at all. For example, if a country had actual foreign equity holdings of 10 percent but should optimally hold 90 percent of its portfolio in foreign assets (according to its world market capitalization), then the home bias would reach a measure of 89 percent.

The main results provided by the empirical studies that have employed this measure of the home bias have unequivocally shown that while there is evidence of an overall moderate decline of the home bias in most countries over time, it has generally remained at high levels throughout sample periods.

The study by Stulz (2005), for example, illustrated that before the 1990s international diversification had been trivial and almost non-existent in the U.S., and that the share of foreign stocks in U.S. investors' portfolios has only gradually increased afterwards – a development that was also reflected in the home bias measures, which have simultaneously decreased and, for example, reached 78 percent in 2001, as shown in Table 1.

Figure 1: The Home Bias of U.S. Investors (1977 - 2003)²⁰



Other studies that have used home bias measures have tried not just to analyze the development of the home bias around the world, but also to determine whether emerging markets or developed markets could be considered more biased in their portfolio allocations. They found somewhat mixed results.

²⁰ Source: Stulz (2005), p. 58.

De Santis and Gerard (2006), for instance, presented generally higher levels of home bias for developed countries, and especially for the U.S. and Canada, both of which countries by far had the largest home bias measures of 92 percent and 93 percent, respectively (among fixed-income markets in 2001). Also Japan and Spain were shown to have very high home bias levels with measures of 88 percent and 80 percent, respectively. Overall, however, there was also evidence of a gradual decline in the general equity home bias around the world, from an overall level of 77 percent to 63 percent over the period from 1997 to 2001.

In contrast, the study by Sercú and Vanpee (2007) presented a somewhat different picture, using home bias estimates from CPIS data for a total of 42 countries from all over the world, as of December 2005. It was shown that, for instance, Austria had a relatively low home bias measure of 58.2 percent, while Indonesia had the highest measure was of 99.5 percent with almost all equity invested in domestic stocks. In general, the home equity bias estimates were lower for developed countries and higher for emerging markets - a result which, more recently, has also been confirmed by Bekaert and Wang (2009) and by Sendi and Bellalah (2010). The latter paper concluded that even though the home bias had been large in developed countries as well (in the U.S., for example, at a level between 57 percent and 68 percent, and in Asian developed markets above 90 percent over the period from 1996 to 2007), emerging markets like Brazil and Chile had maintained the highest levels at almost 100 percent. Also in emerging European and Asian markets the domestic shares in investors' portfolio had equally been at about 99 percent over the period, whereas a relative decrease in the home bias among emerging countries could only be shown for Argentina, Mexico and Peru.

Finally, it is worth noting that there is ample evidence that the home bias has been falling fastest in European countries that are part of the so-called euro area, as shown in Baele, Pungulescu and Ter Horst (2007), for example. In that study it was reported that as overall home bias levels have been decreasing all over the world from 1973 to 2004, the decline in the home bias in the euro area has consistently been 7 to 8 percent higher annually than in any other country in the sample. This important aspect will be explored in more detail in the following.

3.2.4 The Formation of the EMU and the Home Bias

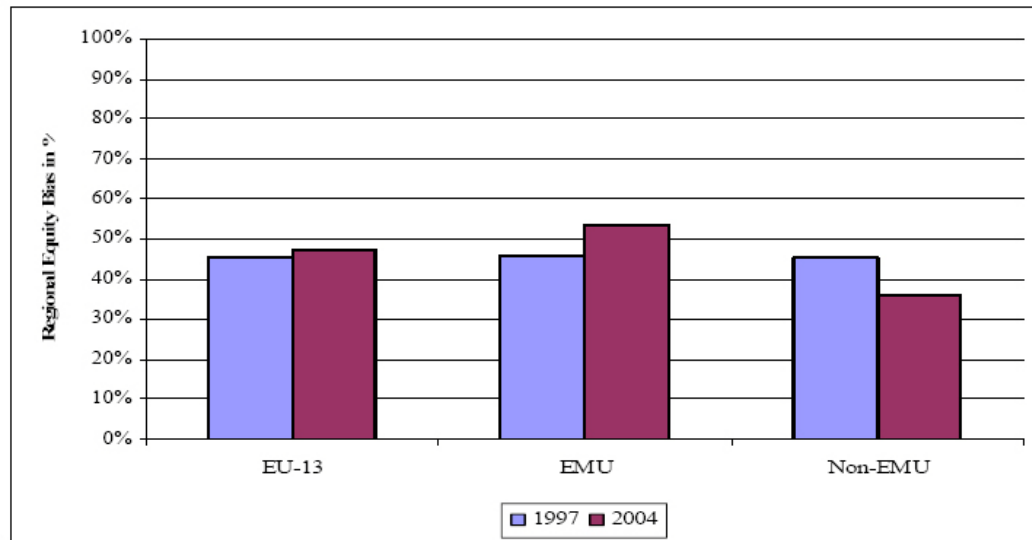
Starting in 2002, the countries of Austria, Belgium, Finland, France, Germany, Greece, Italy, Ireland, Luxembourg, the Netherlands, Portugal and Spain, followed by Slovenia in 2007, Malta and Cyprus in 2008, Slovakia in 2009, and Estonia in 2011, effectively gave up their national currencies by adopting a single common currency - the euro. In the context of international portfolio investment, the creation of the eurozone not only helped enhance financial trade integration and reduce the economic significance of national borders within the monetary union, but also eliminated any exchange rate risk among the participating countries with the fixation of the euro exchange rate. Also cross-country transaction costs were substantially diminished, which improved the liquidity of cross-border trade and significantly facilitated access to European markets for international investors.

Much of the evidence that euro-area countries have become more integrated after the formation of the EMU is pointing to a reallocation of portfolio holdings of investors located in the EMU towards other euro-area members. Moreover, it has also been shown that after the European unification process these countries became more inclined to invest in each other than anywhere else. This phenomenon has also been called *euro-area bias*, and refers to the regional bias of investors from euro-area countries. For instance, Lane and Milesi-Ferretti (2005) found that a significant proportion of 48 percent of total cross-border equity investments had been allocated by euro area members towards other euro-area members by the end of 2001, while the paper by Berkel (2006) reported on average 62 percent larger and increasing cross-border investment flows between Germany and other euro-area member countries when compared to portfolio flows between Germany and non-euro-area countries (such as the U.K. or Denmark), for the period from 1987 to 2002.²¹ It was also reported that euro-area investors had actively re-balanced their portfolios and increased their portfolio allocations towards other euro-area countries by about 12.7 percent from 1997 to 2001 (De Santis and Gerard, 2006).

²¹ See also the paper by Haselmann and Herwartz (2010) for evidence on increased euro-area holdings among German investors.

Schoenmaker and Bosch (2008) found that while the regional bias had increased by 8 percent for euro-area countries from 1997 to 2004, the regional bias among the three non-EMU countries had actually decreased by 9 percent over the same time period (as shown in Figure 2), which was also consistent with the theory of increased economic integration among the EMU member countries.

Figure 2: Regional Equity Bias per Region (1997 vs. 2004)²²



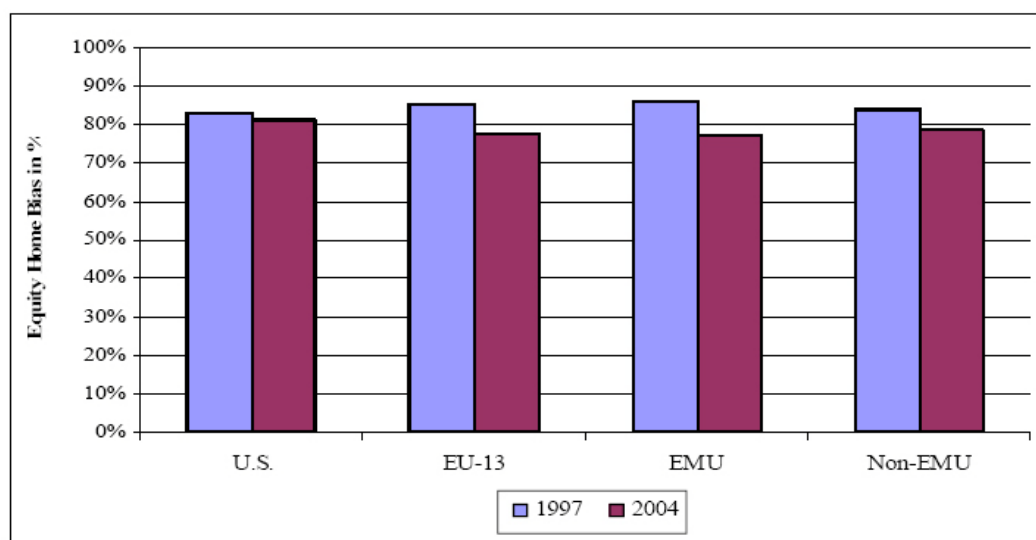
More importantly, the shift and increase in portfolio holdings among euro-area countries towards other euro-area members has also been shown to be related to an overall observed reduction in the equity home bias in those countries.²³ Significantly, the arrival of the euro and the accompanied ongoing financial integration in Europe has not only facilitated a decrease in the home bias, but the decrease has also been nowhere as pronounced as in these countries when compared to other countries around the world. There is also much empirical evidence on lower euro-area home bias levels. The most dramatic drop in the home bias among euro-area countries has been reported in Foad (2012), where the evidence showed that intra-euro-area home bias had fallen from 67.7 percent prior to 1999 to merely 29 percent after the formation of the euro area. Meanwhile, across non-euro countries the bias had decreased only slightly from 92.2 percent to 84.9 percent after 1999.

²² Schoenmaker and Bosch (2008), p. 26.

²³ Balli, Basher and Ozer-Balli (2010) called this the *switch* from home bias to euro bias.

Figure 3 illustrates the more dramatic reduction in the home bias in EMU countries and in other European countries when compared to the change in home bias levels in the U.S. and in other non-EMU countries, as shown in Schoenmaker and Bosch (2008) for the years 1997 and 2004. They also investigated whether the change in the home bias should be considered to be only of temporary or indeed of permanent nature. From 1997 - two years before the arrival of the euro – to 2001, the average home bias for euro-area countries was shown to have decreased from 85 percent to 78 percent; the home bias has then also remained at that level until 2004. In contrast, the home bias of the U.S., for example, was reported to have still been at around 81 percent in 2004 - an only slight decrease from the 83 percent as reported in 1997, and not as significant as within the euro area.²⁴

Figure 3: Equity Home Bias per Region (1997 vs. 2004)²⁵



²⁴ De Santis and Gerard (2006) similarly reported a decrease in the average home bias across euro-area countries, from 77 percent in 1997 to 63 percent in 2001.

²⁵ Schoenmaker and Bosch (2008), p. 25.

4 Empirical Explanations of the Home Bias

Over the last couple of years, significant financial research has not only emphasized the disproportionately high concentration of domestic equities in investors' portfolios and the poor exploitation of international diversification benefits available to them. At the same time, a substantial range of explanations of the home equity bias phenomenon has also been established, citing a varied number of institutional, political, and even behavioral factors.

Initial explanations have focused most prominently on country risk factors that constitute so-called *institutional* or *explicit barriers to investment*, which are typically government-imposed and might include official country restrictions like capital market or exchange controls, foreign ownership restrictions, as well as legal or regulatory barriers such as weak or inexistent laws to prevent insider trading and to protect shareholders. These directly observable barriers to investment might otherwise make the repatriation of dividends, interest or principal more difficult for foreign investors, for example, and deter them from participating in national stock markets. Also, the share of stock ownership available to foreign investors might be limited to holding only a certain (small) fraction of the stock market or of certain economic sectors.²⁶

However, it is also true that many of these obstacles to foreign investment have essentially been diminished with the globalization of the world economy in recent decades. Beginning in the late 1980s and early 1990s, most Latin American and many other developing countries, for example, made significant moves towards liberalizing their capital markets and started to experience advanced economic growth that, in turn, also allowed and encouraged an increase of foreign equity investment inflows into these countries.

²⁶ For example, 90 percent of China's stock market was still unavailable to foreigners in 1997, as reported in Ahearne et al. (2004).

