Inefficient Globalization of Finance: Evidence from Marketing-Oriented Overseas Expansions of Low-Skilled Mutual Fund Families

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Keywords: Globalization of finance; Cross-border capital flows; Mutual funds; Market efficiency

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Abstract

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Introduction

Financial liberalization and its associated cross-border capital flows are at the heart of international finance (Karolyi and Stulz, 2003). Economists and regulators, however, are widely divided over its policy implications. For instance, the former chairman of the U.S. Federal Reserve, Alan Greenspan, stated that the "globalization of finance" has patently contributed "to ever higher standards of living around the world".[1] Indeed, vast evidence shows that a market's opening to foreign investors can be beneficial to the local economy due to reduced cost of capital (Bekaert and Harvey, 2000), increased real investment (Henry, 2000), spurred growth (Bekaert, Harvey, and Lundblad, 2005, 2009), and a better global information process (Bae, Ozoguz, Tan, and Wirjanto, 2012). By contrast, others question whether the financial liberalization process has gone too far and harmed the global market in certain scenarios (e.g., Jotikasthira, Lundblad, and Ramadorai, 2012; Hau and Lai, 2016). Nobel laureate Joseph Stiglitz (2013) even argued that "the instability in cross-border capital flows has been particularly troublesome" for – though not limited to – emerging markets.[2] It is puzzling to see that the same cross-border capital flows trigger so drastically different opinions.

We contribute by proposing a very simple intuition that can shed light on this debate: drawing on a sample of the global mutual fund industry, we argue that all cross-border flows are not the same – and so are their influences. Particularly, the globalization of finance provides opportunities for some low-skill financial institutions (mutual fund companies in our study) to achieve product differentiation by launching products (funds) that track less-explored foreign equity market indices. These cross-border flows may not improve investor welfare or market efficiency; in fact, they may be harmful. In other words, we aim to explicitly identify the components of cross-border capital flows that could be harmful and separate them from those that are beneficial. A better understanding of the heterogeneous nature of capital flows can help reconcile opposing views on foreign capital flows.

Our intuition is built on two important strands of studies. The first recognizes that mutual funds, similar to non-financial companies, compete for investors' capital flows via prices (e.g., reduced mutual fund fees in Wahal and Wang, 2011) and/or product differentiation (e.g., in terms of the degree of active management in Cremers, Ferreira, Matos, and Starks, 2016). The second strand notes that, to the extent that investors often invest according to style strategies (e.g., Mullainathan, 2002; Barberis and Shleifer, 2003; Barberis, Shleifer, and Wurgler, 2005), index-linked investment plays an especially important role in our economy

[1] Remarks by Chairman Alan Greenspan at the 15th Annual Monetary Conference of the Cato Institute, Washington, D.C. October 14, 1997 (https://www.federalreserve.gov/boarddocs/speeches/1997/19971014.htm).
[2] The details of the article can be found at the following link : http://www.emergingmarkets.org/Article/3266187/JOSEPH-STIGLITZ-Government-intervention-is-desirable.html.

(Boyer, 2011; Wurgler, 2011). Based on these considerations, the globalization of finance may significantly alter the way global mutual fund companies compete. To see its influence, consider an example in which stocks in a country become investible to foreign investors due to financial liberalization. Existing indices tracking these stocks, which were previously available only to its local investors, now become investible to global investors.[3] Global mutual fund companies can use this opportunity to differentiate their products based on these "newly emerged" indices. In particular, they can launch new funds that trace such indices, marketing them as brand new products to global investors in order to attract their capital.

To illustrate this possibility, we plot the number of major stock market indices explored by the global mutual fund industry (i.e., traced by at least ten mutual funds) in Figure 1. This number increased drastically from 130 in 2000 to 440 in 2009, consistent with Wurgler's (2011) observation that the number of indices reported in *The Wall Street Journal* has grown exponentially in the last century. Although the global financial crisis has slowed down the trend, the overall growth is nonetheless impressive. Importantly, this growth is accompanied by a similar growth in both the number of funds and the assets under management, suggesting that foreign index-linked product differentiation could have been widely explored by the global mutual fund industry.

The effectiveness of product differentiation, however, attenuates when more similar products are produced—i.e., when more funds that track the same index are offered. This feature has several major implications. First, fund management companies adopting this competition strategy may want to explore new foreign indices that are relatively less explored by other global fund companies. We will refer to this incentive of launching new foreign funds in order to attract investors' capital as a *marketing incentive* and label new funds of this type *marketing-oriented expansions*. Second, due to lower entry barriers, the benefit of marketing a new fund could be less sustainable than that of the long-term performance generated by unreplaceable managerial skills (e.g., the ability to discover and process firm-specific information).

Based on these features, a separating equilibrium, which we refer to as the *low-skill expansion hypothesis*, may arise in which low-skill companies specialize in marketing-oriented strategies (and earn low economic rent), whereas high-skill companies focus on alpha strategies (and earn high profits).[4] A corollary here is that many *marketing-oriented* funds will be sold as "actively managed" as leeway to escape the direct competition of strict index replication. Such funds, however, are unlikely to deliver superior performance due to the low skill of their managing companies. The identification of low-skill cross-border

[3] Other reasons, such as development in the domestic industry, can also give rise to new indices available to global investors. Our analysis includes these cases.

[4] When a skill-based alpha strategy and foreign index-linked cross-border expansions involve different costs and entry barriers (such as reputation), mutual fund companies are likely to specialize one of them, but not both. Whether this separating equilibrium holds in practice is an empirical question that we will examine in later sections.

expansions paves the way to better understand the multifaceted market impact of foreign capital flows. In this scenario, an unintended consequence of the globalization of finance is to allow low-skill companies to survive, if not thrive, via marketing-oriented cross-border expansions, which implies that a significant amount of capital will be channelled to foreign markets by less-skilled fund companies. More capital flows of this type are likely to result in a lower degree of informational efficiency (because corresponding fund companies have relatively low information-processing skills) and lower liquidity (because the main goal is to compete for capital as opposed to trade). In brief, the capital flows associated with the cross-border expansion of actively managed low-skill fund companies for marketing purposes are unlikely to deliver the benefits of financial liberalization documented by the literature.

The alternative hypothesis (equilibrium) is that cross-border expansions may be driven precisely by high-skill companies because it is easy to generate alphas and improve investor welfare by trading stocks that are less explored by global mutual funds. We will call this prediction the *high-skill expansion hypothesis*. Another possibility is that cross-border expansion decisions are simply unrelated to skills, which we label the *irrelevance hypothesis*. Easy to see, the implications of these two scenarios are very different from those of the *low-skill expansion hypothesis*. Both investor welfare and market efficiency are likely to increase in the case of the *high-skill expansion hypothesis* and do not decrease in the case of the *irrelevance hypothesis*.[5] It is therefore crucial to empirically examine these hypotheses in order to properly recognize the influence of cross-border capital flows.

We test these competing hypotheses by focusing on the complete sample of actively managed global open-end mutual funds over the period from 2001 to 2012. We focus on active funds because the majority of foreign funds (i.e., funds that are domiciled in one country but invest in another) are active and because skill-related hypotheses can be better tested by using active funds.

Our empirical analysis consists of three steps. In the first step, we document that mutual fund companies (or, interchangeably, mutual fund families) engage in marketing-oriented cross-border expansion. To do so, we utilize country-level competition conditions related to investible indices to define the attractiveness of countries in terms of marketing incentives. More specifically, we define *the number of unexplored indices by the foreign mutual fund companies* of a country (abbreviated as *the number of unexplored indices* when there is no confusion) as the total number of indices invested by all mutual funds minus the number of indices invested by foreign funds in the country. As the number of unexplored indices increases, the

[5] According to the *irrelevance hypothesis*, companies conducting cross-border expansions are just as skilful as others in the global mutual fund industry. Financial liberalization associated with this type of cross-border expansion benefit – at least in terms of liquidity and market integration – because more global institutional investors are introduced into the local market. Meanwhile, because global investors are more familiar with global information than local information, we should expect market efficiency to increase with respect to the global market (e.g., Bae, Ozoguz, Tan, and Wirjanto, 2012).

country becomes more attractive in making marketing-oriented cross-border expansions because more "new products" can potentially be launched.

We find that, in general, the cross-border expansion policy of mutual fund families is positively related to the number of unexplored indices in target countries. Among all the foreign countries into which global fund companies can potentially expand, one additional unexplored index in a particular country increases the probability for certain fund companies to launch a new product there by 20%. Hence, the globalization of finance offers the opportunity for fund families to launch new products targeting less-explored foreign markets.

To further understand how competition can shape marketing incentives, we interact unexplored indices with the home-market competition of fund companies proxied by the degree of asset concentration among all domestic funds or fund families in the domicile country of these companies. We find that more severe home country competition is typically associated with more aggressive marketing-oriented overseas expansions, confirming that the latter can be motivated by competition-related considerations, such as product differentiation. Our results are robust when we control for the potential motivation for fund companies to use cross-border expansion to enhance diversification (later tests will actually show that such cross-border expansion typically *reduce* diversification).

In the second step of our analysis, we investigate the performance and investor welfare of marketing-oriented cross-border expansions. We first examine the five-year (Fama-French-Carhart four-factor adjusted) performance of these expansions after their inception and find it to be negatively associated with the number of unexplored indices of the target country at inception. In other words, marketing-oriented new funds chasing unexplored indices are generally associated with lower performance. A one-standard-deviation increase in the number of unexplored indices of the target country (or its relative rank among all potential investing countries) reduces the out-of-sample five-year performance of the newly launched funds by 1.94% (1.26%) per year. This observation lends initial support to the *low-skill expansion hypothesis*, as opposed to the other two competing hypotheses.

Given that mutual funds are arguably better at processing local (domestic) information, a direct proxy for the skills of fund companies is the performance of their affiliated domestic funds. Hence, to further test whether marketing-oriented cross-border expansion is a dominant strategy of low-skill fund companies, we link the degree of *marketing incentive* of a fund company to its domestic fund performance. We define the former as the *average* number of unexplored indices for *all* its cross-border expansions made in each year—or the rank of the average number among all companies. A higher average number reveals a higher incentive for the fund company to strategically pursue marketing-oriented cross-border expansions in the rolling period. We measure domestic fund performance as the out-of-sample performance of the domestic funds

(weighted by total net assets) of the same fund company. We find a significant relationship: a one-standard-deviation increase in fund companies' marketing incentive in terms of the average number (rank) is associated with a lower four-factor-adjusted performance of its domestic funds by 0.21% (0.23%), confirming that marketing incentives are associated with low skills. Performance difference (four-factor-adjusted) between fund families with low and high marketing incentives is approximately 2.8% per year.

As a robustness check, we apply this affiliated-fund test to all U.S. domiciled fund families that make cross-border investment. This subsample is important because all unobservable characteristics of family domicile country are automatically controlled for. Moreover, the performance of the domestic funds offered by these families (i.e., domestic U.S. mutual funds) can also be more precisely measured by the Fama-French-Carhart four-factor model. We reach the same conclusion that fund families with higher marketing incentives in this important subsample have lower skills. As another robustness check, we focus on the performance of existing affiliated foreign funds (other than newly launched cross-border funds) and again find that fund families with high marketing incentives underperform.

Our performance tests jointly suggest that marketing-oriented cross-border expansions are likely to be made by low-skill fund companies, which deliver lower performance to investors. A remaining issue in terms of investor welfare is whether low performance can be compensated by a higher degree of international diversification. For instance, these cross-border expansions may reduce the average correlation across funds offered by the same family, thereby allowing family investors to enjoy more diversification benefits. The data, however, tell a different story: a one-standard-deviation increase in the number (rank) of unexplored indices is associated with an *increase* in the five-year return and style-adjusted return correlation between the newly launched fund and those of existing affiliated funds by 1.15% or 1.86% (1.24% and 1.45%). Though the economic magnitude is not huge, the implication is clear: if anything, marketing-oriented expansions *reduce* the degree of diversification that investors can enjoy. We also verify that these expansions do not provide a hedge against crisis (i.e., to deliver better performance therein).

Our third and last step of analysis investigates the market influence of marketing-oriented cross-border expansions. We focus mainly on three dimensions that are particularly important for the market influence of cross-border capital flows: informational efficiency, liquidity, and market integration. In terms of informational efficiency, although foreign investors are typically believed to have less local information, Bae, Ozoguz, Tan, and Wirjanto (2012) show that foreign capital can nonetheless benefit emerging markets by better processing global information. To test whether marketing-oriented capital flows are associated with this benefit, we examine the relation between price delay to global market information (the main variable of interest in Bae, Ozoguz, Tan, and Wirjanto 2012) and the ownership of marketing-oriented fund

families (i.e., families whose marketing incentives are among the top tercile – our results are robust to this threshold).

We find that more ownership of marketing-oriented foreign funds is associated with *greater* price delay to global market information. Furthermore, price delay to global market information is typically enhanced after new marketing-oriented cross-border expansion. Meanwhile, high ownership of marketing-oriented foreign funds is associated with greater price delay to domestic market information. Jointly, therefore, marketing-oriented foreign capital flows are associated with lower informational efficiency both in terms of global information and in terms of local information.

It is especially striking to see that the influence of marketing-oriented foreign capital flows on global information processing is exactly the opposite of that of general foreign capital flows as reported in the literature. To reconcile our finding with the literature, we conduct additional tests (reported in our Internet Appendix) and find that the impact of active cross-border capital flows that are the least related to marketing incentives (i.e., non-marketing funds) is indeed beneficial in processing global information. A one-standard-deviation increase in the ownership of marketing-oriented foreign funds (non-marketing funds) is associated with a 1.33% greater (0.84% lower) price delay with respect to global market information for all countries, where both numbers are scaled by the standard deviation of price delay and a 3.63% greater (2.37% lower) price delay for emerging markets. In this regard, marketing-oriented low-skilled foreign capital flows could reduce 6% price efficiency compared to beneficial capital flows in emerging markets.

If low-skilled fund companies do not improve information processing, maybe they help by supplying liquidity to the local market. To examine this potential benefit, we link the ownership of active marketing-oriented foreign funds to Amihud *illiquidity* (Amihud 2002) and the proportion of zero daily returns in a month (Lesmond, Ogden, and Trzcinka, 1999), two leading indicators of liquidity in international finance. We find little evidence of a beneficial role. By contrast, marketing-oriented foreign ownership reduces liquidity, if anything. Moreover, consistent with the general role of international investors as reported in Karolyi, Lee, and van Dijk (2012), we find that this type of foreign capital flows increase commonality in liquidity. Jointly, these results suggest that, in terms of liquidity, marketing-oriented foreign capital flows not only harm the general liquidity condition but also enhance contagion risk by boosting commonality in liquidity in the local economy.

