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Are investors really home-biased when investing at home?☆

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ABSTRACT

Investors who only invest in their domestic market are typically referred to as being home-biased. We refer to firm-level internationalization and call into question whether investing in domestic stock indices actually leads to home bias. We use three measures of firm-level internationalization based on percentages of foreign sales, employees in foreign countries, and foreign tax payments. We aggregate firm-level results to determine the degree of internationalization of German, French, UK and US stock indices. French and UK stock indices exhibit the largest degree of internationalization. The German index provides slightly less internationalization, whereas internationalization of the US index is lowest but nonetheless considerable. This means that investors who invest in their domestic market do not necessarily suffer from home bias. Instead, investing in domestic stock indices more likely prevents investors from a home bias instead of entrapping them to insufficient portfolios.

1. Introduction

International diversification of investment portfolios has drawn much attention in the academic literature and in the investment business with respect to both benefits of international diversification and so-called home-biased investment decisions. Investors could have enhanced the risk-return profile of their investment portfolio by internationally diversifying their investments despite recent findings of decreased international diversification benefits in particular during the last two decades due to increased market co-movement and stock return correlation resulting from increased market integration (e.g., Baele and Inghelbrecht, 2009; Christoffersen et al., 2012; Lewis and Lai, 2012; Eiling and Gerard, 2014). On the other hand, home bias, which portfolio theory defines as a larger than optimal portion of invested wealth in domestic assets, has shown to be a noteworthy phenomenon, in particular among retail investors (e.g., Oehler et al., 2008; Graham et al., 2009; Bekaert et al., 2014).[1] While approaches to estimate the degree of investors' home bias are typically based on modern portfolio theory

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[1] For an overview of explanations for home-biased investment behavior see, e.g., Oehler et al. (2007).

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developed by Markowitz (1952), retail investors will hardly be able to employ this approach for their investment decisions due to the complexity of the function to identify the optimal mean-variance portfolio and the number of parameters to be estimated as discussed by Ang (2014) who also points out the low performance of mean-variance weights.

Retail investors who choose to invest in domestic firms might do so because they assume they have superior information about these firms compared to foreign firms; this explanation is mostly associated with lower information costs for domestic than for foreign firms. Retail investors have easy access to annual reports of domestic firms in their mother tongue. We therefore assume that retail investors prefer information from annual reports of their domestic firms to concepts of modern portfolio theory. Our approach follows this idea and suggests to assess the international diversification with easily accessible data on firm characteristics.

Literature on firm-level internationalization shows that the activities of most domestic index constituents are not limited to local markets, including financing, product and labor markets (e.g., Sullivan, 1994; Hitt et al., 1997). In contrast, most of these firms follow international business strategies or strategies that focus on the respective economic areas (e.g., Europe/Eurozone or North America) or they structure their activities internationally, e.g., for tax optimization purposes (e.g., Lutz, 2012). In addition, firms follow international financing strategies via cross-listings on foreign stock exchanges (e.g., Lewis and Lai, 2012). Vitali et al. (2011) document that most transnational firms are part of an ownership network which is controlled by only a few financial institutions from around the globe as central and most influential shareholders. On the one hand, this control cluster might offset some of the potential diversification effects within the firms. On the other hand, the international control structure might provide internationalization effects by inducing international corporate governance approaches in the firms which would not be available with domestic shareholders. Given these findings, investments of retail investors focused on domestic stock indices might show a quite considerable degree of internationalization even if they are labeled as home-biased by modern portfolio theory.

Our contribution to the literature is twofold. First, we show to which degree allegedly domestic stock market indices and their constituents can be classified as being truly domestic. We focus on firm characteristics that are publicly available to retail investors in the firms' annual reports. By doing so, we add new insight to the discussion on whether investors who choose to invest in domestic indices should be considered home-biased. Second, we determine whether the different firm characteristics described in the annual reports provide the same picture of the firms' degree of internationalization. In contrast to naïve measures of international diversification (e.g. the location of firms' headquarters, firms' stock index membership, country of incorporation) which assign a firm to a single economy, we use firm characteristics that signal economically (in terms of diversification effects) more relevant information to retail investors. We are aware that more sophisticated approaches to international diversification based on elaborated versions of portfolio theory might exist. These approaches, however, are not readily accessible and understandable to retail investors. It is not our aim to quantify the impact of firm-level internationalization on investors' risk-return profile itself. Instead the aim of our paper is to prepare the ground for approaches helping investors to create internationally diversified portfolios with the information they can assess and understand. We therefore invite further research to analyze the performance of this approach in terms of the impact on the risk-return structure.

We analyze a unique hand-collected dataset containing firm characteristics of more than 300 companies. Specifically, we analyze index constituents' data for firms from four economies: Germany, France, the United Kingdom, and the United States. We categorize firm characteristics into three measures: Domestic and foreign sales as percentages of total sales, the structure of the workforce by determining the number of employees in domestic and foreign countries as percentages of the total workforce, and the tax structure by determining the amount of taxes paid in domestic and foreign countries as percentages of total taxes. Thus, we base our analysis on diversification within the index constituents' business activities instead of analyzing international index diversification that results from inclusion of foreign firms via cross-listings. Because the information used for our measures is easily accessible to retail investors, it might act as a signal for retail investors to assess international diversification of firms and indices. However, the data on our three measures also allow us to assess whether they signal similar information of the firms' degree of internationalization to retail investors.

Our results show that French and UK firms listed in their domestic stock market index, and therefore the entire indices, exhibit the largest degree of internationalization. The German index and its constituents provide slightly less internationalization, whereas internationalization of the US index and the listed US firms is on average the lowest but is nonetheless considerable. For German and French index constituents, a substantial portion of international activity appears to be related to Europe as the home continent economic area. We find that investors who choose to invest in a domestic stock market index in Germany, France, the UK, or the US do not necessarily follow a home-biased investment strategy. They invest in firms with strong proportions of foreign sales and tax payments and with high proportions of workforce being in foreign countries. The three measures provide a largely consistent picture of the firms' level of internationalization.

Our results have implications for retail investors and academics alike. Retail investors that invest in the domestic stock market indices are not necessarily home-biased. Instead, domestic stocks can provide a high degree of internationalization. Therefore, firm-level and index internationalization should be considered an explanatory factor in further research on e.g. (decreased) benefits from international portfolio diversification, financial market co-movement, and stock return correlation. In addition, the impact of potentially negative effects caused by home-biased investment decisions should be revisited in light of firm-level and index internationalization.