At the same time, the fact that countries all over the world became more liberalized has also led to a change in the larger global environment and to a great extent spurred a growth in international financial markets towards becoming a more unified world capital market, i.e. towards more financial market integration.²⁷ Many countries also succeeded to benefit from international financial investment by becoming more *transparent* and thereby more attractive to foreign investors.²⁸

As a result of these developments, direct barriers to investment such as capital controls and high foreign market entry costs have been significantly reduced over the past two decades, and such explicit barriers to investment nowadays are no longer thought enough to significantly explain either the observed portfolio allocations nor the propensity of investors to heavily invest in their home country. Early on, the papers by French and Poterba (1991) and Cooper and Kaplanis (1994) have already argued that direct barriers to investment (like transaction costs) were relatively unimportant for analyzing and explaining the home bias phenomenon; later, Ahearne et al. (2004) also showed that these barriers should rather be considered of second-order importance as an explanation of the home bias.

²⁷ While there is much evidence that the world capital markets have indeed become more integrated over the nineties, an investigation by Bekaert and Harvey (2003) did suggest that this assumption might not always be the case. They showed that a number of emerging markets rather exhibited a degree of integration that was changing over time, and that some of those markets were becoming (again) less integrated into the world market after years of demonstrating regulatory changes. In their study, only four of twelve emerging countries (namely Korea, Mexico, Thailand, and Taiwan) had higher integration measures in the 1990s than before that period.

²⁸ *Transparency* generally refers to the availability and quality of (financial) information. For example, the accuracy of a country's macroeconomic data, national bureaucratic practices or the observance of accounting standards are all acknowledged to be important country characteristics reflecting its degree of transparency. Gelos and Wei (2005), for instance, not only showed that less-developed countries could also be considered less transparent (or *opaque*) than other countries, but that a lack of transparency within a country was generally associated with less international investment towards that country as well.

More recent evidence in the empirical literature has therefore particularly emphasized that *indirect* barriers to investment play a substantial role in explaining the home bias. These are also called *implicit* or *unobservable barriers to investment*. Here, in particular the theory of the existence of informational asymmetries between investors from different countries has become important, while alternative explanations focusing on implicit barriers also explore investors' bias towards geographically more proximate companies, as well as behavioral approaches that suggest that investment behavior is largely driven by psychological biases (like investors' familiarity or overconfidence).

All of these explanations have received notable attention in recent years, and the research by the international finance literature has not only allowed for new insights on the subject, but also potentially offered a better understanding of the phenomenon. The fundamental paper by Lewis (1999) was the first to present not only both a comprehensive and thorough review on the home bias puzzle, but also an examination of several of the main explanations for the home equity bias. However she concluded that, so far, no single explanation has emerged as the definite one: "Two decades of research on equity home bias have yet to provide a definite answer as to why domestic investors do not invest more heavily in foreign assets."²⁹

4.1 Information Asymmetries

This theory claims that a majority of the home bias phenomenon can be explained for by informational issues, and essentially suggests that domestic investors are able to hold more *valuable* information about stocks from their home country in contrast to foreign investors, who will consequently find themselves at an informational disadvantage when investing in that country.

²⁹ See Lewis (1999), p. 589.

The early paper by Gehrig (1993) postulated that asymmetries in information were the main determinant of the home equity bias. He showed that being better informed about the risk-return characteristics of domestic stocks would lead to a stronger domestic bias in portfolio holdings, and that foreign investments would therefore be viewed by an investor as on average more risky than equivalent domestic investments. Domestic investors were so believed to enjoy a so-called *home court advantage* relative to their foreign counterparts in terms of information availability. As a result, such an asymmetric information structure across financial markets was assumed to immensely complicate foreign investment and to lead investors to hold under-diversified portfolios.

As will be shown below, the information asymmetry hypothesis has since become a recurring theme in a greater part of the home bias literature, and has been analyzed from a broad angle in a number of empirical studies.

4.1.1 The Effect of Firm Visibility

One of the primary causes of the home bias phenomenon might be the inability of many foreign firms to attract the *initial attention* of potential investors. At a basic level, investors may just not be *aware* of the existence of all the stocks available to them internationally, and may therefore just invest in a select few ones that they already know about and/or have prior information on. Based on this incomplete information, any given investor will therefore only diversify his/her portfolio inadequately and so contribute to the extent of the home bias.

In this context, Merton (1987) was the first to develop the so-called *investor recognition hypothesis*, which implies that rational investors do primarily invest in firms that are already familiar to them, i.e. domestic firms. Along this reasoning it is so assumed that investors typically put more of their money in those stocks that are well known and on which generally more information is available. Relatively large firms or companies with global operations around the world, for example, can so be considered to be more visible to investors, given their size and presence in the market. Information about such companies might potentially be more readily available to investors who, in turn, can thus be expected to hold more of their investments in these stocks accordingly.

4.1.1.1 The Size Bias

The relationship between the importance of firm size and the home bias was explored in the empirical papers by Kang and Stulz (1997) and Dahlquist and Robertsson (2001). These two papers limited their analysis to a single, non-U.S. country, and showed that a stock's visibility might especially be important in such markets that initially did not have a strong existing foreign investor presence.

Kang and Stulz (1997) effectively followed the analysis by Merton (1987) and investigated the correlation between a firm's market value and foreign ownership in that firm, as well as the assumption that foreign investment was higher in larger-sized firms that were more familiar to investors. Using firm-specific data for Japan, firms of considerable size were commonly shown to have both higher export ratios and higher turnover numbers – characteristics which made them more likely to be well known among international investors. Larger firms were also reported to be more inclined to engage in ADR programs, thus foreign investors were facing fewer obstacles when investing in those firms and were more willing to consider them in their investment choices.

Overall, stock ownership in Japanese firms by foreigners was confirmed to be strongly biased against small firms, with investors disproportionately investing more in larger firms. Kang and Stulz called this observation the *size bias*.³⁰ On average, foreign investors were shown to hold 6.97 percent of the equity of larger firms, but only 1.21 percent of the equity of smaller ones. As such, these results documented a sizable preference that could be directly linked to information asymmetries.³¹

³⁰ Firms are generally considered *large* as measured by their total assets, the market value of common stocks, the number of employees, or otherwise as defined by their market capitalization.

³¹ Huang and Shiu (2009) found similar foreign investor preferences in an emerging market (Taiwan), where foreign institutional investment was equally shown to be concentrated in large firms and in firms that were export-oriented. See also Kho, Stulz and Warnock (2009) for evidence on foreign ownership in Korea.

Similarly, Dahlquist and Robertsson (2001) presented a significant foreign ownership preference for large firms in the country of Sweden. In their study, they were able to substantiate further firm visibility attributes that could be linked to foreign holdings (in addition to firm size), such as a firm's market liquidity or exporting firms' presence in international markets (as measured by foreign sales), or the cross-listing on an international stock exchange. The strong evidence of investors' preference for more liquid stocks, for firms with large export numbers, and for firms that were listed abroad seemed to underline the assumption that information asymmetries were very important in determining the biases in foreign holdings.³²

Later on, additional support in favor of Merton's investor recognition hypothesis was also provided by a host of studies that would focus on investors' holdings across different countries (instead of on investors' holdings in a single country). Kaniel, Li and Starks (2003), for example, used data from multiple developed and emerging market countries, and equally found their results to be consistent with the earlier empirical papers on the effect of stock visibility characteristics (including the size of a company) as being a key determinant of investors' allocation decisions. Similar findings by Aggerwal, Klapper and Wysocki (2005) also positively related higher foreign investment by U.S. mutual funds in various emerging markets to greater firm size and general firm visibility. For example, a doubling in firm size (as measured by total assets) was shown to lead to an approximate 0.12 percent increase in the investment by the funds in that firm. Edison and Warnock (2004) used the comprehensive data from the U.S. benchmark surveys from 1994 and 1997 in order to analyze the U.S. portfolio investment in nine large emerging countries, and were able to show a positive bilateral relationship between U.S. ownership and firm size, where investors would first choose to invest in emerging markets and then, given country allocations, to select certain stocks according to size characteristics, thereby confirming the size bias.³³

³² Cai and Warnock (2004) equally showed a preference for large firms with high foreign sales and with an international presence.

³³ The sample included the emerging countries of Argentina, Brazil, Chile, Mexico, Indonesia, Korea, Malaysia, Philippines, and Thailand.

Overall, these empirical results regarding the preference of foreign investors for more visible stocks are very much emblematic of information asymmetries that may indeed be the driving force behind the biases in foreigners' holdings. If investors do in fact underweight smaller firms that are less visible to them, this may well be a response to the severe information asymmetries associated with such firms. The preference for large firms can so be seen as a proxy for firm recognition, as consistent with Merton (1987).

4.1.1.2 International Cross-Listing

A special factor within the information environment of a company is its decision to list its securities for trading on the local stock exchange *as well as* on stock exchanges in other, foreign countries. Cross-border listing on a foreign exchange may well be very significant for reducing barriers to investment, especially those that might arise from a lack of information about the firm. Cross-listing effectively helps improve access to information about the company and its stock and, as a result, lowers the costs of acquiring information for foreign investors. Also, cross-listing will require companies to adopt and adhere to additional regulatory requirements and to possibly higher disclosure standards, which means that potential investors will also be provided with higher-quality information about the company. This is especially the case whenever a foreign company decides to list its securities in the U.S., either directly as an ordinary share or indirectly in the form of an ADR. Since the U.S. equity market can commonly be regarded to feature more transparency, better governance, and greater shareholder rights' protection when compared to most other countries, it is thus considered highly attractive for outside investors.³⁴ By listing as an ordinary share, a foreign firm must effectively meet all the same requirements as a U.S. firm, which consequently increases its appeal to investors by offering higher-quality and more reliable financial information.³⁵

³⁴ Indeed, most cross-listing has been heavily directed towards U.S. exchanges, particularly by European companies that are larger in size and export-oriented, as shown in Pagano, Roell and Zechner (2002).

³⁵ For example, firms will have to comply with SEC disclosure requirements, supervision and enforcement, and to reconcile their accounts with U.S. GAAP standards.

Listing on the London Stock Exchange (LSE) also has an equivalently potent impact as a U.S. listing, especially for firms in Europe.³⁶ Issuing securities in the U.S. or listing on the LSE appears to not only provide increased liquidity for firms, but such listings may also capture some *name recognition effect* that helps reduce information costs for investors. Overall, public firms that cross-list in another country will benefit from an increased visibility to foreign investors, and especially so firms that are larger in size and export-oriented, i.e. firms investors are already familiar with.

The cross-listing effect on investment decisions has been examined in a variety of empirical studies. Ahearne, Grier and Warnock (2004), for example, indicated that the effect of a U.S. listing did indeed have a significantly positive impact not only on the level of foreign equities in U.S. investors' portfolios, but also on the reduction of information asymmetries. One of the primary benefits of cross-listing was shown to be that it allowed foreign firms to experience a significant increase in U.S. shareholdings and to attract a larger base of investors. Cross-listed firms were able to enhance their appeal to U.S. investors and could even expect higher firm valuations following a cross-listing as a direct result of their greater visibility and the adopted higher-quality information standards.³⁷

The regression analysis in this paper also clearly confirmed a strong negative relationship between a U.S. listing and the home bias, with countries that were not publicly listed in the U.S. shown to be more underweighted in U.S. investors' equity portfolios. More interestingly, the paper also provided evidence that the overall U.S. home bias could be expected to fall from a measure of 80 percent to about 50 percent if all foreign companies were publicly listed on U.S. exchanges, which was a highly significant result.

³⁶ See evidence by Bertaut and Koe (2004).

³⁷ Evidence that cross-listed firms have higher value was also examined in Doidge, Karolyi and Stulz (2004), for example.

Particularly striking were also the results found in Edison and Warnock (2004). In that paper, U.S. investors' holdings of emerging market equities that were cross-listed in the U.S. as ADRs were not only affirmed to be almost four times greater than the holdings of non-cross-listed firms, but the holdings were even shown to be in accordance with the numbers as predicted by the ICAPM, i.e. incorporated in U.S. portfolios at full weights. Also another study by Aggarwal, Klapper and Wysocki (2005) confirmed that an ADR issuance and listing on an U.S. stock exchange by firms from emerging markets did lead to significantly greater investment allocations by U.S. mutual funds towards those countries.

Ammer, Holland, Smith and Warnock (2012) explored the willingness of U.S. investors to purchase outside, cross-listed equity on a U.S. exchange (either directly listed or as ADRs) by using the U.S. benchmark survey as of year-end 1997. The dataset included 12,221 non-U.S. firms from 46 countries, of which 498 were cross-listed in the U.S.. In summary, median U.S. investment in the outstanding shares of a cross-listed foreign firm was shown to be about 13.6 percent of the firm's total market capitalization, whereas non-cross-listed foreign firms only had roughly 3 percent of U.S. stock ownership. It was also reported that while more than one quarter of non-cross-listed firms in the sample were attracting no U.S. investment at all, cross-listed firms, on the other hand, were able to roughly double U.S. holdings in their stocks - an important result revealing investors' clear preference and interest for cross-listed foreign equity (as evident in their country allocations).³⁸ Ammer et al. hence concluded that cross-listing was the single most important determinant of U.S. investment in the equity of a foreign firm, and its effect alone was shown to account for about 25 to 35 percent of total U.S. foreign portfolio holdings (even though only 4 percent of foreign firms were shown to be cross-listed in the U.S.).³⁹

³⁸ See also Dahlquist, Pinkowitz, Stulz and Williamson (2003) for further evidence.