Finally, we examine the potential influence of marketing-oriented foreign capital flows on market integration. In line with the literature (e.g., Griffin, 2002; Fama and French, 2012; Hou, Karolyi, and Kho, 2011; Karolyi and Wu, 2014; Massa and Schumacher, 2015), we define market integration according to the absolute value of the intercept and the adjusted R-square of a regression of stock returns on alternative factor models. As the absolute value of the intercept decreases and the adjusted R-square increases, the

degree of integration increases. We find that marketing-oriented foreign capital flows do not significantly increase the degree of market integration either.

Overall, we find compelling evidence that marketing-oriented cross-border capital flows are likely to be conducted by low-skill mutual fund companies, which result in reduced investor welfare and market efficiency. Our results therefore indicate that different types of cross-border capital flows may have drastically different impacts on the global market. These conclusions are robust to a list of alternative tests, such as excluding closet-index funds (Cremers, Ferreira, Matos, and Starks, 2016) from the sample of active funds, using different risk factors (e.g., global and domestic factors) to compute performance, and replacing after-fee performance with before-fee performance in spirit of Berk and Green (2004).

We contribute to several strands of the literature. To the best of our knowledge, we are the first to analyze heterogeneity among cross-border capital flows in terms of foreign index-lined marketing incentives. In doing so, we contribute to the literature on financial liberalization (e.g., Bekaert and Harvey, 2000; Henry, 2000; Karolyi and Stulz, 2003; Bekaert, Harvey, and Lundblad, 2005, 2009; Bae, Ozoguz, Tan, and Wirjanto, 2012; Jotikasthira, Lundblad, and Ramadorai, 2012; Bartram, Griffin, Lim, and Ng, 2015; Hau and Lai, 2016) by laying out a potential framework to understand the subtle impacts of cross-border capital flows. Our findings have important normative implications that optimal regulations on cross-border capital flows, instead of relying on one-size-fits-all policies, should cater to the heterogeneous nature of these flows.

We also contribute to the literature on competition in the mutual fund literature. While the analysis of competition is very important, our understanding of its role in the mutual fund industry remains rather limited, focusing mostly on its influences on fees (e.g., Wahal and Wang, 2011; Khorana and Servaes, 2004), product differentiation in terms of active management (Cremers, Ferreira, Matos, and Starks, 2016), and organizational structure (Massa, 2003).[6] We extend the literature by demonstrating that the globalization of finance alters the way global mutual fund companies compete with each other. In particular, product differentiation in terms of foreign indices-linked cross-border expansions becomes feasible, which will also profoundly affect the efficiency of the global market.

Our study is also related to the literature on the market implications of investor demand in general and index-related style strategies in particular (e.g., Merton, 1987; Coval and Moskowitz, 1999, 2001; Grinblatt

[6] Researchers also debate the degree of competitiveness in the mutual fund industry. Coates and Hubbard (2007) use the number of class action lawsuits against mutual funds to argue that mutual fund advisory fees are not what a competitive market would suggest. Berk and Green (2004) argue that mutual fund managers are able to grasp the economic rent of performance. Gil-Bazo and Ruiz-Verdú (2009) argue against competition, showing that the fund industry has catered to performance-insensitive investors, exploiting them by charging high fees. Hortaçsu and Syverson (2004) show that a non-competitive model of investor behavior based on search costs helps to explain price (i.e., fee) setting in the mutual fund industry.

and Keloharju, 2001a and 2001b; Shapiro, 2002; Mullainathan, 2002; Barberis and Shleifer, 2003; Barberis, Shleifer and Wurgler, 2005; Boyer, 2011; Wurgler, 2011). We extend the evidence on style investment to an international setup. Indeed, our finding that marketing-oriented cross-border expansions are associated with both lower performance and low diversification benefits suggests that investors are heavily influenced by styles or categories related to foreign equity market indices when making investment decisions.

2. Data and Main Variables

In this section, we describe our data and how we construct the main variables used in the analysis.

A. Data Sources

Our data are drawn from different sources. The main database is the Morningstar mutual fund database, which reports monthly total returns for global mutual funds. Morningstar International has a complete coverage of open-end mutual funds worldwide beginning in the early 1990s. The database is survivorship bias-free, as it includes data on both active and defunct funds. The mutual fund holdings data are from the Factset/Lionshares database. The Factset/Lionshares holdings data on international funds are sparse before 2001, so our sample is restricted to the 2001–2012 period. We match the database to the Morningstar mutual fund database. From Morningstar, we obtain additional control variables, such as management expenses, fund total net assets (TNA), fund turnover, etc. We consolidate multiple share classes into portfolios by adding share class net assets together and by value weighting share class returns, fees and turnover ratios based on share class total net assets (TNA). More specifically, to compute returns, we obtain fund total returns net of fees. When a portfolio has multiple share classes, we compute its total return as the total net asset (TNA)-weighted return of all share classes of the portfolio, where TNA values are one-month lagged. All prices have been converted to U.S. Dollars.

We require funds to follow one of the major global equity indices – i.e., indices that are followed by at least ten funds – as their primary benchmark.[7] Information about fund benchmarks comes from Morningstar ("Prospectus Primary Benchmark"). Moreover, because we must estimate fund factor loadings based on past fund returns, we require funds to have at least two years of reported returns.

The firm-level stock market data are drawn from Datastream for non-U.S. stocks and CRSP for U.S. stocks. The final sample includes 9,754 actively managed equity mutual funds (both active and dead funds) and 1,899 mutual fund families in 37 countries. Most funds come from developed countries. Among them,

[7] This request works only against us in finding significant results for marketing-oriented cross-border expansions, because some minor indices can be created for marketing purposes. The latter effect of index creation, however, goes beyond the scope of the current paper.

U.S. funds represent 75% of the sample in terms of TNA but only 37% of the number of funds. Interestingly, a total number of 1,154 mutual fund families (or more than 60% of all families) launched new active funds outside their domicile countries during our sample period. This observation highlights the importance of the globalization of finance for the global mutual fund industry.

To identify whether a fund is a pure index fund or an actively managed fund, we obtain information on index funds from Morningstar ("Index Funds" from "Open End Funds Universe"). Our tests focus on active funds for two reasons. On one hand, even low-skilled families are likely to label their marketing-oriented funds active because being active helps them to avoid direct competition related to index replication. Indeed, consistent with Cremers, Ferreira, Matos, Starks' (2016) observation that active funds outnumber explicit index funds by almost eight times in the global market, more than 90% of marketing-oriented cross-border expansions are self-labelled "active". On the other hand, given that we study market efficiency, it is also conceptually appealing to focus on actively managed funds (than pure index funds), because active funds, by investor expectation, are supposed to process information. Hence, we focus mostly on active funds to understand the market incentives of families and the market influence of the subsequent marketing-oriented cross-border capital flows.[8]

Of course, the entire sample of all funds can still be important for tests on family performance. Consider, for instance, a case in which a family's actively managed funds deliver low performance. Although this observation is informative, we cannot yet directly conclude that the family is of low skill because the family may strategically use active funds to subsidize their index funds. Hence, in order to study fund family skills, in Internet Appendix, we will provide additional evidence on performance for all affiliated funds of the same family.

B. Main Variables Related to Marketing Incentives

The main independent variable for exploring the overseas expansions of fund families is the number of indices unexplored by foreign mutual funds in a particular targeting country (*Num_UIT*). More explicitly, we define this variable as the total number of indices minus the number of indices invested by foreign funds in the country at any given time. A higher number indicates that the country is more attractive in terms of product differentiation and marketing incentives. The identification of the major equity indices in the global market in each country comes from Morningstar 'Primary Prospectus Benchmark ID'. If the 'Primary Prospectus Benchmark ID' is missing, we use the term 'Primary Prospectus Benchmark'. For each index,

[8] Robustness tests in the Internet Appendix show that excluding closet indexing funds from active funds does not change our results, which is not surprising, as Cremers, Ferreira, Matos, and Starks (2016) show that the assets of truly active funds almost triple those of closet indexing funds.

a domicile country is assigned on the basis of the market in which the majority of the stocks included in the index are traded—i.e., the country in which its portfolio holding has the largest market value—and a foreign fund is defined as a fund whose domicile country is different from that of the index.

A similar but alternative measure is to normalize the number of unexplored indices in each country based on cross-country ranks, which we label "rank of unexplored indices" (*Rank_UIT*). This variable is constructed as follows. We first rank the number of unexplored indices across countries, and we then normalize the ranks to follow a [0, 1] uniform distribution. This variable aims to alleviate any concerns related to the skewed distribution of *Num_UIT*, our main independent variable.

To the extent that the number and rank of unexplored indices measures the marketing attractiveness of a particular country, we can also measure the marketing incentive of a particular fund company based on its revealed preferences – i.e., the *average* number of unexplored indices for *all* its cross-border expansions. A higher average number reveals a higher incentive for the fund company to strategically pursue marketing-oriented cross-border expansions in the rolling window. In particular, we define the *family-average number of unexplored indices*, *Fam_Num_UIT*, as the average number of unexplored indices of the target countries for all cross-border funds launched by the same family in each year. Similarly, we can define the *family-average rank of unexplored indices*, or *Fam_Num_UIT*, as the average rank of unexplored indices of the target countries of all cross-border funds launched by the same family.

Based on the cross-sectional distribution of families' market incentives, we can define a family as *Market-oriented* in any given year when its *Fam_Num_UIT* or *Fam_Rank_UIT* belongs to the top tercile of all families in the same domicile country. This definition will be used when we examine, for instance, the influence of marketing-oriented ownership on price efficiency. Note that our results are in general robust to the threshold used to define market-oriented families. We then define two variables on the active ownership of *Marketing-oriented* families. More specifically, *MktingForOwnAll* refers to the aggregate ownership of all foreign funds offered by marketing-oriented families, and *MktingForOwnNew* refers to the new ownership created by marketing-oriented cross-border expansions of the concurrent year.

Since the marketing incentive of going abroad may be largely related to, if not originating from, competition in the home market (i.e., domicile country) of a fund family, we construct two variables to describe the degree of competition in a family's home market. In particular, we compute the degree of concentration, *HHI_Dom_Fund*, as the Herfindahl-Hirschman index for all funds domiciled in country C in month m: $HHI\_Dom\_Fund_{C,m} = \sum_{f \in C} \left(\frac{TNA_{f,m}}{\sum_{f \in C} TNA_{f,m}} \right)^2$, where $TNA_{f,m}$ refers to the total net assets of fund f in month m, and fund f has country C as its domicile country. A higher concentration implies a lower degree of competition among funds. In a similar manner, we proxy for family-level competition by

constructing a variable, *HHI_Dom_Fam*, that measures the degree of concentration for all family TNAs in a country. We also construct a proxy for the competition in the target country, *HHI_Target*, which measures the degree of concentration for all fund TNAs in the target country.

We also control for a list of country variables that could affect the marketing incentives of fund companies, including *Num_ID*, defined as the total number of indices in the domicile country, *Log (Distance)*, defined as the logarithm of the geographical distance between the target and the domicile country, *Stock Market Turnover*, defined as the total value of shares traded during the year divided by the average market capitalization, *Stock Market/GDP*, defined as the stock market capitalization divided by nominal GDP, *Private Bond Market/GDP*, defined as the domestic credit value to private sector divided by nominal GDP. Appendix A provides a detailed definition of each variable.

C. Variables on Fund Performance and Investor Welfare

We now explain our measures of fund/family performance as well as other characteristics. For a new cross-border expansion, we measure its return, labelled *New Fund Return*, as its average monthly return over the five-year period after the inception, and risk-adjusted performance, labelled *New Fund 4-Factor-adjusted Return*, as Fama-French-Carhart four factor-adjusted fund performance over the same period. Risk adjustment is computed as the realized fund returns minus the product between the fund's four-factor betas and the realized four-factor returns in a given month. The four Fama-French-Carhart (FFC) factors (market, size, book-to-market, and momentum) are measured in the target country in which the new fund aims to invest. The betas of the fund are estimated as the exposures of the fund to the relevant risk factors with a five-year estimation period.

Next, we measure the performance for affiliated domestic funds of a family, where by domestic we mean funds investing in the family's domicile country. We define *Family Domestic Return* as (one-month lagged) TNA-weighted average return of all domestic funds within the same family. We define *Family Domestic 4-Factor-adjusted Return* as TNA-weighted Fama-French-Carhart four-domestic-factor adjusted performance of each fund. The performance of all the affiliated foreign funds of a family, where by foreign we mean funds investing in countries that differ from the family's domicile country, is computed in a similar manner (we exclude the newly launched foreign funds, whose impact is already captured by *New Fund Return*). That is, we compute *Family Foreign Return* as the fund TNA-weighted return of all foreign funds within the same family and *Family Foreign 4-Factor-adjusted Return* as TNA-weighted four international factors (market, size, book-to-market, and momentum) adjusted return. The performance of the affiliated domestic and foreign funds of a family is measured over the five-year period after the cross-border expansion, and later, we relate the performance to the marketing incentives of fund companies.

In robustness checks, we also compute *8-Factor-adjusted Return* for foreign funds (i.e., newly launched foreign funds and existing foreign funds of a fund family), including four domestic FFC factors and four foreign factors that are the value-weighted average of four domestic factors in all other countries. Hence, for newly launched foreign funds, we have *New Fund 8-Factor-adjusted Return*; for all foreign funds of a family, we also have *Family Foreign 8-Factor-adjusted Return*. While thus far we have focused on the net return delivered to mutual fund investors after all fees and expenses, we also consider gross-of-fee performance. Gross-of-fee fund return is computed as the fund total return plus one-twelfth of the annualized expense ratio, and gross-of-fee family domestic (foreign) return is computed as (one-month lagged) TNA-weighted gross-of-fee return of all its domestic (foreign) mutual funds. The gross-of-fee returns are further adjusted by a Fama-French-Carhart four-factor model. Our results are robust to these additional performance measures.

An important alternative motivation for fund expansion is international diversification: fund companies may use cross-border expansion to enhance diversification when their existing products are more closely correlated with each other (*Within Family Correlation*) or with those offered by other companies (*Outside Family Correlation*). Accordingly, we follow Elton, Gruber, and Green (2007) and define the within-family correlation as $Within\ Family\ Corr_{F,t} = \frac{1}{N_t}\sum_{i\in F, j\in F} Corr(R_{i,m,t}, R_{j,m,t})$, where $R_{i,m,t}$ and $R_{j,m,t}$ refer to the monthly return of funds i and j in month m of year t, both funds are affiliated with family F, and N_t refers to the number of fund pairs included in the family. Similarly, we define the *Outside Family Correlation* as $Outside\ Family\ Corr_{F,t} = \frac{1}{N_t}\sum_{i\in F, j\notin F} Corr(R_{i,m,t}, R_{j,m,t})$, where $R_{i,m,t}$ and $R_{j,m,t}$ refer to the monthly return of funds i and j in month m of year t, with fund i affiliated with family F and fund j outside family F but in the same domicile country, and N_t refers to the total number of fund pairs, following Elton, Gruber, and Green (2007).