³⁹ The study also revealed that firms were more likely to cross-list in the U.S. if they were larger in size, had better accounting standards at home, or were domiciled in Canada.

Finally, it should be noted that the effects of a foreign listing by U.S. firms on the investment decisions of *non-U.S. investors* has also been investigated, namely by Ke, Ng and Wang (2010). It was shown that the foreign listing itself had no particular impact on investors' portfolio choices if the U.S. firm already had a significant local presence within that certain country. The authors presumed that this was particularly due to the fact that since U.S. firms were already commonly associated with higher corporate governance and accounting standards even before the cross-listing, investors would not gain any additional benefits from those firms being listed in their country other than the benefits that had also been previously available to them.

Overall, the findings of much smaller under-weights of cross-listed firms clearly underline the importance and implications of international cross-listings for the home bias phenomenon. Investors were shown not only to be more inclined to hold equities of more visible and larger firms, but all these empirical results also proved that information asymmetries did indeed play a central role in explaining the equity home bias puzzle (as consistent with previous studies by Kang and Stulz (1997) and by Dahlquist and Robertsson (2001)). Investors' general aversion to firms that were not cross-listed could at least partially explain the bias, while cross-listed firms were overwhelmingly shown to successfully alleviate investors' information asymmetries.

4.1.2 The Effect of Corporate Governance Factors

In general, the term *corporate governance* is broadly used as a way to describe the various mechanisms and rules under which a company is operating in a market, and normally refers to the prudential regulations in a country, the supervision of financial markets, effective market discipline, or the leadership of a corporation. In the finance literature, the empirical investigation on corporate governance issues points to the substantial influence of the various forms of investor protection on international portfolio investment. If, for example, a country sustains only a weak environment for investors in terms of the degree of government intervention (market regulation), then this will also adversely affect the decisions by foreigners to invest in that country.

On the firm-level, investor protection regulations might also help determine the credibility of the financial information published by firm, and information asymmetries might arise from differences in regulatory and disclosure requirements across countries. Recent governance research has documented both firm-specific *internal* and country-specific *external* corporate governance mechanisms that can be distinguished, both of which are important for understanding investors' portfolio decisions.⁴⁰

4.1.2.1 Country-level Corporate Governance

The extent of country-level (national) corporate governance policies such as strong shareholder rights, the strength of the legal system and judicial efficiency (the rule of law) can be associated with direct investor protection through the enforcement of these laws and the legislative supervision of the financial market. Although these are not directly incomplete-information issues, the existence of poor investing laws or other regulatory constraints can substantially restrain foreign investment in a country.

The studies by La Porta, Lopez-de-Silvanes, Shleifer and Vishny (1998, 2000), for instance, showed evidence that strong investor protection laws and the enforcement of these laws would lead to greater financial and capital market development, while Ahaerne et al. (2004) reported that in particular the enforcement of the laws was as important as the mere existence of the laws itself.⁴¹ Aggerwal, Klapper and Wysocki (2005) provided evidence that the existence of country-level discretionary policies such as strong shareholder rights and legal institutions in emerging markets would lead to greater investment by U.S. mutual funds towards those countries, for example. Also Thapa and Poshakwale (2012) documented that foreign investment was larger towards those countries that were more liquid, exhibited a higher degree of market efficiency, and had lower trading costs. Such stock market development factors were shown to play an important role in foreign investment decisions, and could explain almost 54 percent of the total variation in foreign equity allocations.

⁴⁰ See Leuz, Lins and Warnock (2010), for example.

⁴¹ For example, in the U.S. the SEC reviews filings on a systematic basis and regularly imposes effective sanctions, while other government bodies can be assumed to be less strict.

4.1.2.2 Firm-level Corporate Governance

Firm-level corporate governance generally refers to a company's ownership and control structure. In relation to the home bias phenomenon, two important aspects can be distinguished that potentially help determine investment preferences.

The first aspect considers the information asymmetry viewpoint regarding the *quality of financial information* that is published by companies, both in terms of accountability and credibility. Higher quality of financial information is seen as an important factor within the firm's information environment, and is frequently associated with the adoption of internationally-recognized accounting standards or the use of consolidated statements, for example.⁴²

Many do regard the U.S. Generally Accepted Accounting Principles (GAAP) as the highest financial reporting standards in the world, and adherence to U.S. GAAP can consistently be related to better disclosure patterns and more transparency.⁴³ In a prominent empirical study, Bradshaw, Bushee and Miller (2004) were able to directly relate the choice of accounting method by foreign firms to U.S. investors' portfolio decisions, and indeed confirmed that the degree of conformity with U.S. GAAP was an incremental factor for mitigating the home bias and for attracting international capital. Overall, the level of U.S. institutional ownership was shown to be significantly and positively higher in those non-U.S. firms that demonstrated U.S. GAAP conformity, as investors would strongly prefer higher quality financial information and overweight those firms in their portfolios. The study thus presented information asymmetries as being at least partially due to the financial reporting method adopted by a firm, while much of the previous research rather attributed informational issues to a lack of knowledge that the firm actually existed, as seen earlier. Instead, the credibility of a firm's financial information was shown to be as important as the visibility of the firm, and investors' aversion to firms with expected corporate governance problems could at least equally well explain the home bias.

⁴² Ammer et al. (2012), for example, showed that U.S. investors strongly preferred such firms that maintained higher quality accounting standards, in addition to larger firms and firms that were members of the MSCI World Index (among firms that were not cross-listed in the U.S.).

⁴³ See, for example, Aggerwal, Klapper and Wysocki (2005).

Research also showed that the adoption of International Financial Reporting Standards (IFRS) would lead to increased foreign equity investment, as evidenced more recently in Khurana and Michas (2011) and Shima and Gordon (2011), for example. Somewhat mixed results, however, were earlier published by Beneish and Yohn (2008), who predicted that a company's decision to adhere to IFRS would influence investors either by reducing their so-called information processing costs (like the costs of analyzing and becoming familiar with foreign financial statements, or the costs of interpreting information and comparing financial information across companies), or by reducing uncertainty regarding the quality of financial reporting, especially since IFRS could be considered equivalent to U.S. GAAP in terms of the reliability of financial information provided. However, it was also shown that while accounting factors were important, when compared to other determining factors of the home bias (like investor protection in a country, or geographical proximity) the use of IFRS was not as effective. They therefore concluded that global IFRS adoption alone was unlikely to further reduce the observed home bias.

The second aspect of firm-level governance issues then concerns the existence of so-called *controlling shareholders* in companies, frequently located in countries with weaker corporate governance policies. Insider or controlling shareholder structures limit foreign investment especially since that fraction of shares will not be available for free market trading, and outside investors will only be able to purchase those remaining shares not currently held by the controlling shareholders.⁴⁴ Also, those shareholders might hold an informational advantage over outside investors by having, for example, access to more timely and private information about the company; as such, especially smaller corporations are often controlled by a number of larger shareholders, who might be able to extract for themselves private benefits at the expense of minority shareholders.

⁴⁴ If, for example, such shareholders owned more than 51 percent of a firm, only 49 percent of shares would effectively be available to other (foreign) portfolio investors, suggesting a rather restricted shareholder base. In general, controlling shareholders are classified as those holding more than 5 percent of a firm's outstanding shares.

Thus, in countries where controlling shareholders are economically important the prevalence of closely-held firms might help explain why foreign investors do underweight these firms and countries in their portfolios. It should therefore also be possible to link the size of the home bias to this corporate governance issue.

The study by Dahlquist, Pinkowitz, Stulz and Williamson (2003) found evidence that the existence of controlling shareholders indeed helped explain the foreign equity holdings of U.S. investors. For constructing a measure of the home bias, the authors suggested that the shares held by controlling shareholders who owned more than 5 percent of a firm's outstanding shares should not be included in the world market portfolio and, instead, they created estimates of the *float of shares* (as a fraction of the market's total capitalization) freely available to all investors in the market. The float of shares was so defined as one minus the share of closely-held shares not available for trading in the open market, which thus represented an upper-bound limit for foreign ownership. For example, 7.94 percent of shares were shown to be closely-held in the U.S., while in the U.K. that fraction was 9.93 percent. However, except for the U.S., the U.K., Ireland and Sri Lanka, all other countries in the sample had a fraction of closely-held shares that was more than 20 percent on average (for Austria, that fraction was 54.85 percent).⁴⁵ In terms of the home bias, it was assumed that controlling (or insider) ownership would primarily influence the existence of a bias through its direct effect on the fraction of outstanding shares available to foreign investors. Indeed, when the portion of closely-held shares was taken into account, the home bias as traditionally measured could be shown to be much smaller than previously thought: while the average measure in the paper by Ahearne et al. (2004) had been 81 percent, the average measure of home bias when accounting for closely-held shares was only 33 percent, as there would be less investment towards those countries where the fraction of controlling shareholders was large. As such, the size of the home bias could so be intricately linked to a corporate governance issue.

⁴⁵ It was interesting to see that the U.S. and the U.K., both of which had the lowest controlling ownership share, were also the most developed capital markets in the sample.

Similarly, Leuz, Lins and Warnock (2010) examined U.S. investors' holdings of non-U.S. equities of firms from 29 countries from across Europe, Asia and Latin America, as of year-end of 1997. They also showed that the presence of high levels of managerial or family control at the firm level would dissuade foreign equity investors from investing in such firms, and especially whenever those firms were also located in emerging countries with generally poor disclosure policies and weaker corporate governance systems. In contrast, an increase in governance problems and private control benefits was shown to also directly lead to a decrease in U.S. investment.

For Swedish firms, Giannetti and Simonov (2006) showed that a marginal increase in poor corporate governance that made it easier for insiders to extract private (monetary) benefits for themselves would decrease the probability of foreign investors' willingness to hold stocks of such a firm by 1.37 percentage points, which again suggested that investors did indeed take corporate governance into account when investing abroad.

Finally, Kho, Stulz and Warnock (2009) focused on aggregate country insider ownership, and directly asked how ownership concentration was connected to the home bias phenomenon. While they found no remarkable evidence of a systematic decrease in the insider ownership across the 42 countries in the sample over the period 1994 to 2004, however, they showed that a change in investors' stock preferences was also critically dependent on a change in insider ownership within a certain country. In countries where the insider ownership level had at least somewhat decreased over the sample period, the U.S. home bias towards those countries was shown to have also decreased. Moreover, a country's governance effectiveness, regulatory quality, and rule of law were equally shown to be significantly negatively related to home bias, and to be a determining factor in investors' allocation decisions.

4.2 Local Bias

So far, the various aspects of asymmetric information between domestic and foreign investors have successfully been shown to be some of the fundamental factors that can at least partially explain the home bias phenomenon. As will be seen, however, the information asymmetry argument can also be related to an analysis of the home bias within a *more domestic context* rather than across countries, where investors' preference for geographically proximate companies and *local* stocks is considered an equally important aspect of portfolio choice. Under the assumption that portfolio diversification is also strongly determined by the geographical location in which the investor lives, it is generally assumed that local investors might also find themselves at a substantial informational advantage relative to their foreign counterparts.⁴⁶

Given their geographical proximity, local investors might possibly have easier access to more accurate or even private information about local companies than about more distant ones, as suggested in Coval and Moskowitz (2001): "Investors located near a firm can visit the firm's operations, talk to suppliers and employees, as well as assess the local market conditions in which the firm operates."⁴⁷ In other words, they may simply feel more comfortable about investing in companies that are located near them than they would feel about investing in other, more distant companies located in foreign countries.

⁴⁶ According to Feng and Seasholes (2004) three important terms can be distinguished in order to describe investors' geographic location bias. The first aspect refers to investors' tendency to overweight the stocks of firms with headquarters near where the investor lives, which they called *pure home bias*. The second example represents investors' preference for firms that are listed on a stock exchange located near the investor, also called *location of trade bias*. Yet another preference is the *cultural affinity bias*, where investors are shown to prefer to invest in firms with headquarters near where the investor was born.

⁴⁷ Coval and Moskowitz (2001), p. 839.

The existing literature on portfolio investment tried to accommodate both the question of whether or not a local bias among investors could be shown to exist empirically, and whether or not local investors might indeed be able to perform better than foreign investors (as would be implied by the information asymmetry theory). In this sense, most explanations associated with a preference for geographically proximate companies focused either on the information asymmetries hypothesis or on the familiarity hypothesis, which postulates that investors potentially have a psychological desire to invest in their local community or home country that they are more familiar with.

In the following, the evidence on the local bias from an informational viewpoint will be discussed in more detail, whereas the familiarity hypothesis will then be explored as a behavioral theory in chapter 4.3.4. The importance of investors' tendency towards geographically more proximate investment opportunities is also further investigated in order to discuss how much of the home bias phenomenon can truly be considered an *international* puzzle. If the preference to invest in local stocks can be shown to be strongly related to the home bias, then the local bias as such should also allow for a better clarification of the home bias phenomenon itself.

4.2.1 Empirical Evidence on the Local Bias

The first attempt to uncover the effect of distance on investment decisions was presented in the paper by Coval and Moskowitz (1999), who were able to successfully document the economic significance of geographic proximity within the domestic setting (country). The authors specifically studied the degree of local equity preference among U.S. mutual fund managers in their investments towards U.S.-headquartered companies. For the year 1995, their sample of over a thousand investment managers revealed that nearly one in every ten companies was chosen because of it was located within the same city as the manager, and the average fund manager was shown to invest in companies that were between 160 to 184 kilometers (or 9.32 to 11.20 percent) closer geographically than other comparable companies the manager could have held as well.

Their subsequent study (Coval and Moskowitz, 2001) not only confirmed these earlier results, but also presented an extended analysis spanning over a longer period of 20 years, from year-end of 1974 until year-end of 1994. Over that time period, U.S. mutual fund managers were equally shown to prefer to invest in stocks that were on average 14 percent closer to them than other available investments in the market, which was an even stronger result when compared to their earlier paper in 1999. Fund managers would significantly tilt their portfolios towards local stocks, with about 7.12 percent of their total assets invested locally. That was both a statistically and an economically significant result, and successfully demonstrated a persistent and high local bias among institutional investors.

Further, an even stronger geographical preference was shown to be pursued by *individual investors*. First, Zhu (2002) provided evidence of a significant bias in his examination on the investment activity of 27,189 U.S. individual household investors. During the period from January 1991 to November 1996, investors' portfolio shares were *on average* allocated towards those companies that were between 12.42 and 14.65 percent closer to their home residence than other stocks available in the market, which was an even higher local bias than had previously been indicated in Coval and Moskowitz (1999, 2001). Also Ivkovich and Weisbenner (2005) provided similar results of a disproportionate preference for local stocks among U.S. household portfolios, for an equal sample period from 1991 to 1996. Investments in companies headquartered within 100 kilometers of the investor were considered locally-biased and, on average, the local fraction of overall household portfolio investment was shown to be around 20 percent – which again was a higher result than the average local share of only 7 percent in mutual fund portfolios reported in Coval and Moskowitz (2001), and confirmed the existence of a particularly strong local bias among private investors.

A third, more international paper by Feng and Seasholes (2004) investigated the portfolio composition of a large number of individual brokerage accounts in mainland China, as of June 2001.⁴⁸ They showed that, on average, 19.53 percent of investors' portfolio holdings were allocated towards locally headquartered companies that were situated within the same region where investors currently lived. A preference for locally listed stocks was shown to be even stronger, with investors holding 83.68 percent of their wealth in such stocks that were traded on a main (local) stock exchange (location of trade bias). Both of these results were statistically and economically significant. The authors reasoned that individual investors particularly chose such (local) stocks that were associated with lower searching costs or, equivalently, with lower costs of acquiring information on the stock.⁴⁹ More recently, Seasholes and Zhu (2010) showed that individual investors did overweigh and hold as much as 30 percent of their portfolio in local stocks whose headquarter was within a 250 mile radius of where the investor lived. Here, the final sample included 43,132 household investments at a large U.S. discount broker over a period from January 1991 to November 1996.

Given the strong empirical evidence of investors' bias towards local investments (especially among individual investors) the common view regarding international portfolio investment nowadays assumes that domestic investors generally also might have better access to *local* (private) information about geographically closer companies in their home market that is not available to foreign investors. Accordingly, geographic proximity can also be used as a measure of how well *informed* investors potentially are about investments, and of how much an informational advantage they potentially have from owning local stocks. Thus, if local investors indeed have an informational advantage, this should be evident in the returns of their portfolios as well.

⁴⁸ Hong Kong, Macao, and Taiwan were not included in the study for political and legal reasons.

⁴⁹ Another international study examining individual investors' preference for locally-headquartered companies was also presented by Bodnaruk (2009), who showed that in Sweden the average geographical distance from an investor's residence to the closest establishment of the company he/she was investing in was only 145 kilometers.

4.2.2 Local Bias and Information Asymmetries

In the empirical literature, the simple proposition that investors are holding more value-relevant information about local companies than about remote companies has been directly examined in terms of the *performance* of local investments when compared to other investments, i.e. in terms of investment profitability. It was assumed that whenever investors would succeed in collecting locally available information that was value-relevant, that would also give them an informational advantage over other investors.

Coval and Moskowitz (1999), for instance, showed that U.S. fund managers' returns performance from investing locally was a substantial 2.7 percent higher when compared to non-local investments (for the sample year of 1995). Also the authors' subsequent paper of 2001 showed that locally-held equities had gained an average additional 2.5 percent annual return relative to the rest of the portfolio that was invested in more distant stocks.⁵⁰ They reasoned that the better performance of local holdings not only indicated that local fund managers were indeed better informed about local stocks, but also that they effectively had a meaningful advantage in evaluating local stocks over the rest of the market.⁵¹

Evidence by Ivkovich and Weisbenner (2005) highlighted that value-relevant local information was not only collected by institutional investors but also by individual (household) investors, who would equally exploit their local advantage in order to earn higher returns from their investments. The paper showed that U.S. individual investors were able to earn on average a 3.7 percent excess return on their local investment when compared to other investments (over the one-year sample horizon of 1991). However, the results were even more pronounced when a 100-kilometer radius instead of 250 kilometers was used to define the stocks of firms (within that threshold) as local holdings. Over the sample time frame, investors would have gained an even higher abnormal return of 4.8 percent from investing locally.

⁵⁰ Coval and Moskowitz defined all the holdings that were 95 percent closer to portfolio managers than the average firm in the market as the local portion of the portfolio.

⁵¹ See also the studies by Malloy (2005) and Bae, Stulz and Tan (2008) for further evidence on local analysts' information advantage.

Shukla and van Inwegen (1995) based their results on a performance comparison between U.S. open-end mutual funds and U.K. unit trusts that were both investing primarily in the U.S. security market over a 12-year sample period (from June 1981 to May 1993). Over that time, U.S. fund managers were shown to clearly benefit from a location bias in their investment decisions, as they were able to consistently out-perform their U.K. colleagues with higher average mean returns. This led the authors to conclude that a lack of access to local knowledge and local contacts with other market participants did contribute at least to some extent to the inferior performance of U.K. managers. Over the full sample period, 38.89 percent of U.S. funds were able to show greater mean returns than a comparable performance benchmark (the S&P 500 index) would have achieved, whereas only 5.56 percent of U.K. funds had achieved higher mean returns.

Another paper by Hau (2001) documented an information advantage among professional investors (traders) located close to the corporate headquarters of traded stocks in Germany. Over a four-month period from August to December 1998, more proximately situated traders were shown to out-perform both foreign as well as other non-local German traders. Again, local proximity to stocks seemed to provide significant information advantages for investors, even though here those advantages appeared to be only of short-term nature and to be rather based on insider information (like information received immediately prior to public announcements by a company).

For Korea, Choe, Kho and Stulz (2001) showed an information advantage from the access to private information among domestic investors over foreign institutional investors, while Kim (2002), equally examining the difference in performance between local and foreign investors holding stocks in Korean firms, showed that the effect of information asymmetries was most pronounced when investments in *smaller* firms were taken into account, where local investors' advantage was assumed to be strongest. Between 1996 and 2003, local investors were able to outperform the benchmark portfolio by 60 to 70 basis points, while foreign investors were shown to under-perform by 10 basis points.

Dvorák (2005) also yielded similar results by studying local investments in Indonesia, even though the informational asymmetries between foreign and domestic investors were reported to be less severe than those reported in Choe, Kho and Stulz (2001). In Feng and Seasholes (2004) the local portion of investors' portfolios in China was shown to outperform the more distant share by approximately 62 basis points per year, which was also a statistically significant result.

Additional evidence was also provided for Sweden in the study by Bodnaruk (2009). The paper examined the performance of local investments from a different angle than previous studies had, that is when investors were *changing their place of residence* and were moving to another location, thereby also changing their proximity to the stocks they were originally investing in (before the move). Under the information-based assumption that such a change in proximity would also affect the availability of the information investors might initially have derived from being (geographically) close to the stock, their relocation of residence was assumed to also influence the composition of their stock portfolios afterwards. Indeed, the author showed that over a two-and-a-half year period after the move investors would sell about 3.27 percent more of their originally held local stocks than non-movers would.

Further, the results also indicated that investors were then achieving higher returns on new stock purchases than on the holdings of their original stocks, which again was in line with the assumption that investors had familiarized themselves with a new set of local companies after the move due to more information available to them. After the move, information on previously closer stocks was harder to obtain, and investors would move on to stocks that were again more proximate to them in their new place of residence. As such, their investment choice was seen as more driven by the availability of information on a stock than by other factors, a result which would, again, lend substantial support to the information asymmetry hypothesis.⁵²

⁵² These results were also consistent with Massa and Simonov (2006).

Finally, the paper by Bae, Stulz and Tan (2008) conducted a much broader study and examined the performance of local and foreign analysts from a host of 32 countries around the world, over the period from 2001 to 2003. They showed that local analysts situated in the same country as a firm whose stocks they were covering were more adept at giving more accurate earnings forecasts than foreign investors, whose earnings predictions turned out to be not as precise. For the majority of 26 countries local analysts' advantage was confirmed to be positive, and to be even significantly positive in 10 out of the 32 countries.

4.2.3 Concluding Remarks

Overall, the inferences that can be drawn from the aforementioned papers conclusively point to a pronounced geographic preference for proximate firms, and to a significant informational advantage that local investors potentially have over foreign investors by choosing not to venture abroad. The more interesting question now would be whether the evidence of a local bias can also help explain the international home bias phenomenon, and whether it is possible to determine how much of the home bias can truly be considered an *international* puzzle. If the preference to invest in local stocks is also strongly related to the home bias, then the local bias should allow for a better definition of the international home bias as well. One would expect, for example, that investors with a strong local bias would also generally prefer to invest more at home than abroad.

In the study by Coval and Moskowitz (1999) measures of geographical distance were considered in order to determine how much of the home bias could actually be explained for by a local bias. In an effort to extrapolate the domestic distances (from their earlier results) to international scales, distance-adjusted portfolio weights were compared to the weights of several major markets in the world portfolio. It was thus shown, most interestingly, that distance might account for as much as one-third of the observed home bias in U.S. portfolios, which means that as much of investors' home bias could be explained for by the local bias. In other words, geographic proximity did not only play a central role in domestic allocations, furthermore about one-third of the home bias puzzle should not be considered an *international* puzzle after all, but rather a *local-bias* puzzle.

It was also shown that the domestic local bias and the international bias could well be expected to be *correlated* with each other. Building on and supporting this hypothesis, Zhu (2002) found that investors holding foreign securities in their portfolios did indeed exhibit a significantly smaller local bias in comparison to other investors who were not holding foreign assets. Both local and home country bias seemed to be a function of the same underlying factors, and investors who were more inclined to invest in foreign stocks were also shown to be more likely to invest in more remote companies.⁵³

It can thus be reasoned that existing home bias evidence and findings might have to be re-interpreted as being significantly related to the stronger preference for more proximately located companies rather than for companies located further away or even in another country. In summary, understanding investors' biases within a domestic setting might therefore be just as important as trying to explain investors' home country bias itself and, as such, this aspect should be taken into consideration as well when analyzing the home bias phenomenon.

However, it should also be noted that the theory of information asymmetry cannot be seen as a unifying explanation and as not enough to explain the phenomenon all by itself.⁵⁴ It is also worthwhile to consider that much of the analysis on information asymmetries assumes investor *rationality*, while recent studies suggest that *behavioral factors* might also be at play in inducing a home bias in portfolio decisions. These factors will now be explored in more detail.