Our later tests examine not only performance but also the *ex post* diversification benefit that marketing-oriented cross-border expansions may help investors to achieve. We consider two such variables. The first variable, *New Fund Correlation Within Family*, is the return correlation or style-adjusted return correlation between the newly launched fund and those of existing affiliated funds managed by the same mutual fund family over the five-year period after its inception. The second, *New Fund Correlation Outside Family*, is defined similarly as the return correlation between a newly launched fund and all other existing funds outside the mutual fund family but in the same domicile country.

Family-level control variables include *HHI_Family*, defined as the Herfindahl-Hirschman index of the degree of concentration of the family in its funds; *Log (Family TNA)*, defined as the logarithm of family total net assets (TNA); *Expense Ratio*, defined as the family expense ratio computed as the fund TNA-

weighted annualized expense ratio of all funds within the family; *Family Turnover*, defined as the fund TNA-weighted turnover of all funds within the family; *Log (Family Age)*, defined as the logarithm of family age, where family age is computed as the fund TNA-weighted number of operational months since inception of all funds within the family; *Family Return*, defined as the fund TNA-weighted return of all funds within the family, where the TNA values are one-month lagged; and *Family Flow*, defined as the percentage flow of the mutual fund family.

D. Variables on Market Efficiency

Finally, we move on to stock-level variables. We first measure three types of market influences that marketing-oriented cross-border capital flows can have: price efficacy, liquidity, and market integration. Price efficiency is measured by price delay with respect to global or local market information. For instance, price delay to the global market is defined as

$$Delay\_Global_{i,t} = 1 - \frac{R^2_{restricted,i,t}}{R^2_{unrestricted,i,t}}, \quad (1)$$

where $R^2_{restricted,i,t}$ and $R^2_{unrestricted,i,t}$ refer to the R-square from restricted and unrestricted market models estimated using weekly returns in each year t. Restricted model (RM) and unrestricted model (UM) are defined, respectively, as follows:

$$\text{RM: } R_{i,w,t} = \alpha_{i,t} + \delta_{i,0,t} R_{g,w,t} + \sum_{k=0}^{3} \gamma_{i,k,t} R_{l,w-k,t} + e_{i,w,t}, \quad (2A)$$

$$\text{UM: } R_{i,w,t} = \alpha_{i,t} + \sum_{k=0}^{3} \delta_{i,k,t} R_{g,w-k,t} + \sum_{k=0}^{3} \gamma_{i,k,t} R_{l,w-k,t} + e_{i,w,t}, \quad (2B)$$

where $R_{i,w,t}$ refers to the accumulated return of stock i in week w of year t, and $R_{g,w-k,t}$ and $R_{l,w-k,t}$ refer to the contemporaneous and lagged returns on the value-weighted world market portfolio and the local market portfolio, following Hou and Moskowitz (2005), and Bae, Ozoguz, Tan, and Wirjanto (2012). Price delay to the domestic market, $Delay\_Local_{i,t}$, is defined in a similar manner when the coefficients of the lagged local market returns are set equal to zero in the restricted model (Equation (2A)).

We define illiquidity as the Amihud (2002) illiquidity and the proportion of zero daily returns (Lesmond, Ogden, and Trzcinka, 1999) and label them *Log(Amihud)* and *%Zero*, respectively. We define the commonality in liquidity for stock i in month m as follows:

$$\widehat{\omega}^{Liq}_{i,m,d} = \alpha^{Liq}_{i,m} + \sum_{j=-1}^{1} b^{Liq}_{i,m,j} \widehat{\omega}^{Liq}_{M,m,d+j} + \varepsilon^{Liq}_{i,m,d}, \quad (3)$$

where $\omega^{Liq}_{i,m,d}$ is the residual from the following time-series regressions: $Liq_{i,m,d} = \alpha^{Liq}_{i,m} Liq_{i,m,d-1} + \sum_{\tau=1}^{5} \beta^{Liq}_{i,m,\tau} D_\tau + \gamma^{Liq}_{i,m} HOLI_{m,d} + \omega^{Liq}_{i,m,d}$, where $Liq_{i,m,d}$ is the Amihud liquidity proxy for stock i on day d of month m, defined as $-\log(1 + Illiq_{i,m,d})$, with $Illiq_{i,m,d} = |R_{i,m,d}|/(P_{i,m,d} \times N_{i,m,d})$, $|R_{i,m,d}|$ is the absolute value of return of stock i on day d of month m, $P_{i,m,d}$ is the daily closing price of stock i, $N_{i,m,d}$

is the number of shares of stock i traded during day d, and $HOLI_{t,d}$ is a dummy for trading days around non-weekend holidays. $\widehat{\omega}^{Liq}_{M,m,d+j}$ is the market value (at the end of previous year) weighted average of the residuals for all stocks. The R-square ($R^2_{i,m}$) from the regression measures the commonality in liquidity for stock i of month m. We use the logistic transformation of the R-square measures to proxy for liquidity co-movement, i.e., $\ln\left(\frac{R^2_{i,m}}{1-R^2_{i,m}}\right)$, following Karolyi, Lee, and van Dijk (2012).

In line with the international asset pricing literature (e.g., Griffin (2002), Fama and French (2012), Hou, Karolyi, and Kho (2011), Karolyi and Wu (2014), Massa and Schumacher (2015)), we define market integration as the absolute value of the intercept (i.e., |*Intercept*|) and the adjusted R-square of a regression of stock returns on alternative factor models (labelled *Co-movement*). We consider integration with respect to domestic factors (market, size, book-to-market and momentum) and integration with respect to foreign factors (value-weighted four factors excluding the domestic country).

Stock-level control variables include the following: *Log(Stock Size)*, defined as the logarithm of the market value of the stock; *Turnover*, defined as the annual turnover ratio of the stock; *Log(Net Income)*, defined as the logarithm of its net income; *Log(Sales)*, defined as the logarithm of its sales; *Log(Total Assets)*, defined as the logarithm of its total assets; *Stock Return*, defined as the monthly stock return as reported in Datastream/Worldscope; *Domestic IO*, defined as the domestic mutual fund ownership; and *Foreign IO*, defined as the foreign mutual fund ownership. Among the stock variables, we consider alternative measures of market efficiency that we will define in the last section of the paper.

E. Summary Statistics

We now report the summary statistics in Table 1. Panel A reports the mean, median, standard deviation, and the quantile distribution of the number and rank of unexplored indices at the country level, as well as the family level, monthly fund and family return, and other annual family and country characteristics. The sample consists of all mutual fund families with the foreign expansion of active equity mutual funds over the 2001−2012 period. Summary statistics for the full sample including index funds are largely similar, thanks to the popularity of active funds in cross-border expansions (we tabulate the summary statistics for the full sample in Table IA1 in the Internet Appendix). Panel B reports similar statistics for stock-level variables and characteristics. Panel C reports the correlation matrix of the main dependent and independent variables.

We see that the marketing attractiveness of countries varies drastically in the sample. The number of unexplored indices ranges from zero, when the market is well explored by global investors because all indices are covered by some foreign fund families, to 21 at the 90% quantile, when the market provides

plenty of opportunities for foreign investors to explore. Likewise, the marketing incentives of global mutual fund families also vary substantially, ranging from zero to 21 at the 90% quantile, suggesting that some families are indeed specialized in marketing-oriented cross-border expansions. In contrast, the correlation between price efficiency with respect to global information is negatively correlated with ownership of active marketing-oriented funds. Moreover, it is also negatively correlated with the new ownership created by newly launched active marketing-oriented funds.

These observations are in general consistent with the low-skill expansion hypotheses. Of course, it is difficult to conclude from these summary statistics that marketing-oriented expansions are associated with low-skilled families. We therefore move on to multivariate regressions to formally establish this key relationship.

3. Do Families Make Marketing-Oriented Cross-Border Expansions?

In this section, we first examine the incentives of cross-border expansions. We then investigate the relationship between marketing incentives and family skill. Finally, we study investor welfare in terms of diversification benefits.

A. The Decision to Expand to Overseas Markets

We begin by examining the incentives of mutual fund family foreign expansion. Therefore, we relate the expansion policy of the mutual fund family to the market attractiveness of the specific country. We estimate the following annual logistic regression:

$$Expansion_{F,C,t} = \alpha + \beta Num\_UIT_{C,t-1} + \gamma M_{F,C,t-1} + e_{F,C,t}, \quad (4)$$

where $Expansion_{F,C,t}$ refers to a dummy variable that equals one if the mutual fund family F begins a new foreign fund in target country C in year t and zero otherwise, while $Num\_UIT_{C,t-1}$ refers to the number of indices unexplored by foreign mutual funds in target country C. The vector M stacks all the other family and target country control variables, including the Herfindahl index in the domicile country, target country and within fund family, return correlation within and outside family, number of indices in the domicile country, Log(Family TNA), Expense Ratio, Family Turnover, Log(Family Age), Family Return, Family Flow, Log(Distance), Stock Market Turnover, Stock Market/GDP, and Private Bond Market/GDP. We focus on active fund expansions, include year fixed effects and cluster the standard errors at the family level.

We report the results in Table 2. We find that the foreign expansion policy of mutual fund families is positively related to the number of unexplored indices in the target country; this holds across all

specifications. The economic effect is also sizable: among all potential foreign countries, an increase of one unexplored index increases the probability of entering a particular country by 20% (Model 3). This compares to a 4% unconditional probability.

To further understand how competition can shape marketing incentives, we interact unexplored indices with the home-market competition of fund or fund companies. We find that more severe home-country competition, as proxied by lower values of concentration, is typically associated with more aggressive marketing-oriented overseas expansions. Indeed, a one-standard-deviation increase in competition will increase the sensitivity between cross-border expansion and unexplored indices by 14% (scaled by the average sensitivity). This result and the above result confirm that cross-border expansions can indeed be motivated by product differentiation considerations with respect to home market competition.

Among the other variables, family expansion is negatively related to *within family return correlation*. This (negative) relationship is inconsistent with the idea that diversification is an important motivation for foreign expansions, because we should expect families with low existing diversification (i.e., when existing funds are more correlated with each other) to expand more to overseas markets in order to allow investors to benefit from international diversification. Next, we see that expansions are positively related to *outside family correlation*. This relationship is in general consistent with the idea that families whose products are more similar to or less diversified with other products in the market want to expand. Although in this regard, the variable also describes the competition in a market, unlike the two concentration measures, it does not significantly enhance the sensitivity between cross-border expansion and unexplored indices in unreported tests. This insignificance may result because investors and fund companies do not really use correlation to measure product similarity in practice. Rather, due to the importance of style and index-linked investment (e.g., Mullainathan, 2002; Barberis and Shleifer, 2003; Barberis, Shleifer, and Wurgler, 2005; Boyer, 2011; and Wurgler, 2011), competition may occur more at the country level when foreign indices can unambiguously be marketed as new products.

B. Performance of Marketing-Oriented Expansions

To better assess the incentives of cross-border expansions, we next investigate the performance of new funds that have been launched for marketing purposes. We therefore estimate the following specification:

$$Perf_{f,t:t+4} = \alpha + \beta Num\_UIT_{f,t-1} + \gamma M_{f,t-1} + e_{f,t}, \quad (5)$$

where $Perf_{f,t:t+4}$ refers to the average monthly return of fund f in five years (year t to $t+4$) after inception, $Num\_UIT_{f,t-1}$ refers to the number of indices unexplored by foreign mutual funds in the country where fund f is launched, which measures how attractiveness the country is for marketing incentives (we

also use the rank of the unexplored index, $Rank\_UIT_{f,t-1}$, as a robustness check). The vector *M* stacks all other family and target country control variables, including return correlation within and outside family, Log(Family TNA), Expense Ratio, Family Turnover, Log(Family Age), Family Return, Log (Distance), Stock Market Turnover, Stock Market/GDP, and Private Bond Market/GDP.

We report the results in Table 3 for all newly launched active funds. We find that the new funds launched for marketing purposes perform poorly in the subsequent five years after inception. This holds across all the specifications and is not only statistically significant but also economically relevant. Indeed, a one-standard-deviation increase in the number (rank) of unexplored indices reduces annual returns and risk-adjusted performance by 0.41% and 1.94% (0.39% and 1.26%).

As a robustness check, we also conduct the same test on all foreign expansions (i.e., to further include newly launched foreign index funds) and on the sample of active foreign expansions excluding all closet index funds (i.e., Cremers, Ferreira, Matos, and Starks, 2016) from the sample of active funds. These two tests could alleviate the potential concern that our results can be contaminated by index funds or closet index funds. In addition, we consider alternative performance measures such as 8-factor adjusted return including four FFC domestic and four FFC foreign factors, as well as gross-of-fee performance. To save space, we report the results in the Internet Appendix (Table IA2; Panel A for all foreign expansions, Panel B for active funds excluding all closet indexers, Panel C for 8-factor adjusted return, and Panel D for gross-of-fee performance). We can see that poor performance is associated with all samples of funds we have examined and across all performance measures.

C. Performance of Marketing-Oriented Families

The above results deliver a message that the decision to offer new funds has a major marketing-driven component that is likely to be associated with lower performance. This observation leads to a more general question: is it generally true that low-skilled families concentrate on marketing incentives due to their inability to deliver performance? To answer this question, we use family performance in the domestic market as a proxy of skill because mutual funds are arguably better at processing domestic information, and we relate this skill proxy to measures of marketing incentives for families. More specifically, we estimate the following specification:

$$DomPerf_{F,t:t+4} = \alpha + \beta MktingIncentive_{F,t-1} + \gamma M_{F,t-1} + e_{F,t}, \quad (6)$$

where $DomPerf_{F,t:t+4}$ refers to the performance of the existing domestic portfolios of fund family *F* in five years (year t to $t+4$) after its foreign expansion (i.e., *Family Domestic Return* or *Family Domestic Factor-adjusted Return* as defined above), and $MktingIncentive_{F,t-1}$ refers to the two measures of a

family's marketing incentives (i.e., *Fam_Num_UIT* or *Fam_Rank_UIT*). Vector *M* stacks all other family and domicile country control variables, including the Herfindahl index in the domicile country and within the fund family, return correlation within and outside the family, the number of indices in the domicile country, Log(Family TNA), Expense Ratio, Family Turnover, Log(Family Age), and Family Return.

We report the results in Table 4 for all families that have launched active funds in another country. The results document that families that use cross-border expansions to differentiate themselves appear to be low-skilled and underperform in the domestic market. A one-standard-deviation increase in fund companies' marketing incentive in terms of the average number (rank) of unexplored indices reduces returns and risk-adjusted performance by 0.36% and 0.21% (0.33% and 0.23%). As previously mentioned, it is important to examine the performance of both active funds and all funds in order to reach a conclusion on family skill. Both groups of funds deliver lower performance. Hence, we can unambiguously conclude that marketing-oriented families are of low skills to explore investing opportunities in their own domestic market.