⁵³ Especially more *sophisticated* investors (as defined by their higher incomes or by their profession) were shown to be more likely to invest both abroad and in more distant firms.

⁵⁴ Bravo-Ortega (2003) and Jeske (2001) also came to this conclusion.

4.3 Investor Behavior

Since the early studies by Markowitz (1952, 1959) and Tobin (1958) the widespread diffusion of the classic portfolio model has lead to a generic acceptance of the fundamental aspects of this approach, which postulate that investors base their portfolio investment decisions, *ceteris paribus*, only on the mean and variance of the expected returns according to their general risk aversion.

More recently, however, it has also been argued that this approach has so far largely ignored investors' actual behavior, beliefs, or otherwise biases of judgment regarding their investment decisions. In this context, the empirical literature has increasingly begun to shift towards relaxing many of the traditional assumptions of the classic portfolio model in order to allow for a wider set of determinants that would take into account not just the mean and variance of expected returns, but would also emphasize investor irrationality and behavior. Based on this understanding, the development of what is known as *behavioral finance* has been spurred at least since the 1990s, which by now is considered a vital research approach in academic finance.

As the succeeding literature on behavioral finance was essentially trying to bridge the gap between the normative models and the real behavior of investors, it thereby followed a much broader perspective by incorporating psychology and sociology into the standard models of finance, focusing on observable (and very human) departures from rational behavior based on the assumptions found in psychological research or common sense. Overall, this has lead not only to a profound deepening of knowledge about international financial markets but, more importantly, also to a better understanding of the home bias phenomenon itself.

As will be shown in the following, empirical behavioral finance studies have clearly confirmed earlier intuition that in many circumstances investors' behavior is quite different from the rationality hypothesis of the classic finance theory. Theories of investor *preferences* or investor *overconfidence*, for example, have been put forth to explain investors' choice of under-diversification. Investors' *familiarity* with companies, their overly *optimistic* performance predictions regarding the returns of domestic firms, or *subjective competence* have all been discussed as possible explanations that determine investors' portfolio decision. In addition, investors' *loyalty* towards a certain company, for example, might also make it difficult for them to hold an independent view on the expected returns from that company's stock, thereby affecting their investment decisions.

These behavioral approaches can all claim substantial empirical validation, and all of these theories have successfully been related to the home bias phenomenon in a number of papers. The main results from the behavioral literature have led to important new insights on the home bias phenomenon which, in summary, seems to be influenced by a wider number of factors than has previously been assumed.

4.3.1 Relative Optimism

Commonly perceived as the basic alternative explanation to the theory of information asymmetries, the behavioral approach of relative optimism has been initially suggested for explaining the under-diversification in international portfolios. It is also being referred to as *optimism bias*.

French and Poterba (1991) were the first to claim that if investors were simply more *optimistic* about the expected equity returns from their home market than about returns from foreign markets, then the observed home bias could be considered a direct implication of investors' behavior in forming expectations. They reasoned that whenever investors were regarding their domestic market as being relatively *better* compared to other (foreign) countries, these optimistic investors were in fact having trouble evaluating their home country in an objective, unbiased way.

French and Poterba suggested that in order for the observed home bias in portfolio holdings to be *rationalized* and comprehensible, investors would have to be assumed to hold substantial optimistic expectations about their domestic market and, at the same time, pessimistic expectations about foreign markets. In an effort to document this hypothesis, they compared the expected returns from six major capital markets that would explain investors' *actual* (heavily domestically biased) portfolio holdings to the returns that could be expected from holding an *optimally* diversified portfolio (with country weights proportional to the country's share of market capitalization in the world market), and were able to show clear differences in expectations: U.S. investors, for example, valued and perceived the expected returns from their home market allocations to be 90 basis points above those implied by an optimally diversified portfolio (the benchmark); likewise, Japanese and British investors were shown to be even more optimistic and expected their domestic market returns to be 250 and over 400 basis points higher than the returns implied by an international value-weighted portfolio, respectively. The perceived relative advantage alone was therefore shown to be enough for investors to heavily overweight the domestic market in their portfolios.

For the authors these results lead them to conclude that, first, investors clearly perceived and expected their domestic equity to perform relatively better than what the benchmark allocations would imply and, second, that the perceived advantage of the domestic equity over foreign equity may indeed be a driving force restraining international diversification; relative optimism was so successfully established as a reasonable and acceptable explanation of the home equity bias.

Further seminal studies by Strong and Xu (2003), Luetje and Menkhoff (2007), and Graham, Harvey and Huang (2009) would later on complement the research efforts in this area. The authors of all of these papers suggested that investors not only perceived domestic stocks more favorably than foreign stocks, but also that they generally judged their home market more optimistically than financial markets in other regions of the world.

Strong and Xu (2003), for example, analyzed data from the Merrill Lynch monthly Fund Manager Survey from October 1995 to October 2000, and equally found a significant optimistic tendency towards the home market among fund managers from the U.S., the U.K., Continental Europe, and Japan. Overall, 52 percent of U.S. investors were shown to be on average more optimistic about domestic equities in the U.S. than about other (foreign) equities, while 66 percent of U.K. investors were on average relatively more optimistic about U.K. equities. The results were also similar for European and Japanese markets. Investors' optimism about their home market thus had a significant effect on their portfolio allocations, and induced them to hold overly domestically-biased investments.

Relative optimism was also shown to be statistically significant among fund managers in Germany, in the paper by Luetje and Menkhoff (2007). Their examination of a questionnaire survey including responses from 234 German fund managers in 2003 revealed that higher performance forecasts and better expectations about the German market would lead them to invest more in their home country than in other countries. Indeed it was shown that the higher their expectations for the home market were, the higher would also consequently be their observed degree of home bias.

Finally, Graham, Harvey and Huang (2009) were able to directly relate optimism to fewer foreign portfolio holdings, even though the immediate effect of optimism appeared to be quite small. Using data on overall household investment in the U.S. from the year 2002, it was shown that on average 72 percent of all investors were relatively more optimistic about the U.S. market than about other foreign markets, while only 37.5 percent of all investors were holding foreign assets in their portfolios. However, when the effect of optimism was estimated to be greater than its average value, only slightly fewer investors were prepared to invest internationally, namely 37.3 percent. In comparison, whenever investor optimism was shown to be less than its average value, a just slightly higher percentage of 37.7 of investors choose to invest in foreign assets. Thus, while relative optimism seemed to be an important contributing factor to investors' home bias, the magnitude of its effects was too small to fully explain its cause.

4.3.2 Over-Confidence

Over-confident investors can be characterized as those investors who feel more confident about home market investments than about foreign investments, thereby largely under-estimating domestic (local) risk.⁵⁵

Kilka and Weber (2000), for example, conducted an experimental study on the investment behavior of graduate students from both Germany and the U.S., and showed that each group of participants felt on average more confident about domestic stocks in their portfolios, as well as about making forecasts regarding their home market rather than foreign markets. Both groups foresaw higher returns on the stocks they believed to know better and were in general more optimistic about domestic stocks, which in turn translated into greater optimism about the distribution of domestic market returns, and lead to a greater home bias.

Another paper by Pastor (2000) concluded that, in principle, investors' home bias could be rationalized by the degree of that investor's confidence about the home market, while Li (2004) even went as far as arguing that *only* strong domestic investor confidence would generate an under-investment in foreign equities. The paper also showed that investors held very strong beliefs about the associated higher risks and/or lower returns from foreign stocks.

4.3.3 Lack of Self-Rated Competence

The so-called competence effect can essentially be seen as a related concept to the over-confidence hypothesis as discussed in Barber and Odean (2001). Here it is argued that there are certain *types* of investors who feel especially skillful about their investment knowledge, and who also feel more competent about fully understanding the risks and benefits involved in investing in *foreign* markets.⁵⁶ Investors with more competence thus not only feel that they are good at investing in general, but might feel they are in particular good at investing in foreign stocks and are more willing to invest accordingly. In contrast, however, this might also mean that whenever people feel less knowledgeable and less competent about their investment opportunities, they will only choose poorly and more likely avoid foreign countries in their investment decisions, and thus increase the home bias.

⁵⁵ As indicated in Barber and Odean (2001).

⁵⁶ See Heath and Tversky (1991) for an illustration of the competence effect.

The study by Graham, Harvey and Huang (2009), for example, argued that the type of investor behavior that characterized less home bias was driven, at least in part, by the competence effect, and they stated: “It is likely that their educational background and other demographic characteristics make some investors feel more competent than others in understanding the array of financial information and opportunities available to them.”⁵⁷ Using data from several UBS/Gallup Investor Surveys in the U.S. they found, for example, that male investors and investors with higher income and more education were also more likely to believe they were competent investors than female investors or those with less income and education were. As such, higher education and income were shown to not only make a person feel considerably more competent, but in turn these characteristics also led to higher perceived competence in financial matters.⁵⁸ The effect of investor competence was also shown to be economically large and significant, and also to be an important factor supporting a decrease in the home bias of investors, as more competent investors would indeed invest more in foreign securities than other investors.⁵⁹

Support for the competence theory by Graham, Harvey and Huang (2009) was found in the paper by Abreu, Mendes and Santos (2011), who showed that Portuguese individual investors needed to acquire experience in their home market before would venture abroad and invest in foreign securities, and were willing to invest in foreign securities only after they felt *competent* about the benefits and risks involved in such investments. The decision to invest abroad was not only affected by their experience in the home market, however, but also by investors’ characteristics. Female, married, and older investors, as well as those with only basic education were shown to need more experience in the domestic market and to wait longer before they started to invest in foreign securities in comparison to wealthier investors or those with highly skilled jobs or more financial knowledge.

⁵⁷ Graham, Harvey and Huang (2009), p. 1.

⁵⁸ Similar results that related the home bias phenomenon to investors’ *demographic characteristics* were also presented in Goetzmann and Kumar (2008), Zhu (2002), Karlsson and Norden (2007), and Kyrychenko and Shum (2009). In summary, investors with higher education level, higher income and of higher age were shown to be more likely to diversify their portfolios internationally.

⁵⁹ Bailey, Kumar and Ng (2008) reported similar results.

Further, and more importantly, the study also argued that investors' experience obtained while investing in the domestic market as opposed to overconfidence was the key reason that helped them start investing abroad. Investors who ventured abroad not only appeared to have better investment skills, but were indeed shown to improve their performance and to outperform domestic investors once they started investing in foreign securities. If the reason why investors entered foreign markets was just because they were overconfident, then their performance would not have improved afterwards. These results so helped understand the home bias, and also again confirmed that there are benefits for investors choosing to invest abroad.

4.3.4 Familiarity

The behavioral explanation of familiarity is a rather obvious and compelling concept in the home bias literature, according to which people simply prefer to invest in the stocks of those companies that are already familiar to them, or that they generally regard as more *favorable* than other securities available to them.⁶⁰ For example, investors might strongly prefer those companies that publish their financial reports in their own native language (*language effect*), or that have chief executives coming from the same or similar cultural background as investors themselves (*cultural effect*).⁶¹ Also, investors were shown to be not only influenced by the general information about a firm's geographic location; instead it was also important for them to know more about a company's specific identity so that they could form a connection or association with that firm.⁶²

Investors might also view themselves as being better *informed* about the familiar than about the unfamiliar, however, independent of actually having more and/or superior information about the firm itself. Familiar stocks are so perceived to potentially deliver higher returns than other investments (at lower risk), and investors might therefore shift their portfolios to those companies accordingly.

⁶⁰ In their earlier paper Coval and Moskowitz (1999) have already related the preference for geographical proximity investors to the psychological desire to invest in the local community, i.e. to a *cognitive bias for the familiar*.

⁶¹ See Grinblatt and Keloharju (2001).

⁶² As indicated in Ackert, Church, Tompkins and Zhang (2005).

Most empirical studies discussing the familiarity effect were particularly concerned with disentangling the local bias preference of investors from the asymmetric information concept as suggested by Coval and Moskowitz (1999), and were indeed able to show that advantageous information alone might not have been the sole reason driving locally biased investments.

In his fundamental paper, Huberman (2001) was the first to explicitly link the geographic bias of investors to the concept of familiarity. He examined the familiarity hypothesis by looking at the geographic distribution of the shareholders of the seven Regional Bell Operating Companies (RBOCs) in the U.S., major providers of local telephone services. The author was able to document an evidently large tendency of local resident investors to invest more in those companies that were operating in an area that was geographically closer: in most states, the fraction of RBOC equity held by investors within the company's local area was shown to be on average 2.76 times higher for local RBOCs than for out-of-state RBOCs (as of year-end 1996), i.e. disproportionately higher than the average amount invested in other RBOCs.

Given this evidence of investors' propensity to hold stocks in locally situated RBOCs, Huberman suggested, most importantly, that these results allowed for local investment to be seen as stemming from non-informational factors. The bias to invest in the *familiar* rather reflected investors' tendency to be more *optimistic* about familiar stocks and not so much an exploitation of an informational advantage, as investors were shown to buy and *hold* these more familiar stocks in their portfolios but were less likely to *trade* them in response to new information.⁶³ Overall, Huberman thus considered the familiarity theory a very reasonable explanation of the home bias phenomenon.

⁶³ This observation also seems rather consistent with other behavioral explanations of the home bias that argue that investors feel more confident and optimistic about the expected returns of familiar stocks. People look more favorably upon such stocks and think of them as being *more likely* to deliver higher returns, as seen earlier.

In line with these findings was also the evidence presented by Zhu (2002), who equally confirmed the significance of familiarity for U.S. individual investors' portfolio decisions. The paper showed that investors' average portfolio composition was between 12.42 and 14.65 percent closer to their home base than to other domestic common stocks in the market, and concluded that although individual investors *might* be able to obtain more information on familiar companies, not all of this information was relevant in the sense that it also would provide investors with higher returns on their investments. While investors were indeed more inclined to invest in locally proximate companies than in more distant ones, there was no evidence found that they were able to achieve higher returns from their local bias, nor were they shown to outperform those investors with less local bias in their investments. Therefore, these results were seen as casting further doubt on the advantageous information explanation, and as lending additional support to the familiarity hypothesis. Unlike earlier examinations on local bias, Zhu directly concluded that the theory of advantageous information could not well explain individual investors' behavior, and that investors were investing locally for reasons other than information advantages; this was later also confirmed in Seasholes and Zhu (2010), where U.S. individual investors' local portfolios equally could not be shown to generate higher performance (over a 1991 to 1996 sample period), as investors did not appear to have value-relevant information about the local stocks in their portfolios that might have helped them achieve superior returns. These results thus directly contradicted conclusions reached earlier in papers such as Ivkovich and Weisbenner (2005) and Massa and Simonov (2006).

Similar evidence was also delivered for institutional investors. Ke, Ng and Wang (2010), for instance, studied a sample of more than 3,000 mutual funds from 22 developed and developing countries over a period from 2001 to 2002, and showed that mutual funds' investment in U.S. firms that had a local presence in the funds' home country were not generating any higher returns than a comparable benchmark portfolio. They also rather suggested that fund managers' local investments were more likely driven by familiarity effects than by informational effects.

4.3.5 Loyalty

Lastly, it can be postulated that investors might exhibit *loyalty* or *emotional ties* towards certain investment possibilities, which might significantly influence and effect their investment decisions. The idea of loyalty regarding its impact on investors' decisions was first considered by Cohen (2009), who reflected on the emotional ties that employees might display towards their own company when considering their retirement money investment.⁶⁴ In the paper, the *loyalty bias* towards company stock was defined as the overweighting of own-company stock in the investment portfolio due to a loyalty to the firm itself. Employees were assumed to be truly convinced of their company being better than other companies, and so overestimated the performance of its stock because of their loyalty towards the firm.

Employee loyalty was clearly shown to affect investors' equity portfolio decisions, whereas superior information as an explanation of employees' preference for own company stock was more or less rejected. While employees were also investing more in such own companies that were more visible to them outside (through advertising, for example), moreover, they were shown to be especially loyal to and would invest more in those companies that maintained a constant firm structure, hierarchy, and management over a long period of time, factors which helped employees develop long-term loyalty with their firm.⁶⁵

Most interesting, however, was that Cohen also reported evidence on the *cost* of loyalty-biased investment decisions to employee investors, i.e. on the foregone returns from under-diversification. An employee was shown to lose almost 2 percent in annual portfolio returns by not investing more variedly because of his/her loyalty bias – a potentially large loss which was shown to be even *higher* than the costs (foregone gains) that were normally associated with investors' home bias.

⁶⁴ Huberman (2001) regarded the choice of workers to invest some or all of their retirement contributions in the stock of the company they were employed with as *investing in the most familiar*.

⁶⁵ The main sample period was from 1997 to 2000.

A second theory on loyalty then refers to investors' loyalty or *patriotic feelings* towards their home country that might induce them to invest more at home than in other countries, and could so possibly explain (at least) part of the equity home bias. Morse and Shive (2011), for instance, showed that the effect of investors' country loyalty on foreign equity holdings was even economically significant: a one-unit increase in patriotism was shown to lead to an 11 percentage decrease in the proportion of foreign holdings in an average country's total equity holdings (over a sample period from 1995 to 1997). In the U.S., for example, investors located in more patriotic regions like West South Central were shown to invest the least in foreign equities, as they had stronger feelings about their home country and would clearly allocate more of their portfolio towards domestic stocks than towards stocks from other countries. Thereby, the effect of investor patriotism could be shown to be highly important both for explaining international investment allocations as well as for a better understanding of the equity home bias in general; overall, patriotic behavior was seen as at least partly responsible for the home bias phenomenon.

A related patriotism theory was also provided by Bhattacharya and Groznik (2008). The paper introduced another measure of loyalty, namely the *national country of origin* of (immigrant) investors living in the U.S., where immigrants were assumed to view the investment opportunities in their country of origin more favorably than investments opportunities in other countries. The size of an immigrant group from a certain foreign country was shown to be positively correlated to overall U.S. investment in that particular (foreign) country, as immigrants would invest proportionately more in their own countries than any other country. Immigrants in the U.S. did not only consider the institutional characteristics of the country in their investment decisions, but particularly cared about the fact whether the country was their country of origin, and whether or not they still had strong family and cultural ties to their country. This effect has also been documented in Foad (2011), where immigration was shown to decrease the equity home bias by increasing the share of the domestic investors that have a preference for foreign equity in the adopted country.

4.3.6 Concluding Remarks

While not providing a unifying explanation of the home bias itself, behavioral theory has significantly contributed towards finding a more meaningful interpretation of this international phenomenon. Behavioral biases such as familiarity (Huberman, 2001), loyalty (Cohen, 2009), patriotism (Morse and Shive, 2011), over-confidence (Kilka and Weber, 2000) and optimism (French and Poterba, 1991) all help understand why investors might not diversify their investments to a larger degree, and why investors' strong preferences in their investment decisions are significant for explaining the home bias.⁶⁶ In contrast, investors with higher perceived investment competence were shown to be less likely to exhibit a home bias, with almost 51.6 percent of their portfolios invested internationally (versus a foreign portion of just 33.1 percent in less competent investors' portfolios), as seen in Graham, Harvey and Huang, 2009.

Overall, the behavioral literature has not only offered a new perspective on the international home bias puzzle, but it has also shown that investors' behavior rather than institutional restrictions or factors have lead to an under-diversification of their portfolios. By uncovering some irrational patterns in investors' portfolio decisions, the behavioral theories provide evidence that at least not all investors are merely influenced by the basics of portfolio theory, but rather reflect investors' differing views and beliefs when making their decisions.

⁶⁶ Further behavioral explanations might also include aversion to regret (Solnik, 2006), or downside equity risk (Campbell and Kraeussl, 2007).

5 Conclusion

The traditional line of arguments that has been put forward as an explanation of the observed lack of international portfolio diversification initially included the existence of barriers to investment, like capital controls or market segmentation. The early empirical literature in this regard, however, can no longer be viewed as offering viable or adequate explanations of the home bias phenomenon, especially since the parallel decrease in the documented home bias has not been as drastic as the removal of capital barriers and similar other restrictions to international investment in recent years would suggest. Indeed, the home bias in investors' portfolios has not changed substantially since the unfolding of capital market liberalization.

Over the years, the home bias has largely persisted in every country around the globe, even among professional investors. This has led to a focus on indirect barriers to investment as a possibly more relevant explanation of the bias, such as the existence of information asymmetries between investors from different countries. There is much evidence that foreign investors are more likely to invest in those countries that offer better government and corporate standards, which presumably enables investors to achieve higher returns. Also, investors were shown to hold stocks of foreign companies that are larger in size and more visible, i.e. more easily accessible to investors. It is further assumed that especially investors who are located geographically proximate to an investment opportunity do also have a substantial informational advantage over foreign investors, which even might allow them to perform better than other investors who are located further away. In that case, under-diversification and the resulting home bias were shown to be even tempered by the higher returns from investing locally.

It has also been argued that investors are heavily influenced by behavioral biases, since most rational theories have failed to fully explain the extent of the observed home bias. As such, behavioral explanations have generally been related to an expectation of higher returns from domestic investment, or equivalently to investors' risk aversion as they falsely assume foreign investments to be more risky than they truly are, simply because they are foreign. Investors' patriotism towards their own country or loyalty to their own company also seems to influence their investment decisions. It could also be inferred that domestic investors do perceive themselves as having an informational advantage over foreigners, which may, however, just be the result of behavioral biases that also lead to the home bias. This argument is particularly relevant given that the home bias phenomenon has remained so persistent over time.

In summary, it can be said that all the empirical evidence that has been uncovered so far does imply that the home bias phenomenon can be seen as rather complex to explain and understand. The bias appears to be driven by a wider number of forces than previously assumed, and no single theory seems to offer a complete explanation or solution to the home bias puzzle. Investors' portfolio decisions rather appear to be related to a mixture of all explanations presented in this paper, which are all valuable. Most factors are only able to explain a small portion of the home bias, and hopefully future research interest in this area will help clarify a larger part of investors' home country preferences in coming years.

Bibliography

Abreu, M., Mendes, V. and J. A. Santos (2011), *Home Country Bias: Does Domestic Experience Help Investors Enter Foreign Markets?*, Journal of Banking and Finance, Vol. 35 (9), pp. 2330-2340

Ackert, L. F., Church, B. K., Tompkins, J. and P. Zhang (2005), *What's in a Name? An Experimental Examination of Investment Behavior*, Review of Finance, Vol. 9 (2), pp. 281-304

Adler, M. and B. Dumas (1983), *International Portfolio Choice and Corporation Finance: A Synthesis*, Journal of Finance, Vol. 38 (3), pp. 925-984

Aggarwal, R., Klapper, L. and P. D. Wysocki (2005), *Portfolio Preferences of Foreign Institutional Investors*, Journal of Banking and Finance, Vol. 29 (12), pp. 2919-2946

Ahearne, A. G., Grier, W. L. and F. E. Warnock (2004), *Information Costs and Home Bias: An Analysis of U.S. Holdings of Foreign Equities*, Journal of International Economics, Vol. 62 (2), pp. 313-336

Ammer, J., Holland, S. B., Smith, D. C. and F. E. Warnock (2012), *U.S. International Equity Investment*, International Finance Discussion Paper No. 1044, Board of Governors of the Federal Reserve System

Bae, K. H., Stulz, R. M. and H. Tan (2008), *Do Local Analysts Know More? A Cross-Country Study of the Performance of Local Analysts and Foreign Analysts*, Journal of Financial Economics, Vol. 88 (3), pp. 581-606

Baele, L. and K. Inghelbrecht (2006), *Structural versus Temporary Drivers of Country and Industry Risk*, Working Paper, Faculty of Economics and Business Administration, Ghent University, Belgium

Baele, L., Pungulescu, C. and J. Ter Horst (2007), *Model Uncertainty, Financial Market Integration and the Home Bias Puzzle*, Journal of International Money and Finance, Vol. 26 (4), pp. 606-630

Bailey, W., Kumar, A. and D. Ng (2008), *Foreign Investments of U.S. Individual Investors: Causes and Consequences*, Management Science, Vol. 54 (3), pp. 443-459

Balli, F., Basher, S.A. and H. Ozer-Balli (2010), *From Home Bias to Euro Bias: Disentangling the Effects of Monetary Union on the European Financial Markets*, Journal of Economics and Business, Vol. 62 (5), pp. 347-366

Barber, B. M. and T. Odean (2001), *Boys will be Boys: Gender, Overconfidence, and Common Stock Investment*, Quarterly Journal of Economics, Vol. 116 (1), pp. 261-292

Bekaert, G. and C. R. Harvey (1995), *Time-Varying World Market Integration*, Journal of Finance, Vol. 50 (2), pp. 403-444

Bekaert, G. and C. R. Harvey (2003), *Emerging Markets Finance*, Journal of Empirical Finance, Vol. 10 (1-2), pp. 3-56

Bekaert, G. and M. S. Urias (1996), *Diversification, Integration and Emerging Market Closed-End Funds*, Journal of Finance, Vol. 51 (3), pp. 835-869

Bekaert, G. and X. S. Wang (2009), *Home Bias Revisited*, Working Paper, Department of Finance and Economics, Columbia Business School, New York, U.S.