As a further robustness check, we consider the relationship between the performance of all domestic funds of a family and the family's marketing incentives for 1) all families that have foreign expansion (i.e., to further include families that launch only foreign index funds) 2) families that have active foreign expansions, excluding closet indexers (i.e., to further exclude families that launch only foreign closet index funds). These robustness checks are important to make sure that our results are not driven by families that are specialized in launching and managing foreign index funds or foreign closet-index funds. To save space, we tabulate the results in Panels A and B of Table IA3 in the Internet Appendix. Our results remain unchanged, confirming that index funds and closet-index funds are not a concern for our results.

Another related concern is that some families may charge consistently higher fees than others, which subsequently lead to lower after-fee performance of their funds. Panel C of Table IA3 provides additional robustness checks using gross-of-fee performance of mutual fund families. Our results are again robust, suggesting that fee strategy is not a major driving force for our performance results. Indeed, univariate tests suggest that the fee strategy for marketing-oriented families are similar to that of other families.

To further gauge the economic impact of marketing incentives, we also perform a portfolio-based analysis. We proceed as follows. At the beginning of each year, mutual fund families are sorted into terciles within the domicile country according to their lagged marketing incentives, proxied by the number and the rank of unexplored index at the family level ($Fam\_Num\_UIT_{F,t-1}$ and $Fam\_Rank\_UIT_{F,t-1}$). We then construct portfolios going long (short) the Low (High) marketing incentive families and calculate their holding period (year t) monthly returns. The returns are first averaged across fund families within the same domicile country and then averaged across countries. Next, we calculate performance of these portfolios by using either a one-factor model (international market factor) or a Fama-French-Carhart four-

international-factor model comprising the market, size, book-to-market, and momentum factors. The "LMH" rows report the difference in profits between Low and High marketing incentive portfolios. We adjust the errors using a Newey-West adjustment.

We report the results in Table 5 for all families that launch active funds in another country. We find that, in line with the previous findings, the families with high marketing incentives underperform those with low marketing incentives by 2.78% (2.77%) per year in FFC four-factor alpha when marketing incentives are proxied by the number (rank) of unexplored indices.

As an important subsample test, we now examine the foreign expansion of U.S. mutual fund families. We report the results in Table 6. Models 1 to 2 re-estimate Equation (4), and Models 3 to 4 re-estimate Equation (6). We find that our main results hold for U.S. mutual fund families. An increase of one number of unexplored indices increases the probability of expansion by 41%, and a one-standard-deviation increase in fund companies' marketing incentive in terms of the average number (rank) of unexplored indices reduces risk-adjusted performance by 0.34% (0.2%) per year.

Finally, we examine the performance of foreign funds. We ask whether there is a link between the decision of the family to expand for marketing reasons and its ability to perform abroad. We therefore re-estimate the same specifications as Equation (6), while using as a dependent variable the performance of the family abroad. We consider both a multivariate analysis and a portfolio-based one, as in the previous case of domestic performance. We also consider the sample of U.S. funds. In particular, we estimate

$$ForPerf_{F,t:t+4} = \alpha + \beta MktingIncentive_{F,t-1} + \gamma M_{F,t-1} + e_{F,t}, \quad (7)$$

where $ForPerf_{F,t:t+4}$ refers to the average monthly return of the existing foreign portfolios of fund family F in five years (year t to $t+4$) after its foreign expansion (i.e., *Family Foreign Return* or *Family Foreign Factor-adjusted Return* as defined above), and $MktingIncentive_{F,t-1}$ is our measure of marketing incentives of fund families as before. The vector *M* stacks all other family and country control variables, as defined in Table 4.

We report the results in Table 7. In Panel A, we report the results based on multivariate analysis, and in Panel B, we report the results of the portfolio-based analysis. We find that families that expand for marketing reasons underperform in the foreign market. This result holds both in the multivariate analysis and in the portfolio-based analysis. The underperformance is strongly economically and statistically significant. For instance, a one-standard-deviation increase in fund companies' marketing incentive in terms of the average number (rank) of unexplored indices reduces returns and risk-adjusted performance by 0.21% and 0.21% (0.19% and 0.14%). In addition, families with high marketing incentive underperform those with low marketing incentive in their foreign funds by 2.09% to 2.56% per year (in FFC four-factor alpha).

Similar to the case of domestic fund performance, we have also examined the relationship between the performance of foreign funds of a family and the marketing incentive of the family for 1) all families that have foreign expansion (i.e., to further include families that launch only foreign index funds) and 2) families that have active foreign expansions excluding closet indexers (i.e., to further exclude families that launch only foreign closet index funds). The results are also tabulated in Panels A and B of Table IA3 in the Internet Appendix. The only difference with respect to the domestic fund tests is that, by having foreign investments, we can also adjust the performance of foreign funds based on an 8-factor model including both domestic and foreign factors. Our main conclusion remains unchanged across all these different specifications.

From these tests, we find that higher marketing incentives are in general related to low performance for all categories of funds that a family offers. Hence, the data support the prediction of the low-skill expansion hypothesis that marketing-oriented overseas expansions are likely to be a competition tool used by low-skilled fund companies. Next, it will be interesting to check the stock market influences of such low-skilled, marketing-oriented cross-border capital flows. However, before we take on this task, we want to examine whether marketing incentives could give rise to diversification benefits, which are hypothetical benefits that overseas expansions can help investors to achieve.

D. Investor Welfare in terms of Diversification Benefits and Hedging Against Crisis

Although our performance tests strongly suggest that marketing-driven investment is likely to be conducted by low-skilled families, a residual issue is whether marketing-driven investment is more closely related to portfolio diversification than to performance. If so, low performance does not necessarily indicate low investor welfare. Instead, low performance can be compensated by a higher degree of international diversification. For instance, these cross-border expansions may reduce the average correlation across funds offered by a same family, thereby allowing family investors to enjoy more diversification benefits. To formally investigate this issue, we relate the *ex post* diversification benefit of the new funds to our marketing proxy as follows:

$$Diversification_{f,t:t+4} = \alpha + \beta Num\_UIT_{f,t-1} + \gamma M_{f,t-1} + e_{f,t}, \quad (8)$$

where $Diversification_{f,t:t+4}$ refers to the diversification proxy of fund f in five years (year t to $t+4$) after inception, and $Num\_UIT_{f,t-1}$ measures the marketing incentives of fund f as before (we also use $Rank\_UIT_{f,t-1}$, as a robustness check). The vector *M* stacks all other family and target country control variables, including return correlation within and outside the family, Log(Family TNA), Expense Ratio, Turnover, Log(Family Age), Family Return, Log(Distance), Stock Market Turnover, Stock Market/GDP, and Private Bond Market/GDP.

We report the results in Table 8. In Models 1 to 2 (Models 3 to 4), the (lack of) diversification is proxied by the return (style-adjusted return) correlation between the newly launched fund and other funds within the same family, and in Models 5 to 6, the diversification is proxied by the return correlation between the newly launched fund and other funds outside the family but within the same domicile country. We focus on the newly launched active funds and find that expansions oriented from marketing purposes do not gain diversification benefits. In contrast, a one-standard-deviation increase in fund companies' marketing incentive in terms of the average number (rank) of unexplored indices increases the correlation of the new fund with the family by 1.15% and 1.86% (1.24% and 1.45%) in the case of fund performance and style-adjusted performance.

Next, we explore whether overseas expansions can benefit investors by offering a hedge against crisis—i.e., to deliver performance during a crisis period. Models 7 to 8 investigate the risk-adjusted performance of newly launched funds during the 2008 – 2009 financial crisis. We can see that these funds do not deliver performance during crisis. Unreported tests show that, when we interact a crisis period dummy with marketing incentives, the interaction is also insignificant. These findings do not support the view that marketing-oriented funds are launched as an instrument to hedge crisis.

4. Marketing Influence of Low-Skilled Expansion

We now investigate the link between marketing expansion and market efficiency. We focus mainly on three dimensions that could best demonstrate the (different) market influence of cross-border capital flows: informational efficiency, liquidity, and market integration. These three dimensions of influences will allow us to understand the difference between market-oriented cross-border capital flows and the general cross-border capital flows that are typically examined in the literature.

A. On Price Efficacy

We begin with the important finding of Bae, Ozoguz, Tan, and Wirjanto (2012) that foreign capital can improve the informational efficiency in emerging markets by better processing global information, and we examine whether marketing-oriented capital flows are associated with similar benefits. To achieve this goal, we examine the relation between price delay to global market information, the main variable of informational efficiency in Bae, Ozoguz, Tan, and Wirjanto (2012), and the ownership of actively managed foreign funds offered by marketing-oriented fund families.

We estimate the following specification:

$$Delay_{i,t} = \alpha + \beta MktingForOwn_{i,t-1} + \gamma M_{i,t-1} + e_{i,t}, \quad (9)$$

where $Delay_{i,t}$ refers to market delay of stock i in year t to the global market information ($Delay\_Global_{i,t}$) or the local market information ($Delay\_Local_{i,t}$), and $MktingForOwn_{i,t-1}$ is the ownership of marketing-oriented active foreign funds either by all foreign funds of marketing-oriented families ($MktingForOwnAll_{i,t-1}$) or by newly launched marketing-oriented funds ($MktingForOwnNew_{i,t-1}$).

Mutual fund families are sorted into terciles within the domicile country according to their lagged marketing incentives and proxied by the number and the rank of unexplored index at the family level (*Fam_Num_UIT* and *Fam_Rank_UIT*). Those in the top tercile are defined as marketing-oriented families, and the aggregate ownership from their existing (newly launched) affiliated foreign funds is labelled as *MktingForOwnAll* (*MktingForOwnNew*) accordingly. Furthermore, *MktingForOwnAll* (*MktingForOwnNew*) refers to a set of variables—i.e., *MktingForOwnAll_Num* and *MktingForOwnAll_Rank* (*MktingForOwnNew_Num* and *MktingForOwnNew_Rank*) when marketing incentives of mutual fund families are proxied by *Fam_Num_UIT* and *Fam_Rank_UIT*. Vector *M* stacks all other stock and country control variables, including domestic and foreign IO, Stock Return, Log(Stock Size), Turnover, Log(Net Income), Log(Sales), Log(Total Assets), Stock Market Turnover, Stock Market/GDP, and Private Bond Market/GDP.

We report the results in Table 9. We find that the capital flows associated with marketing-oriented cross-border expansions do not improve the price discovery and overall market efficiency in the target country. On the contrary, a one-standard-deviation increase in the ownership of marketing-oriented foreign funds identified based on the number (rank) of unexplored indices is related to 1.1% (1.13%) greater price delay (i.e., the influence of additional price delay scaled by the standard deviation of price delay) to the global market information in Model 1 (Model 3). A better measure of the impact in terms of policy implication should be based on the comparison between marketing-oriented foreign funds and funds that are the least related to marketing incentives (i.e., non-marketing funds or associated capital flows), as we will discuss shortly. Meanwhile, perhaps not surprisingly, high ownership of marketing-oriented foreign funds is associated with a more prominent price delay to the domestic market information.

Furthermore, price delay to global market information is typically enhanced after new marketing-oriented cross-border expansions. A one-standard-deviation increase in the *new* ownership introduced by marketing-oriented cross-border expansions is related to a 1.06% (1.18%) greater price delay in Model 2 (Model 4). Note that, because $MktingOwnNew_{i,t-1}$ is equivalent to changes in marketing-oriented ownership induced by new marketing-oriented cross-border expansions, the latter is especially intriguing because it directly measures the new price delay that is likely to be introduced by the new ownership of marketing-oriented overseas expansions.

It is especially striking to see that the influence of marketing-oriented foreign capital flows in processing global information is exactly the opposite of that of general foreign capital flows, as reported in the literature (e.g., Bae, Ozoguz, Tan, and Wirjanto, 2012). To reconcile our finding with the literature, we conduct additional tests (reported in Table IA4 in the Internet Appendix) and find that the impact of active cross-border capital flows that are the least related to marketing incentives (non-marketing funds or associated capital flows) is largely beneficial in processing global information. A one-standard-deviation increase in the ownership of marketing-oriented foreign funds (non-marketing funds) is associated with a 1.33% greater (0.84% less) price delay with respect to global market information for all countries and a 3.63% greater (2.37% less) price delay for emerging markets. In the regard, marketing-oriented foreign capital flows can reduce price efficiency by approximately 6% compared to non-marketing-oriented foreign capital flows.

In addition to market delay, we also examine whether these funds are better able to affect price informativeness by processing industry-level information. To test this channel, we construct two measures of delays in processing global industry information and local industry information by replacing the returns of the value-weighted market portfolio with the returns of the value-weighted industry portfolio for the leading industry invested by a fund. Unreported results show that marketing-oriented foreign capital flows are unrelated to both delay measures, while non- marketing-oriented foreign capital flows help process the industry-level information in both global and domestic market. Hence marketing-oriented foreign capital flows are no better in processing industry-level information than local funds either.

These results have important normative implications. It suggests that capital flows are heterogeneous in nature and that there could be a significant difference between the impact of "bad" capital flows and that of "good" ones. Hence, a one-policy-for-all regulation may not achieve the intended benefit of the globalization of finance. However, above all, our results suggest that the non-beneficial impact actually comes from marketing-oriented and low-skilled foreign expansions.

B. On Liquidity and Commonality in Liquidity

Next, we examine the notion that low-skilled fund companies may supply liquidity to the local market instead of processing information. If so, capital flows associated with these companies are still arguably beneficial to the local economy.

To achieve this goal, we replace price delay in Equation (9) by stock liquidity (Amihud illiquidity and the proportion of zero daily returns, following Lesmond, Ogden, and Trzcinka, 1999) and commonality in liquidity (Karolyi, Lee, and van Dijk, 2012), and we tabulate the results in Table 10. We find that marketing-oriented foreign capital flows do not improve liquidity conditions, either. By contrast, a one-standard-

deviation increase in the ownership of (rank-based) marketing-oriented foreign funds is associated with an increase in Amihud *illiquidity* of 0.29% and an increase of the proportion of zero return days of 1.27% (scaled by the standard deviation of illiquidity measures). Similarly, a one-standard-deviation increase in the new ownership of marketing-oriented foreign funds is also associated with an increase in Amihud *illiquidity* of 0.39% and an increase in the proportion of zero return days of 1.25%.

To better understand this result, we re-visit the turnover ratio of various types of funds as a proxy for their willingness to trade. Univariate analysis shows that marketing-oriented foreign funds trade considerably less than other funds: they trade 17% (23%) less than non-marketing-oriented foreign funds and 54% (55%) less than domestic funds when the marketing incentive is measured by number (rank) of unexplored indices. It is not surprising to see that marketing-oriented foreign funds are less willingness to trade. On the one hand, mutual funds usually trade more to exploit profitable investment opportunities (Pástor, Stambaugh, and Taylor (2015)). Since marketing-oriented foreign funds are of low skills, they trade less compared to more informed funds. On the other hand, if the major goal of these funds is to attract capital flows, their trading incentives will be low after this marketing task is achieved. These considerations may explain why marketing-oriented foreign funds do not contribute to market liquidity.

Moreover, we find that marketing-driven flows are also associated with higher commonality in liquidity. A one-standard-deviation increase in ownership of all and new (rank-based) marketing-oriented foreign funds is associated with increases in commonality in liquidity with respect to the local market of 1.04% and 0.93%, respectively. This result is also consistent with the finding of Karolyi, Lee, and van Dijk (2012) that the behaviour of foreign investors can explain the variations in commonality in liquidity. Although this magnitude is not very large, the message is clear that marketing-oriented foreign capital flows do not benefit the local market in terms of liquidity.

Overall, marketing-oriented foreign capital flows not only harm the general liquidity condition but also increase commonality in liquidity. While the first influence is unambiguously costly, the latter may also enhance contagion risk by boosting the local economy's commonality in liquidity. Interestingly, the cross-border flows that are least marketing-oriented do not improve liquidity conditions either, as Table IA5 in the Internet Appendix indicates. Indeed, they also seem to absorb liquidity, although the results are less robust across different specifications. Given that this type of (least-market-oriented) capital flows process global information, it is not surprising that they may require liquidation from the local market from time to time.

C. On Market Integration

Finally, we consider market integration. As for the case of price efficiency, we separately examine the two cases of market integration: integration with the global market and that with the local market. Recall that market integration is defined as the absolute value of the intercept and the adjusted R-square of a regression of stock returns on global or domestic factor models. As the absolute value of the intercept decreases and the adjusted R-square increases, the degree of integration increases.

We then again conduct a regression specification similar to that in Equation (9), replacing price delay with various measures of market integration. The results are tabulated in Table 11. We find that marketing-oriented foreign ownership is not related to integration with respect to overall international market factors.

Jointly, the tests in this section fail to depict a beneficial role of marketing-oriented cross-border capital flows. Indeed, these capital flows hurt price efficiency – with respect to both global information and local information – as well as liquidity conditions. Table IA6 in the Internet Appendix further shows that these results remain valid when we focus only on the sample of active funds, excluding closet indexers. These pricing influences are in general consistent with the results of the previous section that such capital flows are likely to be managed by low-skilled families.

Conclusion

In this paper, we study how the globalization of finance may unintendedly reduce market efficiency through low-skilled mutual fund companies. The globalization of finance, despite all its beneficial influences, may allow low-skilled mutual fund companies to achieve product differentiation by launching new funds for marketing purposes rather than for the improvement of investor welfare or market efficiency. Cross-border capital flows channelled to foreign markets through low-skill fund companies for marketing purposes are unlikely to deliver the benefits of financial liberalization, as documented in the literature. Instead, more capital flows of this type may hurt informational efficiency and the liquidity condition.

Using the complete sample of global mutual funds, we indeed find that marketing-oriented fund companies are more likely to launch new funds in foreign markets that have more indices unexplored by the global mutual fund industry. New funds launched this way are in general associated with lower performance – and so are their affiliated funds managed by the same fund company. These findings suggest that low-skilled fund companies can use unexplored foreign indices to differentiate their products. Empirically, cross-border capital flows managed by marketing-oriented fund companies increase the degree of market integration with respect to global factors and reduce the price efficiency, even with respect to global information and the general liquidity conditions of a market.

Our key message is that all flows are not the same, depending on who manage them, which highlights the importance of heterogeneity among cross-border capital flows. Our findings have important normative implications for regulations and call for more research to understand foreign capital flows based on more solid micro-foundations.

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Appendix A: Variable Definitions

Variables	Definitions
A. Marketing Incentive Measures	
Num_UIT	The number of unexplored indices in the target country is computed as the total number of indices minus the number of indices invested by foreign funds in the country where a new fund is launched. The index tracked by mutual funds in each country first comes from Morningstar 'Primary Prospectus Benchmark ID', and the name 'Primary Prospectus Benchmark' is used if 'Primary Prospectus Benchmark ID' is missing. For each index, a domicile country is assigned based on the market in which the majority of the stocks included in the index are traded, and a foreign fund to an index is defined as a fund whose domicile country is different from that of the index.
Rank_UIT	We further rank the number of unexplored indices in the target country across all newly launched funds from the same domicile country, and the ranks are normalized to follow a [0, 1] uniform.
Fam_Num_UIT	The number of unexplored indices at the family level is computed as the average number of unexplored indices in the target country across all newly launched funds within the same family.
Fam_Rank_UIT	The number of unexplored indices at the family level is computed as the average rank of unexplored indices in the target country across all newly launched funds within the same family.
MktingForOwnAll_Num (in %)	The aggregate ownership of all existing foreign funds offered by marketing-oriented families, when marketing-oriented families are defined as those with *Fam_Num_UIT*, belongs to the top tercile among all families in the same domicile country. The marketing-oriented foreign ownership is computed as the total number of shares held by mutual funds affiliated with marketing-oriented families divided by the number of shares outstanding.
MktingForOwnNew_Num (in %)	The aggregate ownership of all newly launched foreign funds offered by marketing-oriented families, when marketing-oriented families are defined as those with *Fam_Num_UIT*, belongs to the top tercile among all families in the same domicile country. The variable is defined in a similar manner as *MktingForOwnAll_Num*.
MktingForOwnAll_Rank (in %)	The aggregate ownership of all existing foreign funds offered by marketing-oriented families, when marketing-oriented families are defined as those with *Fam_Rank_UIT*, belongs to the top tercile among all families in the same domicile country. The variable is defined in a similar manner as *MktingForOwnAll_Num*.
MktingForOwnNew_Rank (in %)	The aggregate ownership of all newly launched foreign funds offered by marketing-oriented families, when marketing-oriented families are defined as those in which *Fam_Rank_UIT* belongs to the top tercile among all families in the same domicile country. The variable is defined in a similar manner as *MktingForOwnAll_Num*.
B. Performance Measures (in %)	
New Fund Return	Monthly total returns for the newly launched fund, as reported by Morningstar. When a portfolio has multiple share classes, its total return is computed as the share class total net asset (TNA)-weighted return of all share classes, where the TNA values are one-month lagged.
New Fund 4-Factor-adjusted Return	Realized fund returns minus the productions between a fund's four-factor betas multiplied by the realized four factor returns in a given month. The four Fama-French-Carhart (FFC) factors (market, size, book-to-market, and momentum) are measured in the target country in which the new fund is launched. The betas of the fund are estimated as the exposures of the fund to the relevant risk factors with a five-year estimation period.
New Fund 8-Factor-adjusted Return	Realized fund returns minus the productions between a fund's eight-factor betas multiplied by the realized eight factor returns in a given month. The eight factors consist of four Fama-French-Carhart (FFC) factors (market, size, book-to-market, and momentum) that are measured in the target country where the new fund is launched, as well as four foreign factors that are the value weighted average of the four factors in all other countries. The betas of the fund are estimated as the exposures of the fund to the relevant risk factors with a five-year estimation period.
Family Domestic Return	Family domestic return is computed as the fund TNA-weighted return of all domestic funds within the same family, where the TNA values are one-month lagged, and the domestic fund is defined as a fund tracking an index in the same domicile country.
Family Domestic 4-Factor-adjusted	Realized family domestic returns minus the productions between a family's four-factor betas multiplied by the realized four factor returns in a given month. The Fama-French-Carhart factors (market, size, book-to-market, and momentum) are measured in the family's domicile country. The betas of the fund are estimated as the exposures of the fund to the relevant risk factors with a five-year estimation period.
Family Foreign Return	Family foreign return is computed as the fund TNA-weighted return of all foreign funds within the same family, where the TNA values are one-month lagged, and the foreign fund is defined as a fund tracking an index outside its domicile country.
Family Foreign 4-Factor-adjusted Return	Realized family foreign returns minus the productions between a family's four-factor betas multiplied by the realized four factor returns in a given month. The four international factors are the value weighted average of four domestic Fama-French-Carhart factors (market, size, book-to-market,

	and momentum). The betas of the fund are estimated as the exposures of the fund to the relevant risk
Family Foreign 8-Factor-adjusted Return	Realized family foreign returns minus the productions between a family's eight-factor betas multiplied by the realized eight factor returns in a given month. The eight factors consist of four domestic Fama-French-Carhart (FFC) factors (market, size, book-to-market, and momentum), as well as four foreign factors that are the value weighted average of four domestic factors in all other countries. The betas of the fund are estimated as the exposures of the fund to the relevant risk factors with a five-year estimation period.
C. Diversification Measures	
Within-Family Correlation	Within-family correlation for mutual fund family F in year t is computed as follows: $Within\ Family\ Corr_{F,t} = \frac{1}{N_t}\sum_{i\in F, j\in F} Corr(R_{i,m,t}, R_{j,m,t})$, where $R_{i,m,t}$ and $R_{j,m,t}$ refer to the monthly return of fund i and j in month m of year t, with both funds affiliated with family F, and N_t refers to the number of fund pairs included in the family, following Elton, Gruber, and Green (2007).
Outside Family Correlation	Outside family correlation for mutual fund family F in year t is computed as follows: $Outside\ Family\ Corr_{F,t} = \frac{1}{N_t}\sum_{i\in F, j\notin F} Corr(R_{i,m,t}, R_{j,m,t})$, where $R_{i,m,t}$ and $R_{j,m,t}$ refer to the monthly return of fund i and j in month m of year t, with fund i affiliated with family F and fund j outside family F but in the same domicile country, and N_t refers to the total number of fund pairs, following Elton, Gruber, and Green (2007).
New Fund Correlation Within Family	New fund correlation within the family is computed as the return correlation between a newly launched fund and all other existing funds affiliated with the same mutual fund family, defined as the within-family correlation above.
New Fund Correlation Outside Family	New fund correlation outside the family is computed as the return correlation between a newly launched fund and all other existing funds outside the mutual fund family but in the same domicile country, defined as the outside family correlation above.
D. Market Delay Measures	
Delay_Global	The price delay to the global market information for stock i in year t is computed as follows: $Delay\_Global_{i,t} = 1 - \frac{R^2_{restricted,i,t}}{R^2_{unrestricted,i,t}}$, where $R^2_{restricted,i,t}$ and $R^2_{unrestricted,i,t}$ refer to the R-square from restricted and unrestricted market models estimated using weekly returns in each year t. Restricted model: $R_{i,w,t} = \alpha_{i,t} + \delta_{i,0,t}R_{g,w,t} + \sum_{k=0}^{3}\gamma_{i,k,t}R_{l,w-k,t} + e_{i,w,t}$; Unrestricted model : $R_{i,w,t} = \alpha_{i,t} + \sum_{k=0}^{3}\delta_{i,k,t}R_{g,w-k,t} + \sum_{k=0}^{3}\gamma_{i,k,t}R_{l,w-k,t} + e_{i,w,t}$, where $R_{i,w,t}$ refers to the accumulated return of stock i in week w of year t, and $R_{g,w-k,t}$ and $R_{l,w-k,t}$ refer to the contemporaneous and lagged returns on the value-weighted world market portfolio and the local market portfolio, following Hou and Moskowitz (2005), and Bae, Ozoguz, Tan, and Wirjanto (2012).
Delay_Local	The price delay to the local market information for stock i in year t is computed as follows: $Delay\_Local_{i,t} = 1 - \frac{R^2_{restricted,i,t}}{R^2_{unrestricted,i,t}}$, where $R^2_{restricted,i,t}$ and $R^2_{unrestricted,i,t}$ refer to the R-square from restricted and unrestricted market models estimated using weekly returns in each year t. Restricted model: $R_{i,w,t} = \alpha_{i,t} + \sum_{k=0}^{3}\delta_{i,k,t}R_{g,w-k,t} + \gamma_{i,0,t}R_{l,w,t} + e_{i,w,t}$; Unrestricted model : $R_{i,w,t} = \alpha_{i,t} + \sum_{k=0}^{3}\delta_{i,k,t}R_{g,w-k,t} + \sum_{k=0}^{3}\gamma_{i,k,t}R_{l,w-k,t} + e_{i,w,t}$, where all variables are defined as in *Delay_Global*.
E. Stock Liquidity and Liquidity Commonality Measures	
Log (Amihud)	The Amihud illiquidity for stock i in month m is computed as follows: $Illiq_{i,m} = \left[\sum_{d=1}^{n}\left|R_{i,m,d}\right|/\left(P_{i,m,d}\times N_{i,m,d}\right)\right]/n$, where n is the number of trading days in each month m, $\left|R_{i,m,d}\right|$ is the absolute value of return of stock i on day d of month m, $P_{i,m,d}$ is the daily closing price of stock i, and $N_{i,m,d}$ is the number of shares of stock i traded during day d, following Amihud (2002). *Log(Amihud)* refers to the logarithm of Amihud illiquidity.
%Zero	The proportion of zero daily returns in a month, following Lesmond, Ogden, and Trzcinka (1999).
Liquidity Co-movement	The commonality in liquidity for stock i in month m is computed as follows: $\hat{\omega}^{Liq}_{i,m,d} = \alpha^{Liq}_{i,m} + \sum_{j=-1}^{1} b^{Liq}_{i,m,j}\hat{\omega}^{Liq}_{M,m,d+j} + \varepsilon^{Liq}_{i,m,d}$, where $\omega^{Liq}_{i,m,d}$ is the residual from the following time-series regressions: $Liq_{i,m,d} = \alpha^{Liq}_{i,m}Liq_{i,m,d-1} + \sum_{\tau=1}^{5}\beta^{Liq}_{i,m,\tau}D_\tau + \gamma^{Liq}_{i,m}HOLI_{m,d} + \omega^{Liq}_{i,m,d}$, where $Liq_{i,m,d}$ is the Amihud liquidity proxy for stock i on day d of month m, defined as $-\log(1 + Illiq_{i,m,d})$, with $Illiq_{i,m,d} = \left|R_{i,m,d}\right|/\left(P_{i,m,d}\times N_{i,m,d}\right)$, all variables are defined as in *Log(Amihud)*, D_τ $(\tau = 1, \dots, 5)$ refers to a list of day-of-the-week dummy variables, and $HOLI_{t,d}$ is a dummy for trading days around non-weekend holidays. $\hat{\omega}^{Liq}_{M,m,d+j}$ is the market value (at the end of previous year) weighted average of the residuals for all stocks. The R-square ($R^2_{i,m}$) from the regression measures the commonality in liquidity for stock i of month m. We use the logistic transformation of the R-square measures, i.e., $\ln\left(\frac{R^2_{i,m}}{1-R^2_{i,m}}\right)$, following Karolyi, Lee, and van Dijk (2012).
F. Market Integration Measures	
|Intercept_8Fac|	For every stock in each month, we regress daily excess returns on the four domestic factors (market, size, book-to-market and momentum), as well as four foreign factors, defined as the value weighted