Beneish, M. D. and T. L. Yohn (2008), *Information Frictions and Investor Home Bias: A Perspective on the Effect of Global IFRS Adoption on the Extent of the Equity Home Bias*, Journal of Accounting and Public Policy, Vol. 27 (6), pp. 433-443

Berkel, B. (2006), *The EMU and German Cross Border Portfolio Flows*, Discussion Paper No. 6110, Mannheim Research Institute for the Economics of Aging (MEA), University of Mannheim, Germany

Bertaut, C. C. and L. S. Kole (2004), *What Makes Investors Over or Underweight? Explaining International Appetites for Foreign Equities*, International Finance Discussion Paper No. 819, Board of Governors of the Federal Reserve System

Bertaut, C. C. and R. W. Tryon (2007), *Monthly Estimates of U.S. Cross-Border Securities Positions*, International Finance Discussion Paper No. 910, Board of Governors of the Federal Reserve System

Bhattacharya, U. and P. Groznik (2008), *Melting Pot or Salad Bowl: Some Evidence from U.S. Investments Abroad*, Journal of Financial Markets, Vol. 11 (3), pp. 228-258

Bodnaruk, A. (2009), *Proximity Always Matters: Local Bias When the Set of Local Companies Changes*, Review of Finance, Vol. 13 (4), pp. 629-656

Bohn, H. and L. L. Tesar (1996), *U.S. Equity Investment in Foreign Markets: Portfolio Rebalancing or Return Chasing?*, American Economic Review, Vol. 86 (2), pp. 77-81

Bradshaw, M. T., Bushee, B. J. and G. S. Miller (2004), *Accounting Choice, Home Bias, and U.S. Investment in Non-U.S. Firms*, Journal of Accounting Research, Vol. 42 (5), pp. 795-841

Bravo-Ortega, C. (2005), *Does Asymmetric Information Cause the Home Equity Bias?*, Policy Research Working Paper No. 3495, The World Bank

Cai, F. and F. E. Warnock (2004), *International Diversification at Home and Abroad*, International Finance Discussion Paper No. 793, Board of Governors of the Federal Reserve System

Campbell, R. A. and R. Kraeussl (2007), *Revisiting the Home Bias Puzzle: Downside Equity Risk*, Journal of International Money and Finance, Vol. 26 (7), pp. 1239-1260

Cao, J. (2005), *International Diversification Through iShares and Their Rivals*, Working Paper, University of Texas at Austin, U.S.

Chan, K., Covrig, V. M. and L. K. Ng (2005), *What Determines the Domestic Bias and Foreign Bias? Evidence from Mutual Fund Equity Allocations Worldwide*, Journal of Finance, Vol. 60 (3), pp. 1495-1534

Chang, E., Eun, C. S. and R. Kolodny (1995), *International Diversification Through Closed-End Country Funds*, Journal of Banking and Finance, Vol. 19 (7), pp. 1237-1263

Charitou, A., Makris A. and G. P. Nishiotis (2006), *Closed-End Country Funds and International Diversification*, Multinational Finance Journal, Vol. 10 (3-4), pp. 251-276

Choe, H., Kho, B. and R. M. Stulz (2001), *Do Domestic Investors Have More Valuable Information about Individual Stocks than Foreign Investors?*, Working Paper No. 8073, National Bureau of Economic Research, Cambridge, Massachusetts, U.S.

Coeurdacier, N. and P. O. Gourinchas (2011), *When Bonds Matter: Home Bias in Goods and Assets*, Working Paper No. 17560, National Bureau of Economic Research, Cambridge, Massachusetts, U.S.

Cohen, L. H. (2009), *Loyalty-Based Portfolio Choice*, Review of Financial Studies, Vol. 22 (3), pp. 1213-1245

Cooper, I. and E. Kaplanis (1994), *Home Bias in Equity Portfolios, Inflation Hedging, and International Capital Market Equilibrium*, Review of Financial Studies, Vol. 7 (1), pp. 45-60

Coval, J. D. and T. J. Moskowitz (1999), *Home Bias at Home: Local Equity Preference in Domestic Portfolios*, Journal of Finance, Vol. 54 (6), pp. 2045-2073

Coval, J. D. and T. J. Moskowitz (2001), *The Geography of Investment: Informed Trading and Asset Prices*, Journal of Political Economy, Vol. 109 (4), pp. 811-841

Cumby, R. E. and J. D. Glen (1990), *Evaluating the Performance of International Mutual Funds*, Journal of Finance, Vol. 45 (2), pp. 497-521

Dahlquist, M. and G. Robertsson (2001), *Direct Foreign Ownership, Institutional Investors, and Firm Characteristics*, Journal of Financial Economics, Vol. 59 (3), pp. 413-440

Dahlquist, M., Pinkowitz, L., Stulz, R. M. and R. Williamson (2003), *Corporate Governance and the Home Bias*, Journal of Financial and Quantitative Analysis, Vol. 38 (1), pp. 87-110

De Santis, R. A. and B. Gérard (2006), *Financial Integration, International Portfolio Choice and the European Monetary Union*, Working Paper No. 626, European Central Bank

Doidge, C. A., Karolyi, G. A. and R. M. Stulz (2004), *Why are Foreign Firms Listed in the U. S. Worth More?*, Journal of Financial Economics, Vol. 71 (2), pp. 205-238

Dvorák, T. (2005), *Do Domestic Investors Have an Information Advantage? Evidence from Indonesia*, Journal of Finance, Vol. 60 (2), pp. 817-839

Edison, H. J. and F. E. Warnock (2004), *U.S. Investors' Emerging Market Equity Portfolios: A Security-Level Analysis*, Review of Economics and Statistics, Vol. 86 (3), pp. 691-704

Errunza, V., Hogan, K. and M. W. Hung (1999), *Can the Gains from International Diversification be Achieved without Trading Abroad?*, Journal of Finance, Vol. 54 (6), pp. 2075-2107

Feng, L. and M. S. Seasholes (2004), *Location Effects and Portfolio Tilting*, Working Paper, University of California, Berkeley, U.S.

Foad, H. S. (2011), *Immigration and Equity Home Bias*, Journal of International Money and Finance, Vol. 30 (6), pp. 982-998

Foad, H. S. (2012), *Equity Home Bias and the Euro*, Quarterly Journal of Finance, Vol. 2 (1), pp. 113-142

Foerster, S. R. and G. A. Karolyi (1999), *The Effects of Market Segmentation and Investor Recognition on Asset Prices: Evidence from Foreign Stock Listing in the U.S.*, Journal of Finance, Vol. 54 (3), pp. 981-1013

Forbes, K. J. (2010), *Why Do Foreigners Invest in the United States?*, Journal of International Economics, Vol. 80 (1), pp. 3-21

French, K. R. and J. M. Poterba (1991), *Investor Diversification and International Equity Markets*, American Economic Review, Vol. 81 (2), pp. 222-226

Gehrig, T. (1993), *An Information Based Explanation of the Domestic Bias in International Equity Investment*, Scandinavian Journal of Economics, Vol. 95 (1), pp. 97-109

Gelos, R. G. and S. J. Wei (2005), *Transparency and International Portfolio Holdings*, Journal of Finance, Vol. 60 (6), pp. 2987-3020

Gerke, W., Mager, F. and A. Roehrs (2005), *Twenty Years of International Diversification from a German Perspective*, Schmalenbach Business Review, Vol. 57 (2), pp. 86-102

Giannetti, M. and A. Simonov (2006): *Which Investors Fear Expropriation? Evidence from Investors' Portfolio Choices*, Journal of Finance, Vol. 61 (3), pp. 1507-1547

Giofr , M. (2008), *Information Asymmetries and Foreign Equity Portfolios: Households versus Financial Investors*, Working Paper No. 74/08, Center of Research on Pensions and Welfare Policies, Italy

Glen, A. (2005), *Corporate Financial Management*, 3rd edition, Financial Times/Prentice Hall

Goetzmann, W. N. and A. Kumar (2008), *Equity Portfolio Diversification*, Review of Finance, Vol. 12 (3), pp. 433-463

Graham, J. R., Harvey, C. R. and H. Huang (2009), *Investor Competence, Trading Frequency, and Home Bias*, Management Science, Vol. 55(7), pp. 1094-1106

Grauer, R. R. and N. H. Hakansson (1987), *Gains from International Diversification: 1968-1985 Returns on Portfolios of Stocks and Bonds*, Journal of Finance, Vol. 42 (3), pp. 721-739

Griffin, M. W. (1997), *Why Do Pension and Insurance Portfolios Hold So Few International Assets?*, Journal of Portfolio Management, Vol. 23 (4), pp. 45-50

Grinblatt, M. and M. Keloharju (2001), *How Distance, Language, and Culture Influence Stockholdings and Trades*, Journal of Finance, Vol. 56 (3), pp. 1053-1073

Grubel, H. G. (1968), *Internationally Diversified Portfolios: Welfare Gains and Capital Flows*, American Economic Review, Vol. 58 (5), pp. 1299-1314

Haselmann, R. and H. Herwartz (2010), *The Introduction of the Euro and its Effects on Portfolio Decisions*, Journal of International Money and Finance, Vol. 29 (1), pp. 94-110

Hau, H. (2001), *Location Matters: An Examination of Trading Profits*, Journal of Finance, Vol. 56 (5), pp. 1959-1983

Hau, H. and H. Rey (2008), *Home Bias at the Fund Level*, American Economic Review, Vol. 98 (2), pp. 333-338

Heath, C. and A. Tversky (1991), *Preference and Belief: Ambiguity and Competence in Choice under Uncertainty*, Journal of Risk and Uncertainty, Vol. 4 (1), pp. 5-28

Huang, R. D. and C. Y. Shiu (2009), *Local Effects of Foreign Ownership in an Emerging Financial Market: Evidence from Qualified Foreign Institutional Investors in Taiwan*, Financial Management, Vol. 38 (3), pp. 567-602

Huberman, G. (2001), *Familiarity Breeds Investment*, Review of Financial Studies, Vol. 14 (3), pp. 659-680

Ivkovich, Z. and S. Weisbenner (2005), *Local Does as Local is: Information Content of the Geography of Individual Investors' Common Stock Investments*, Journal of Finance, Vol. 60 (1), pp. 267-306

Jacquillat, B. and B. H. Solnik (1978), *Multinationals are Poor Tools for International Diversification*, Journal of Portfolio Management, Vol. 4 (2), pp. 8-12

Jeske, K. (2001), *Equity Home Bias: Can Information Cost Explain the Puzzle?*, Economic Review, Federal Reserve Bank of Atlanta, Vol. 86 (3), pp. 31-42

Jiang, C. X. (1998), *Diversification with American Depository Receipts: The Dynamics and the Pricing Factors*, Journal of Business, Finance and Accounting, Vol. 25 (5-6), pp. 683-699

Kabir, M. H., Hassan, M. K. and N. Maroney (2011), *International Diversification with American Depository Receipts (ADRs)*, Pacific-Basin Finance Journal, Vol. 19 (1), pp. 98-114

Kang, J. and R. M. Stulz (1997), *Why is there a Home Bias? An Analysis of Foreign Portfolio Equity Ownership in Japan*, Journal of Financial Economics, Vol. 46 (1), pp. 3-28

Kaniel, R., Li, D. and L. T. Starks (2003), *The Investor Recognition Hypothesis: International Evidence and Determinants*, Working Paper, University of Texas, Austin, U.S.