	average of four domestic factors in all remaining countries. |*Intercept_8Fac*| is defined as the absolute value of the intercept from this regression for each stock month.
Co-movement_8Fac	The return co-movement with the global market is defined as the adjusted R-square from the same monthly stock-level regressions as in |*Intercept_8Fac*|.
G. Other Family Characteristics	
HHI_Family	The Herfindahl-Hirschman index for mutual fund family F in month m is computed as follows: $HHI_{F,m} = \sum_{f \in F} \left(\frac{TNA_{f,m}}{\sum_{f \in F} TNA_{f,m}} \right)^2$, where $TNA_{f,m}$ refers to the total net assets of fund f in month m, and fund f is affiliated with mutual fund family F.
Log (Family TNA)	The logarithm of family total net assets (TNA), where the family TNA is computed as the summation of all fund-level TNA (reported in Morningstar) within the family.
Expense Ratio (in %)	The family expense ratio is computed as the fund TNA-weighted annualized expense ratio of all funds within the family, where the TNA values are one-month lagged, and the fund-level expense ratio is reported in Morningstar.
Family Turnover	The family turnover is computed as the fund TNA-weighted turnover of all funds within the family, where the TNA values are one-month lagged, and fund-level turnover is reported in Morningstar.
Log (Family Age)	The logarithm of family age, where family age is computed as the fund TNA-weighted number of operational months since inception of all funds within the family, and the fund inception date is reported in Morningstar.
Family Return (in %)	Family return is computed as the fund TNA-weighted return of all funds within the family, where the TNA values are one-month lagged.
Family Flow (in %)	The flow for mutual fund family F in month m is computed as follows: $Flow_{F,m} = \frac{\sum_{f \in F} [TNA_{f,m} - TNA_{f,m-1} \times (1 + R_{f,m})]}{\sum_{f \in F} TNA_{f,m-1}}$, where $TNA_{f,m}$ refers to the total net asset of fund f in month m, $R_{f,m}$ refers to the fund total return in the same month, and fund f is affiliated with mutual fund family F.
H. Country Characteristics	
HHI_Dom_Fund	The Herfindahl-Hirschman index for all funds in the domicile country C in month m is computed as follows: $HHI\_Dom\_Fund_{C,m} = \sum_{f \in C} \left(\frac{TNA_{f,m}}{\sum_{f \in C} TNA_{f,m}} \right)^2$, where $TNA_{f,m}$ refers to the total net asset of fund f in month m, and fund f has country C as its domicile country.
HHI_Dom_Fam	The Herfindahl-Hirschman index for all fund families in the domicile country C in month m is computed as follows: $HHI\_Dom\_Fam_{C,m} = \sum_{F \in C} \left(\frac{TNA_{F,m}}{\sum_{F \in C} TNA_{F,m}} \right)^2$, where $TNA_{F,m}$ refers to the total net assets of fund family F in month m, and fund family F has country C as its domicile country.
HHI_Target	The Herfindahl-Hirschman index for all funds in the target country, computed similarly to the *HHI_Dom_Fund* above.
Num_ID	The total number of indices in the domicile country.
Log (Distance)	The logarithm of the geographical distance between the target and domicile countries.
Stock Market Turnover	The total value of shares traded during the year divided by the average market capitalization, as reported by the World Bank. Average market capitalization is calculated as the average of the year-end values for this year and the previous year.
Stock Market/GDP	The end-of-year stock market capitalization divided by nominal GDP, as reported by the World Bank.
Private Bond Market/GDP	The end-of-year domestic credit value to the private sector divided by nominal GDP, as reported by the World Bank. Domestic credit to the private sector refers to financial resources provided to the private sector by financial corporations.
I. Other Stock Characteristics	
Domestic IO (in %)	The domestic mutual fund ownership, computed as the number of shares held by domestic mutual funds divided by the number of shares outstanding.
Foreign IO (in %)	The foreign mutual fund ownership, computed as the number of shares held by foreign mutual funds divided by the number of shares outstanding.
Stock Return (in %)	The monthly stock return, as reported in Datastream Worldscope.
Log (Stock Size)	The logarithm of market capitalization of stocks, in millions, as reported in Datastream Worldscope.
Turnover	The monthly stock trading volume scaled by shares outstanding, as reported in Datastream
Log (Net Income)	The logarithm of absolute net income, in millions, as reported in Datastream Worldscope, times 1 (–1) if net income is positive (negative).
Log (Sales)	The logarithm of sales, in millions, as reported in Datastream Worldscope.
Log (Total Assets)	The logarithm of total assets, in millions, as reported in Datastream Worldscope.

Figure 1: Number of Stock Market Indices and Size of the Global Mutual Fund Industry

This figure plots the number of stock market indices explored by the global mutual fund industry, as well as the total net assets (TNA, indicated by the left axis in billions USD) and number of mutual funds from 2000 to 2012. The number of mutual funds and stock market indices are indicated by the right axis.

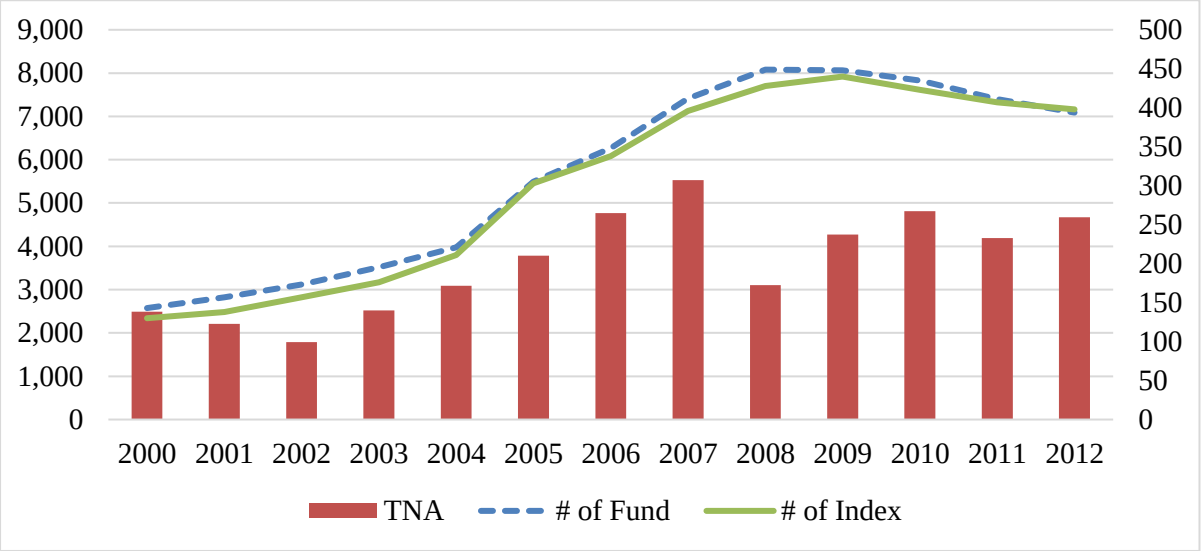

Table 1: Summary Statistics

This table presents the summary statistics for the data used in the paper. Panel A reports the mean, median, standard deviation, and the quantile distribution of the number and rank of unexplored indices at the country level and the family level, monthly fund and family return, and other annual family and country characteristics. The sample consists of all mutual fund families with the foreign expansion of active equity mutual funds over the 2001−2012 period. Panel B reports similar statistics for annual market delay, illiquidity, market integration and other stock characteristics. Panel C reports the correlation matrix of the main stock-level dependent and independent variables. Appendix A provides detailed definitions of each variable. Numbers with "*", "**", and "***" are significant at the 10%, 5%, and 1% levels, respectively.

Panel A: Quantile Distribution of Family and Country Characteristics

	Mean	Std.Dev.	Quantile Distribution				
			10%	25%	Median	75%	90%
Num_UIT	8.659	8.522	0	0	6	16	21
Rank_UIT	0.745	0.289	0.310	0.400	0.905	1.000	1.000
Fam_Num_UIT	12.271	5.949	3.500	7.500	13.000	16.000	21.000
Fam_Rank_UIT	0.846	0.165	0.606	0.725	0.889	1.000	1.000
New Fund Return	0.429	0.746	-0.401	-0.044	0.350	0.858	1.443
New Fund 4-Factor-adjusted Return	0.029	0.596	-0.608	-0.290	-0.019	0.309	0.734
New Fund 8-Factor-adjusted Return	0.066	2.112	-0.608	-0.280	-0.021	0.319	0.717
New Fund Correlation Within Family	79.223	13.876	62.343	73.621	82.286	88.291	93.126
New Fund Correlation Outside Family	70.261	12.235	55.996	64.578	72.999	78.604	82.079
Family Domestic Return	0.535	1.120	-0.327	0.066	0.463	1.050	1.497
Family Domestic 4-Factor-adjusted Return	-0.114	0.483	-0.654	-0.328	-0.092	0.153	0.374
Family Foreign Return	0.509	0.872	-0.249	0.023	0.428	0.971	1.506
Family Foreign 4-Factor-adjusted Return	-0.174	0.481	-0.626	-0.370	-0.166	0.036	0.296
Family Foreign 8-Factor-adjusted Return	0.055	0.529	-0.434	-0.181	0.024	0.272	0.541
HHI_Dom_Fund	0.085	0.112	0.008	0.016	0.038	0.119	0.209
HHI_Dom_Fam	0.162	0.130	0.046	0.073	0.127	0.215	0.320
HHI_Target	0.105	0.204	0.004	0.005	0.008	0.079	0.316
HHI_Family	0.603	0.283	0.193	0.379	0.601	0.839	1.000
Within Family Correlation	0.694	0.176	0.477	0.604	0.705	0.826	0.900
Outside Family Correlation	0.574	0.144	0.404	0.510	0.595	0.656	0.740
Num_ID	48.427	55.109	2	6	23	64	157
Log (Family TNA)	21.009	2.416	17.682	19.448	21.264	22.850	23.859
Expense Ratio	1.043	0.621	0.121	0.563	1.118	1.456	1.773
Family Turnover	57.948	70.291	2.174	10.071	42.083	77.601	134.153
Log (Family Age)	4.552	0.797	3.550	4.206	4.686	5.054	5.411
Family Return	0.617	2.050	-1.981	-0.348	0.944	1.847	2.729
Family Flow	-0.718	7.782	-3.252	-1.124	-0.065	1.201	2.914
Log (Distance)	1.572	0.822	0.306	0.577	1.960	2.274	2.363
Stock Market Turnover	142.223	75.298	63.136	89.112	126.544	182.806	216.458
Stock Market/GDP	126.893	80.786	53.750	79.964	123.923	140.179	172.532
Private Bond Market/GDP	147.068	46.095	87.902	114.819	161.649	184.291	197.678

Table 1—Continued

Panel B: Quantile Distribution of Stock Characteristics							
	Mean	Std.Dev.	Quantile Distribution				
			10%	25%	Median	75%	90%
Delay_Global	16.718	16.087	1.946	4.773	11.264	23.529	40.283
Delay_Local	17.091	16.389	1.986	4.880	11.561	24.095	41.215
Log (Amihud)	2.611	3.378	-1.909	0.117	2.615	5.074	7.021
%Zero	22.380	25.999	1.558	5.693	12.201	27.199	63.613
Liquidity Co-movement	-1.463	0.475	-2.008	-1.767	-1.495	-1.195	-0.876
|Intercept_8Fac|	63.764	47.351	21.851	33.953	51.716	78.683	119.469
Co-movement_8Fac	27.720	21.558	2.604	11.939	25.040	40.155	55.925
|Intercept_Domestic|	48.422	35.081	16.847	26.076	39.425	60.020	90.602
Co-movement_Domestic	26.687	20.484	3.113	11.139	23.674	38.501	53.755
|Intercept_Foreign|	58.325	39.104	21.214	32.501	48.869	73.292	106.385
Co-movement_Foreign	12.658	14.934	-1.126	3.214	9.167	17.414	30.077
MktingForOwnAll_Num	0.702	4.762	0.000	0.000	0.065	0.408	1.285
MktingForOwnNew_Num	0.415	4.246	0.000	0.000	0.000	0.111	0.551
MktingForOwnAll_Rank	0.751	4.925	0.000	0.000	0.069	0.437	1.384
MktingForOwnNew_Rank	0.449	4.397	0.000	0.000	0.000	0.124	0.607
Stock Return	1.121	5.658	-5.422	-1.651	1.152	3.896	7.497
Domestic IO	4.393	8.506	0.000	0.000	0.102	4.425	16.248
Foreign IO	3.087	8.271	0.000	0.071	0.663	2.954	8.036
Log (Stock Size)	5.449	1.942	3.074	4.138	5.365	6.701	8.020
Turnover	0.127	0.226	0.005	0.017	0.049	0.135	0.321
Log (Net Income)	2.033	2.806	-2.455	0.602	2.714	3.843	4.826
Log (Sales)	5.730	1.880	3.336	4.602	5.984	6.893	7.723
Log (Total Assets)	6.256	1.848	3.801	4.994	6.505	7.332	8.257

Panel C: Correlation among Stock Characteristics				
	MktingForOwnAll_Num	MktingForOwnNew_Num	MktingForOwnAll_Rank	MktingForOwnNew_Rank
Delay_Global	0.132***	0.099***	0.133***	0.101***
Delay_Local	0.139***	0.099***	0.141***	0.100***
Log (Amihud)	0.186***	0.138***	0.184***	0.136***
%Zero	0.188***	0.083***	0.188***	0.081***
Liquidity Co-movement	0.052***	0.015***	0.052***	0.014***
|Intercept_8Fac|	-0.063***	0.064***	-0.066***	0.060***
Co-movement_8Fac	0.084***	0.006	0.079***	-0.001
|Intercept_Domestic|	-0.065***	0.057***	-0.066***	0.056***
Co-movement_Domestic	0.087***	0.006	0.082***	-0.000
|Intercept_Foreign|	-0.052***	0.072***	-0.054***	0.069***
Co-movement_Foreign	0.091***	0.018***	0.086***	0.011***

Table 2: The Decision of Mutual Fund Family Cross-Border Expansion

This table presents the results of the following annual logistic regressions with year fixed effects and their corresponding t-statistics with standard errors clustered at the family level,

$$Expansion_{F,C,t} = \alpha + \beta Num\_UIT_{C,t-1} + \gamma M_{F,C,t-1} + e_{F,C,t},$$

where $Expansion_{F,C,t}$ refers to a dummy variable that equals one if the mutual fund family F starts a new foreign fund in target country C in year t and zero otherwise, and $Num\_UIT_{C,t-1}$ refers to the number of indices unexplored by foreign mutual funds in target country C. Vector M stacks all other family and target country control variables, including return correlation within and outside the family, the number of indices in domicile country, the Herfindahl index in the target country, domicile country and within the fund family, Log(Family TNA), the Expense Ratio, Family Turnover, Log(Family Age), Family Return, Family Flow, Log (Distance), Stock Market Turnover, Stock Market/GDP, and Private Bond Market/GDP. Our sample includes all active fund expansions. Appendix A provides detailed definitions for each variable. Numbers with "*", "**", and "***" are significant at the 10%, 5%, and 1% levels, respectively.