Karlsson, A. and L. L. Norden (2007), *Home Sweet Home: Home Bias and International Diversification among Individual Investors*, Journal of Banking and Finance, Vol. 31 (2), pp. 317-333

Ke, D., Ng, L. K. and Q. Wang (2010), *Home Bias in Foreign Investment Decisions*, Journal of International Business Studies, Vol. 41 (6), pp. 960-979

Kho, B. C., Stulz, R. M. and F. E. Warnock (2009), *Financial Globalization, Governance, and the Evolution of the Home Bias*, Journal of Accounting Research, Vol. 47 (2), pp. 597-635

Khurana, I. K. and P. N. Michas (2011), *Mandatory IFRS Adoption and the U.S. Home Bias*, Accounting Horizons, Vol. 25 (4), pp. 729-754

Kilka, M. and M. Weber (2000), *Home Bias in International Stock Return Expectations*, Journal of Psychology and Financial Markets, Vol. 1 (3-4), pp. 176-192

Kim, W. (2002), *Do Foreign Investors Perform Better than Locals? – Information Asymmetry, Investor Sophistication, and Market Liquidity*, Working Paper, KDI School of Public Policy and Management, Seoul, Korea

Kyrychenko, V. and P. Shum (2009), *Who Holds Foreign Stocks and Bonds? Characteristics of Active Investors in Foreign Securities*, Financial Services Review, Vol. 18 (1), pp. 1-21

Lane, P. R. and G. M. Milesi-Ferretti (2005), *The International Equity Holdings of Euro Area Investors*, Discussion Paper No. 104, The Institute for International Integration Studies, Trinity College, Dublin, Ireland

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and R. W. Vishny (1998), *Law and Finance*, Journal of Political Economy, Vol. 106 (6), pp. 1113-1155

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and R. W. Vishny (2000), *Investor Protection and Corporate Governance*, Journal of Financial Economics, Vol. 58 (1-2), pp. 3-27

Leuz, Ch., Lins, K. V. and F. E. Warnock (2010), *Do Foreigners Invest Less in Poorly Governed Firms?*, Review of Financial Studies, Vol. 23 (3), pp. 3245-3285

Levy, H. and M. Sarnat (1970), *International Diversification of Investment Portfolios*, American Economic Review, Vol. 60 (4), pp. 668-675

Lewis, K. (1999), *Trying to Explain Home Bias in Equities and Consumption*, Journal of Economic Literature, Vol. 37 (2), pp. 571-608

Li, K. (2004), *Confidence in the Familiar: An International Perspective*, Journal of Financial and Quantitative Analysis, Vol. 39 (1), pp. 47-68

Lintner, J. (1965), *The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets*, Review of Economics and Statistics, Vol. 47 (1), pp. 13-37

Luetje, T. and L. Menkhoff (2007), *What Drives Home Bias? Evidence from Fund Managers' Views*, International Journal of Finance and Economics, Vol. 12 (1), pp. 21-35

Malloy, C. J. (2005), *The Geography of Equity Analysis*, Journal of Finance, Vol. 60 (2), pp. 719-755

Markowitz, H. M. (1952), *Portfolio Selection*, Journal of Finance, Vol. 7 (1), pp. 77-91

Markowitz, H. M. (1959), *Portfolio Selection: Efficient Diversification of Investments*, John Wiley and Sons Inc., New York

Massa, M. and A. Simonov (2006), *Hedging, Familiarity and Portfolio Choice*, Review of Financial Studies, Vol. 19 (2), pp. 633-685

Merton, R. C. (1987), *A Simple Model of Capital Market Equilibrium with Incomplete Information*, Journal of Finance, Vol. 42 (3), pp. 483-510

Miffre, J. (2007), *Country-Specific ETFs: An Efficient Approach to Global Asset Allocation*, Journal of Asset Management, Vol. 8 (2), pp. 112-122

Mishra, A. V. (2008), *Australia's Equity Home Bias*, Australian Economic Papers, Vol. 47 (1), pp. 53-73

Morse, A. and S. Shive (2011), *Patriotism in your Portfolio*, Journal of Financial Markets, Vol. 14 (2), pp. 411-440

Obstfeld, M. and K. Rogoff (2000), *The Six Major Puzzles in International Macroeconomics: Is There a Common Cause?*, Working Paper No. 7777, National Bureau of Economic Research, Cambridge, Massachusetts, U.S.

Odier, P. and B. H. Solnik (1993), *Lessons for International Asset Allocation*, Financial Analysts Journal, Vol. 49 (2), pp. 63-77

Pagano, M., Röell, A. A. and J. Zechner (2002), *The Geography of Equity Listing: Why Do Companies List Abroad?*, Journal of Finance, Vol. 57 (6), pp. 2651-2694

Pastor, L. (2000), *Portfolio Selection and Asset Pricing Models*, Journal of Finance, Vol. 55 (1), pp. 179-223

Rowland, P. F. and L. L. Tesar (2004), *Multinationals and the Gains from International Diversification*, Review of Economic Dynamics, Vol. 7 (4), pp. 789-826

Schoenmaker, D. and T. Bosch (2008), *Is the Home Bias in Equities and Bonds Declining in Europe?*, Investment Management and Financial Innovations, Vol. 5 (4), pp. 90-102

Seasholes, M.S. and N. Zhu (2010), *Individual Investors and Local Bias*, Journal of Finance, Vol. 65 (5), pp. 1987-2010

Sendi, I. and M. Bellalah (2010), *The Equity Home Bias: Explanations and Financial Anomalies*, International Journal of Economics and Finance, Vol. 2 (2), pp.78-96

Sercu, P. and R. Vanpée (2007), *Home Bias in International Equity Portfolios: A Review*, FETEW Research Report AFI_0710, Faculty of Economics and Applied Economics, Katholieke Universiteit Leuven, Leuven, Belgium

Sharpe, W. F. (1964), *Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk*, Journal of Finance, Vol. 19 (3), pp. 425-442

Shiller, R. J., Kon-Ya, F. and Y. Tsutsui (1996), *Why Did the Nikkei Crash? Expanding the Scope of Expectations Data Collection*, Review of Economics and Statistics, Vol. 78 (1), pp. 156-164

Shima, K. and E. Gordon (2011), *IFRS and the Regulatory Environment: The Case of U.S. Investor Allocation Choice*, Journal of Accounting and Public Policy, Vol. 30 (5), pp. 481-500

Shukla, R. K. and G. B. van Inwegen (1995), *Do Locals Perform Better Than Foreigners? An Analysis of U.K. and U.S. Mutual Fund Managers*, Journal of Economics and Business, Vol. 47 (3), pp. 241-254

Solnik, B. H. (1974), *Why Not Diversify Internationally Rather Than Domestically?*, Financial Analysts Journal, Vol. 30 (4), pp. 48-54

Solnik, B. (2006), *Equity Home Bias and Regret: An International Equilibrium Model*, Working Paper, HEC School of Management, Paris, France

Strong, N. C. and X. Xu (2003), *Understanding the Equity Home Bias: Evidence from Survey Data*, Review of Economics and Statistics, Vol. 85 (2), pp. 307-312

Stulz, R. M. (1981), *On the Effects of Barriers to International Investment*, Journal of Finance, Vol. 36 (4), pp. 923-934

Stulz, R. M. (2005), *The Limits of Financial Globalization*, Journal of Finance, Vol. 60 (4), pp. 1595 - 1638

Tesar, L. L. and I. M. Werner (1995), *Home Bias and High Turnover*, Journal of International Money and Finance, Vol. 14 (4), pp. 467-492

Tesar, L. L. and I. M. Werner (1998), *The Internationalization of Securities Markets Since the 1987 Crash*, Brookings-Wharton Papers on Financial Services, Vol. 1, pp. 281-372

Thapa, C. and S. S. Poshakwale (2012), *Country-Specific Equity Market Characteristics and Foreign Equity Portfolio Allocations*, Journal of International Money and Finance, Vol. 31 (2), pp. 189-211

Thomas, C. P., Warnock, F. E. and J. Wongswan (2004), *The Performance of International Equity Portfolios*, International Finance Discussion Paper No. 817, Board of Governors of the Federal Reserve System

Tobin, J. (1958), *Liquidity Preference as Behavior Towards Risk*, Review of Economic Studies, Vol. 25 (2), pp. 65-86

Warnock, F. E. and M. Mason (2001), *The Geography of Capital Flows: What we Can Learn from Benchmark Surveys of Foreign Equity Holdings*, Emerging Markets Quarterly, Vol. 5 (1), pp. 15-29

Zhu, N. (2002), *The Local Bias of Individual Investors*, International Center for Finance Working Paper No. 02-30, School of Management, Yale University, New Haven, U.S.

Online References

Department of the U.S. Treasury and the Board of Governors of the Federal Reserve System (2011), Report on U.S. Holdings of Foreign Securities,

<http://treasury.gov/resource-center/data-chart-center/tic/Documents/shc2010r.pdf>

(last accessed July 23, 2012)

International Monetary Fund (2011), Coordinated Portfolio Investment Survey as of December 31, 2010, <http://cpis.imf.org> (last accessed July 23, 2012)

International Monetary Fund (2011), Economies Reporting CPIS Data,

http://cpis.imf.org/docs/misc/CPIS_Data.pdf (last accessed July 23, 2012)

International Monetary Fund (2011), Reported Portfolio Investment Assets by Economy of Nonresident Issuer: Equity Securities,

<http://elibrary-data.imf.org/Report.aspx?Report=9492637&Country=111>

(last accessed July 23, 2012)

Investment Company Institute (2012), Exchange Traded Fund Data June 2012,

www.ici.org/etf_resources/research/etfs_06_12 (last accessed July 26, 2012)

JP Morgan Chase (2008), Depositary Receipts Reference Guide,

www.adr.com/Home/LoadPDF?CMSID=88b09551120043cfac03554006845cb

(last accessed July 20, 2012)

New York Stock Exchange (2009), What You Should Know About Exchange Traded Funds, www.nyse.com/pdfs/ETFs7109.pdf, (last accessed July 18, 2012)

German Abstract

Die Globalisierung der letzten Jahrzehnte führte zu einer Deregulierung und Liberalisierung der internationalen Finanzmärkte, und zu einer intensiven Verflechtung der nationalen Volkswirtschaften. Damit einher erschlossen sich für Investoren zunehmend internationale Investitionsmöglichkeiten und –alternativen. Die Empirie zeigt jedoch, dass sowohl private als auch institutionelle Investoren weitaus überproportionaler am jeweiligen Heimatmarkt investieren als dies nach der grundlegenden Darstellung der Portfoliotheorie vorteilhaft wäre.

Ziel der vorliegenden Diplomarbeit ist es, dieses „Home Bias Phänomen“ - welches auch als „Puzzle der internationalen Finanzmärkte“ bezeichnet wird - näher zu erläutern, und dessen Entwicklung und aktuelle Ausprägung im internationalen Umfeld zu beschreiben. In der empirischen Literatur dominieren im Wesentlichen wichtige rationale Erklärungsansätze wie die Theorie über Informationsasymmetrien zwischen heimischen und ausländischen Investoren, sowie die Präferenz von Unternehmen in lokaler Nähe zum Investor. Offenbar spielen auch verhaltenswissenschaftliche Erklärungen, die psychologisch begründet werden, eine Rolle. Dazu zählen der relative Optimismus und ein höheres Selbstwertgefühl (Selbstüberschätzung) bei Entscheidungen über Investitionen am Heimatmarkt, das bevorzugte Investieren in bereits vertraute oder bekannte (nationale) Unternehmen, oder auch mögliche Treuegefühle zum Heimatland bzw. zu bestimmten Unternehmen. Selbst wahrgenommene höhere Kompetenz bei Finanzangelegenheiten wiederum hilft den Home Bias deutlich zu verringern.

Die umfassende Darstellung aller relevanten Theorien zeigt, dass kein Effekt groß genug ist den Home Bias in seiner vollständigen Ausprägung zu erklären. Vielmehr scheint der Home Bias das Resultat eines komplexeren Zusammenspiels mehrerer Faktoren zu sein als ursprünglich angenommen, bis dato lässt sich daher das Phänomen jedoch nicht eindeutig erklären.

English Abstract

Over the last few decades the ongoing globalization has led both to a deregulation and liberalization of international financial markets, and to a more intense interdependence of national economies. This development has also been accompanied by a rampant increase in international investment opportunities. However, empirical evidence shows a clear tendency of private as well as institutional investors to invest disproportionately more in their home market than internationally, thereby not fully capturing the postulated benefits of portfolio diversification.

This thesis aims to provide a clear definition of the home bias phenomenon – or so-called international finance puzzle – and to describe its evolution and current magnitude within international markets. In the empirical literature several important rational explanatory attempts have been put forward, like the theory of information asymmetries among national and foreign investors, or the preference for locally situated companies. Behavioral explanations based on psychological biases also seem to play an important role. These include investors' relative optimism and over-confident behavior regarding their domestic market investment decisions, the preferred investment in more familiar (domestic) companies, or investors' loyalty towards their home country or towards certain companies. In contrast, perceived higher competence in financial matters helps mitigate the home bias substantially.

A thorough examination of all significant theories shows that no single explanation can capture the full extent of the observed home bias. The evidence rather points to the home bias phenomenon being caused by a complex interplay of various factors, which hitherto cannot be unequivocally explained.

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Spanish: basic everyday and business knowledge
French: sound knowledge
Italian: basic knowledge
Latin