Out-of-sample Mutual Fund Family Cross-Border Expansion Regressed on Marketing Incentives					
	Model 1	Model 2	Model 3	Model 4	Model 5
Num_UIT	0.096***	0.182***	0.182***	0.197***	0.200***
	(22.24)	(26.06)	(26.07)	(23.71)	(22.44)
Num_UIT × HHI_Dom_Fund				-0.240***	
				(-4.65)	
Num_UIT × HHI_Dom_Fam					-0.134***
					(-4.11)
HHI_Dom_Fund		3.145***		5.251***	
		(4.23)		(6.91)	
HHI_Dom_Fam			1.631***		2.939***
			(3.29)		(5.45)
HHI_Target		1.271***	1.268***	1.185***	1.199***
		(5.87)	(5.86)	(5.30)	(5.40)
HHI_Family		0.436**	0.456**	0.441**	0.454**
		(2.48)	(2.55)	(2.52)	(2.56)
Within Family Correlation		-1.093***	-1.049***	-1.084***	-1.038***
		(-3.83)	(-3.71)	(-3.82)	(-3.69)
Outside Family Correlation		1.061*	0.834	1.071*	0.827
		(1.86)	(1.46)	(1.89)	(1.46)
Num_ID		-0.011***	-0.011***	-0.011***	-0.011***
		(-11.58)	(-11.43)	(-11.63)	(-11.45)
Log (Family TNA)	0.296***	0.397***	0.399***	0.396***	0.399***
	(11.76)	(14.38)	(14.22)	(14.36)	(14.23)
Expense Ratio	-0.198***	-0.075	-0.071	-0.070	-0.068
	(-3.75)	(-1.22)	(-1.16)	(-1.15)	(-1.12)
Family Turnover	-0.002**	0.001	0.001	0.001	0.001
	(-2.42)	(1.57)	(1.46)	(1.60)	(1.50)
Log (Family Age)	-0.026	-0.002	-0.007	-0.010	-0.012
	(-0.51)	(-0.03)	(-0.11)	(-0.15)	(-0.17)
Family Return	0.069***	-0.024	-0.023	-0.024	-0.023
	(3.15)	(-0.87)	(-0.81)	(-0.84)	(-0.81)
Family Flow	-0.001	0.006	0.007	0.006	0.007
	(-0.23)	(0.97)	(1.14)	(0.96)	(1.11)
Log (Distance)	-0.194***	-0.328***	-0.327***	-0.302***	-0.306***
	(-4.19)	(-6.39)	(-6.36)	(-5.90)	(-5.99)
Stock Market Turnover	0.005***	0.002***	0.002***	0.002***	0.002***
	(17.64)	(5.23)	(5.23)	(4.76)	(4.90)
Stock Market/GDP	0.003***	0.005***	0.005***	0.005***	0.005***
	(10.17)	(11.84)	(11.84)	(11.77)	(11.76)
Private Bond Market/GDP	0.009***	0.003***	0.003***	0.003***	0.003***
	(11.28)	(3.00)	(2.99)	(2.61)	(2.74)
Constant	-15.191***	-16.963***	-16.935***	-17.067***	-17.094***
	(-32.72)	(-23.04)	(-22.89)	(-23.27)	(-23.21)
Obs	269,624	130,996	130,996	130,996	130,996

Table 3: Performance of Marketing-Oriented Cross-Border Expansions

This table presents the results of the following regressions with year fixed effects and their corresponding robust t-statistics,

$$Perf_{f,t:t+4} = \alpha + \beta Num\_UIT_{f,t-1} + \gamma M_{f,t-1} + e_{f,t},$$

where $Perf_{f,t:t+4}$ refers to the average monthly return of fund f in five years (year t to $t+4$) after inception, $Num\_UIT_{f,t-1}$ refers to the number of index unexplored by foreign mutual funds in the country where fund f is launched, and an alternative measure $Rank\_UIT_{f,t-1}$ refers to the rank of unexplored indices. Vector M stacks all other family and target country control variables, including return correlation within and outside the family, Log(Family TNA), Expense Ratio, Family Turnover, Log(Family Age), Family Return, Log (Distance), Stock Market Turnover, Stock Market/GDP, and Private Bond Market/GDP. Raw returns are further adjusted by a Fama-French-Carhart four-factor model comprising the market, size, book-to-market, and momentum factors. Our sample includes all newly launched active funds. Appendix A provides detailed definitions for each variable. Numbers with "*", "**", and "***" are significant at the 10%, 5%, and 1% levels, respectively.

Out-of-sample Performance of Cross-Border Expansion (in %) Regressed on Marketing Incentives				
	New Fund Return		New Fund 4-Factor-adjusted	
	Model 1	Model 2	Model 3	Model 4
Num_UIT	-0.004**		-0.019***	
	(-2.59)		(-3.35)	
Rank_UIT		-0.113**		-0.362**
		(-2.22)		(-2.49)
Within Family Correlation	0.290***	0.302***	0.003	0.058
	(4.02)	(4.03)	(0.02)	(0.37)
Outside Family Correlation	-0.256*	-0.273*	0.140	0.034
	(-1.87)	(-1.91)	(0.60)	(0.14)
Log (Family TNA)	0.024***	0.025***	0.022***	0.024***
	(4.30)	(4.47)	(2.92)	(3.10)
Expense Ratio	0.004	0.007	-0.055*	-0.044
	(0.29)	(0.50)	(-1.87)	(-1.46)
Family Turnover	0.000	0.000	0.001***	0.001***
	(0.46)	(0.76)	(3.32)	(3.24)
Log (Family Age)	0.017	0.017	0.009	0.008
	(0.92)	(0.90)	(0.43)	(0.41)
Family Return	-0.000	0.000	-0.022	-0.020
	(-0.01)	(0.05)	(-1.54)	(-1.41)
Log (Distance)	0.002	0.002	0.017	0.037
	(0.14)	(0.12)	(0.59)	(1.09)
Stock Market Turnover	-0.000*	-0.000***	-0.001**	-0.001***
	(-2.01)	(-2.93)	(-2.61)	(-3.02)
Stock Market/GDP	-0.000	-0.000	-0.001***	-0.001***
	(-1.68)	(-1.67)	(-5.18)	(-4.29)
Private Bond Market/GDP	0.000	0.000	0.002**	0.001
	(0.41)	(0.36)	(2.09)	(1.45)
Constant	-0.542***	-0.502**	-0.145	0.035
	(-2.95)	(-2.54)	(-0.43)	(0.09)
Adj-Rsq.	0.042	0.042	0.110	0.097
Obs	2,198	2,198	2,198	2,198

Table 4: Performance of Domestic Funds Managed by Marketing-Oriented Families

This table presents the results of the following regressions with year fixed effects and their corresponding robust t-statistics,

$$DomPerf_{F,t:t+4} = \alpha + \beta MktingIncentive_{F,t-1} + \gamma M_{F,t-1} + e_{F,t},$$

where $DomPerf_{F,t:t+4}$ refers to the average monthly return of the existing domestic portfolios of fund family F in five years (year t to $t+4$) after its foreign expansion; in particular, the family domestic return is computed as the lagged TNA-weighted return of all its domestic mutual funds. $MktingIncentive_{F,t-1}$ refers to the two measures of marketing incentives of a family, including $Fam\_Num\_UIT_{F,t-1}$ (the number of unexplored indices at the family level) and $Fam\_Rank\_UIT_{F,t-1}$ (the rank of unexplored indices at the family level). Vector *M* stacks all other family and domicile country control variables, including Herfindahl index in domicile country and within fund family, return correlations within and outside the family, the number of indices in domicile country, Log(Family TNA), Expense Ratio, Family Turnover, Log(Family Age), and Family Return. Raw returns are further adjusted by a Fama-French-Carhart four-domestic-factor model comprising the market, size, book-to-market, and momentum factors. Our sample includes all families that launch active funds in another country. Appendix A provides detailed definitions for each variable. Numbers with "*", "**", and "***" are significant at the 10%, 5%, and 1% levels, respectively.

Out-of-sample Performance of Domestic Funds in Mutual Fund Families (in %) Regressed on Marketing Incentives				
	Family Domestic Return		Family Domestic 4-Factor-adjusted	
	Model 1	Model 2	Model 3	Model 4
Fam_Num_UIT	-0.005**		-0.003*	
	(-2.02)		(-1.83)	
Fam_Rank_UIT		-0.169**		-0.104**
		(-2.52)		(-2.15)
HHI_Dom_Fund	0.172	0.217	0.583*	0.613*
	(0.55)	(0.69)	(1.76)	(1.87)
HHI_Family	0.160**	0.164**	0.122**	0.124**
	(2.48)	(2.54)	(2.29)	(2.33)
Within Family Correlation	0.140	0.152	-0.002	0.006
	(0.77)	(0.84)	(-0.02)	(0.04)
Outside Family Correlation	0.569	0.525	-0.017	-0.047
	(1.51)	(1.39)	(-0.06)	(-0.16)
Num_ID	0.000	0.000	0.001***	0.001***
	(0.00)	(0.02)	(3.15)	(3.36)
Log (Family TNA)	0.011	0.011	0.008	0.008
	(1.30)	(1.38)	(1.13)	(1.18)
Expense Ratio	-0.121***	-0.119***	-0.089***	-0.088***
	(-3.32)	(-3.29)	(-4.60)	(-4.53)
Family Turnover	-0.000	-0.000	-0.000	-0.000
	(-0.58)	(-0.58)	(-1.17)	(-1.17)
Log (Family Age)	0.028	0.029	-0.003	-0.002
	(1.49)	(1.55)	(-0.16)	(-0.13)
Family Return	0.011	0.011	0.045***	0.045***
	(0.58)	(0.61)	(3.31)	(3.34)
Constant	-0.558***	-0.484**	-0.357**	-0.315*
	(-2.76)	(-2.33)	(-2.24)	(-1.95)
Adj-Rsq.	0.507	0.508	0.110	0.110
Obs	1,016	1,016	1,012	1,012

Table 5: Performance of Portfolios of Domestic Funds Sorted by Marketing Incentives

At the beginning of each year, mutual fund families are sorted into terciles according to their lagged marketing incentives, proxied by the number and the rank of unexplored indices at the family level ($Fam\_Num\_UIT_{F,t-1}$ and $Fam\_Rank\_UIT_{F,t-1}$). This table reports the holding period (year t) monthly returns to the strategy of going long (short) for Low (High) marketing incentive families, and the returns are measured by the returns of domestic funds in mutual fund families. The returns are first averaged across fund families within the same domicile country and then averaged across countries. Raw returns are further adjusted by CAPM (the international market factor) or a Fama-French-Carhart four-international-factor model comprising the market, size, book-to-market, and momentum factors. The "LMH" rows report the difference in profits between Low and High marketing incentive portfolios. Newey-West adjusted t-statistics are shown in parentheses. Our sample includes all families that launch active funds in another country. Appendix A provides detailed definitions for each variable. Numbers with "*", "**" and "***" are significant at the 10%, 5% and 1% levels, respectively.

Portfolio Returns (in %) to Investment Strategies Sorted by Marketing Incentives						
Rank of Marketing Incentive	Sorted by Fam_Num_UIT			Sorted by Fam_Rank_UIT		
	Return	CAPM	FFC	Return	CAPM	FFC
Low	0.600	0.221**	0.175	0.598	0.221**	0.187*
	(1.14)	(2.09)	(1.56)	(1.15)	(2.14)	(1.66)
Med	0.576	0.202	0.073	0.570	0.192	0.073
	(1.08)	(1.59)	(0.53)	(1.05)	(1.55)	(0.55)
High	0.413	0.032	-0.057	0.427	0.053	-0.045
	(0.75)	(0.25)	(-0.42)	(0.79)	(0.41)	(-0.33)
LMH	0.186**	0.189**	0.232**	0.171*	0.168*	0.231**
	(2.03)	(2.05)	(2.41)	(1.84)	(1.73)	(2.29)

Table 6: Robustness Checks for U.S. Mutual Fund Families

This table reports subsample results for U.S. mutual fund families. Models 1 to 2 present the results of the following annual logistic regressions with year fixed effects and their corresponding t-statistics with standard errors clustered at the family level,

$$Expansion_{F,C,t} = \alpha + \beta Num\_UIT_{C,t-1} + \gamma M_{F,C,t-1} + e_{F,C,t},$$

where all variables are defined as in Table 2. Models 3 to 4 present the results of the following regressions with year fixed effects and their corresponding robust t-statistics,

$$DomPerf_{F,t:t+4} = \alpha + \beta MktingIncentive_{F,t-1} + \gamma M_{F,t-1} + e_{F,t},$$

where all variables are defined as in Table 4. Appendix A provides detailed definitions for each variable. Numbers with "*", "**", and "***" are significant at the 10%, 5%, and 1% levels, respectively.

Out-of-sample Family Cross-Border Expansion and Domestic Performance (in %) Regressed on Marketing Incentives				
	Family Cross-Border Expansion		Family Domestic 4-Factor-adjusted Return (in %)	
	Model 1	Model 2	Model 3	Model 4
Num_UIT	0.045***	0.346***		
	(3.47)	(8.79)		
Fam_Num_UIT			-0.005**	
			(-2.52)	
Fam_Rank_UIT				-0.128**
				(-2.46)
HHI_Dom_Fund		6.303***	-0.140	-0.092
		(3.93)	(-0.43)	(-0.28)
HHI_Target		3.378***		
		(7.24)		
HHI_Family		0.077	0.029	0.029
		(0.20)	(0.51)	(0.52)
Within Family Correlation		-1.835**	0.280	0.303
		(-2.35)	(1.13)	(1.22)
Outside Family Correlation		3.008	-0.733	-0.800
		(1.47)	(-1.23)	(-1.34)
Num_ID		-1.094***	0.004***	0.004***
		(-3.08)	(3.89)	(3.90)
Log (Family TNA)	0.450***	0.388***	0.003	0.003
	(9.30)	(5.95)	(0.35)	(0.29)
Expense Ratio	0.382*	0.324	0.009	0.007
	(1.91)	(1.13)	(0.17)	(0.13)
Family Turnover	0.000	-0.000	-0.001**	-0.001**
	(0.21)	(-0.20)	(-2.00)	(-2.02)
Log (Family Age)	0.038	0.186	0.035	0.036
	(0.28)	(1.11)	(1.51)	(1.58)
Family Return	0.171***	0.169	0.004	0.006
	(3.11)	(1.60)	(0.14)	(0.21)
Family Flow	-0.009	-0.007		
	(-0.59)	(-0.23)		
Log (Distance)	0.648***	1.195***		
	(3.91)	(4.38)		
Stock Market Turnover	0.005***	-0.012***		
	(6.69)	(-4.39)		
Stock Market/GDP	0.001	0.002		
	(0.99)	(1.47)		
Private Bond Market/GDP	0.020***	0.023***		
	(13.81)	(5.37)		
Constant	-25.548***	187.900***	-0.370*	-0.273
	(-15.80)	(2.73)	(-1.72)	(-1.23)
Obs	106,189	50,113	252	252

Table 7: Performance of Foreign Funds Managed by Marketing-Oriented Families

Panel A presents the results of the following regressions with year fixed effects and their corresponding robust t-statistics,

$$ForPerf_{F,t:t+4} = \alpha + \beta MktingIncentive_{F,t-1} + \gamma M_{F,t-1} + e_{F,t},$$

where $ForPerf_{F,t:t+4}$ refers to the average monthly return of the existing foreign portfolios of fund family F in five years (year t to $t+4$) after its foreign expansion; in particular, the family foreign return is computed as the lagged TNA-weighted return of all its foreign mutual funds. $MktingIncentive_{F,t-1}$ refers to the two measures of marketing incentives of a family, including $Fam\_Num\_UIT_{F,t-1}$ (the number of unexplored indices at the family level) and $Fam\_Rank\_UIT_{F,t-1}$ (the rank of unexplored indices at the family level). Vector *M* stacks all other family and country control variables, including the Herfindahl index in the domicile country and within the fund family, the return correlation within and outside the family, the number of indices in the domicile country, Log(Family TNA), Expense Ratio, Family Turnover, Log(Family Age), and Family Return. Raw returns are further adjusted by a Fama-French-Carhart four-international-factor model comprising the market, size, book-to-market, and momentum factors. Panel B reports the holding period (year t) monthly returns to the strategy of going long (short) for Low (High) marketing incentive families, and the returns are measured by returns of foreign funds in mutual fund families. The portfolio construction is the same as in Table 5, and marketing incentive is proxied by the number ($Fam\_Num\_UIT_{F,t-1}$) and the rank ($Fam\_Rank\_UIT_{F,t-1}$) of unexplored indices at the family level. Newey-West adjusted t-statistics are shown in parentheses. Our sample includes all families that launch active funds in another country. Appendix A provides detailed definitions for each variable. Numbers with "*", "**", and "***" are significant at the 10%, 5%, and 1% levels, respectively.

Panel A: Out-of-sample Performance of Foreign Funds in Mutual Fund Families (in %) Regressed on Marketing Incentives				
	Family Foreign Return		Family Foreign 4-Factor-adjusted	
	Model 1	Model 2	Model 3	Model 4
Fam_Num_UIT	-0.003**		-0.003**	
	(-2.35)		(-2.25)	
Fam_Rank_UIT		-0.094**		-0.072**
		(-2.49)		(-1.97)
HHI_Dom_Fund	0.753***	0.759***	0.906***	0.500***
	(3.47)	(3.50)	(4.79)	(2.72)
HHI_Family	0.033	0.034	0.029	0.039
	(0.83)	(0.84)	(0.75)	(1.03)
Within Family Correlation	0.186*	0.191*	-0.234**	-0.244**
	(1.84)	(1.90)	(-2.16)	(-2.39)
Outside Family Correlation	0.056	0.046	0.013	0.162
	(0.32)	(0.26)	(0.10)	(1.00)
Num_ID	0.001***	0.001***	0.001***	0.001***
	(4.70)	(4.96)	(5.72)	(5.32)
Log (Family TNA)	0.013**	0.014**	0.005	0.012*
	(2.29)	(2.44)	(0.77)	(1.94)
Expense Ratio	0.056***	0.056***	-0.024	0.011
	(3.55)	(3.57)	(-1.55)	(0.71)
Family Turnover	-0.000	-0.000	-0.000	-0.000
	(-1.25)	(-1.20)	(-1.63)	(-0.30)
Log (Family Age)	0.023	0.021	0.017	0.008
	(1.63)	(1.54)	(1.18)	(0.54)
Family Return	-0.013	-0.012	0.006	0.037***
	(-1.10)	(-1.07)	(1.41)	(3.12)
Constant	0.309*	0.332*	-0.184	-0.294
	(1.76)	(1.89)	(-1.42)	(-1.61)
Adj-Rsq.	0.677	0.677	0.081	0.166
Obs	1,525	1,525	1,522	1,522

Table 7—Continued

Panel B: Portfolio Returns (in %) to Investment Strategies Sorted by Marketing Incentives						
Rank of Marketing Incentive	Sorted by Fam_Num_UIT			Sorted by Fam_Rank_UIT		
	Return	CAPM	FFC	Return	CAPM	FFC
Low	0.465	0.089	0.010	0.432	0.057	-0.017
	(0.89)	(0.83)	(0.09)	(0.84)	(0.55)	(-0.15)
Med	0.342	-0.031	-0.070	0.435	0.060	0.009
	(0.67)	(-0.30)	(-0.60)	(0.83)	(0.56)	(0.08)
High	0.308	-0.060	-0.164	0.246	-0.118	-0.230**
	(0.60)	(-0.54)	(-1.38)	(0.49)	(-1.09)	(-2.01)
LMH	0.157*	0.149	0.174*	0.186**	0.175**	0.213**
	(1.83)	(1.65)	(1.98)	(2.27)	(2.03)	(2.47)

Table 8: Investor Welfare Related to Marketing-Oriented Cross-Border Expansions

Models 1 to 6 present the results of the following regressions with year fixed effects and their corresponding robust t-statistics,

$$Diversification_{f,t:t+4} = \alpha + \beta Num\_UIT_{f,t-1} + \gamma M_{f,t-1} + e_{f,t},$$

where $Diversification_{f,t:t+4}$ refers to the diversification proxy of fund f in five years (year t to $t+4$) after inception, $Num\_UIT_{f,t-1}$ refers to the number of indices unexplored by foreign mutual funds in the country where fund f is launched, and an alternative measure $Rank\_UIT_{f,t-1}$ refers to the rank of unexplored index. Vector *M* stacks all other family and target country control variables, including return correlation within and outside the family, Log(Family TNA), Expense Ratio, Family Turnover, Log(Family Age), Family Return, Log(Distance), Stock Market Turnover, Stock Market/GDP, and Private Bond Market/GDP. In Models 1 to 2 (Models 3 to 4), the (lack of) diversification is proxied by the return (style-adjusted return) correlation between the newly launched fund and other funds within the same family, and in Models 5 to 6, the correlation is proxied by the return correlation between the newly launched fund and other funds outside the family but in the same domicile country. Models 7 to 8 present the results of the following regressions with year fixed effects and their corresponding robust t-statistics,

$$Perf_{f,t:t+4} = \alpha + \beta Num\_UIT_{f,t-1} + \gamma M_{f,t-1} + e_{f,t},$$

where $Perf_{f,t:t+4}$ refers to the average monthly four-factor-adjusted return of fund f in five years (year t to $t+4$) after inception, computed from a Fama-French-Carhart four-factor model comprising the market, size, book-to-market, and momentum factors. All other variables are defined the same as above, and the analysis is similar to Table 3, while focusing on the sub-period of the 2008 and 2009 financial crisis. Our sample includes all newly launched active funds. Appendix A provides detailed definitions for each variable. Numbers with "*", "**", and "***" are significant at the 10%, 5%, and 1% levels, respectively.

Table 8—Continued

Out-of-sample Diversification and Performance From Cross-Border Expansion (in %) Regressed on Marketing Incentives								
	Return Correlation Within Family		Style-adjusted Return Correlation Within Family		Return Correlation Outside Family		New Fund 4-Factor-adjusted Return in Crisis Period	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Num_UIT	0.135*		0.218***		0.049		-0.003	
	(1.85)		(4.05)		(0.60)		(-0.13)	
Rank_UIT		4.289*		5.013***		0.711		-0.101
		(1.80)		(3.51)		(0.26)		(-0.27)
Within Family Correlation	31.433***	31.216***	38.852***	38.428***	-0.024	-0.156	0.306	0.323
	(13.57)	(13.37)	(7.17)	(7.19)	(-0.01)	(-0.05)	(0.43)	(0.44)
Outside Family Correlation	-2.568	-2.502	-24.863***	-24.257***	22.265***	22.519***	-0.892	-0.943
	(-0.43)	(-0.44)	(-4.09)	(-4.20)	(9.52)	(9.50)	(-0.56)	(-0.56)
Log (Family TNA)	-0.038	-0.073	-1.820***	-1.859***	0.177	0.174	0.074**	0.074**
	(-0.17)	(-0.34)	(-7.43)	(-7.49)	(0.57)	(0.57)	(2.28)	(2.33)
Expense Ratio	2.098***	1.997***	0.780	0.657	0.411	0.392	-0.403***	-0.405***
	(4.05)	(4.11)	(0.73)	(0.61)	(1.39)	(1.30)	(-4.83)	(-4.81)
Turnover	0.016***	0.014***	0.002	0.000	0.004	0.003	0.001	0.001
	(4.51)	(4.58)	(0.24)	(0.01)	(0.64)	(0.65)	(1.62)	(1.64)
Log (Family Age)	0.374	0.408	2.566***	2.587***	0.514	0.508	-0.024	-0.023
	(0.54)	(0.61)	(3.95)	(3.89)	(1.63)	(1.69)	(-0.16)	(-0.15)
Family Return	0.163	0.158	2.084***	2.071***	-0.056	-0.057	-0.084**	-0.084**
	(0.47)	(0.45)	(3.89)	(3.87)	(-0.29)	(-0.28)	(-2.28)	(-2.30)
Log (Distance)	-1.372***	-1.275***	-0.334	-0.437	-1.678***	-1.753***	0.249**	0.246**
	(-3.46)	(-3.52)	(-0.32)	(-0.40)	(-3.85)	(-4.20)	(2.36)	(2.44)
Stock Market Turnover	0.008	0.010	0.010*	0.015**	0.013	0.014*	-0.002**	-0.002***
	(1.27)	(1.67)	(1.87)	(2.64)	(1.55)	(1.86)	(-2.39)	(-3.19)
Stock Market/GDP	0.006	0.006	-0.002	-0.001	0.010**	0.010**	-0.002***	-0.002***
	(1.21)	(1.33)	(-0.54)	(-0.40)	(2.15)	(2.08)	(-5.22)	(-5.79)
Private Bond Market/GDP	0.005	0.004	0.015	0.020	-0.005	-0.002	-0.001	-0.001
	(0.37)	(0.28)	(1.11)	(1.40)	(-0.31)	(-0.15)	(-0.56)	(-0.72)
Constant	51.868***	50.937***	15.360*	13.486	49.962***	49.510***	-0.609	0.278
	(8.12)	(8.18)	(1.87)	(1.57)	(4.69)	(4.59)	(-0.72)	(0.33)
Adj-Rsq.	0.306	0.307	0.116	0.115	0.344	0.344	0.276	0.276
Obs	2,348	2,348	2,372	2,372	2,429	2,429	221	221

Table 9: Influence of Marketing-Oriented Cross-Border Capital Flows on Stock Market Efficiency

This table presents the results of the following Panel regressions with year and stock fixed effects and their corresponding t-statistics with standard errors clustered at the stock level,

$$Delay_{i,t} = \alpha + \beta MktingForOwn_{i,t-1} + \gamma M_{i,t-1} + e_{i,t},$$

where $Delay_{i,t}$ refers to market delay of stock i in year t to the global market information ($Delay\_Global_{i,t}$) or the local market information ($Delay\_Local_{i,t}$), and $MktingForOwn_{i,t-1}$ is the ownership of marketing-oriented active foreign funds either by all foreign funds of marketing-oriented families ($MktingForOwnAll_{i,t-1}$) or by newly launched marketing-oriented funds ($MktingForOwnNew_{i,t-1}$). $MktingForOwnAll_{i,t-1}$ ($MktingForOwnNew_{i,t-1}$) further refers to a set of variables, i.e., $MktingForOwnAll\_Num_{i,t-1}$ and $MktingForOwnAll\_Rank_{i,t-1}$ ($MktingForOwnNew\_Num_{i,t-1}$ and $MktingForOwnNew\_Rank_{i,t-1}$) when marketing incentives of mutual fund families are proxied by $Fam\_Num\_UIT_{F,t-1}$ and $Fam\_Rank\_UIT_{F,t-1}$, respectively. Vector *M* stacks all other stock and country control variables, including domestic and foreign IO, Stock Return, Log(Stock Size), Turnover, Log(Net Income), Log(Sales), Log(Total Assets), Stock Market Turnover, Stock Market/GDP, and Private Bond Market/GDP. Appendix A provides detailed definitions for each variable. Numbers with "*", "**", and "***" are significant at the 10%, 5%, and 1% levels, respectively.

Out-of-sample Market Efficiency Measures (in %) Regressed on Marketing-Oriented Mutual Fund Ownership								
	Delay_Global				Delay_Local			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
MktingForOwnAll_Num	0.037***				0.025***			
	(3.50)				(2.67)			
MktingForOwnNew_Num		0.040***				0.025**		
		(3.41)				(2.48)		
MktingForOwnAll_Rank			0.037***				0.027***	
			(3.65)				(2.99)	
MktingForOwnNew_Rank				0.043***				0.028***
				(3.83)				(2.93)
Domestic IO	-0.059***	-0.059***	-0.059***	-0.059***	-0.040***	-0.040***	-0.040***	-0.040***
	(-5.60)	(-5.60)	(-5.59)	(-5.60)	(-3.80)	(-3.81)	(-3.80)	(-3.80)
Foreign IO	-0.011	-0.009	-0.011*	-0.011*	-0.005	-0.004	-0.006	-0.005
	(-1.64)	(-1.47)	(-1.74)	(-1.66)	(-0.74)	(-0.57)	(-0.88)	(-0.74)
Stock Return	-0.063***	-0.063***	-0.063***	-0.064***	-0.072***	-0.073***	-0.073***	-0.073***
	(-7.58)	(-7.59)	(-7.59)	(-7.60)	(-8.54)	(-8.54)	(-8.54)	(-8.55)
Log (Stock Size)	-1.867***	-1.866***	-1.867***	-1.866***	-2.058***	-2.057***	-2.058***	-2.057***
	(-24.75)	(-24.74)	(-24.76)	(-24.73)	(-27.02)	(-27.01)	(-27.02)	(-27.00)
Turnover	-3.431***	-3.435***	-3.428***	-3.429***	-2.943***	-2.946***	-2.941***	-2.943***
	(-15.08)	(-15.10)	(-15.07)	(-15.08)	(-12.48)	(-12.49)	(-12.46)	(-12.47)
Log (Net Income)	-0.119***	-0.119***	-0.119***	-0.119***	-0.082***	-0.082***	-0.082***	-0.082***
	(-6.39)	(-6.39)	(-6.39)	(-6.40)	(-4.37)	(-4.37)	(-4.37)	(-4.37)
Log (Sales)	0.065	0.065	0.065	0.066	0.060	0.061	0.061	0.061
	(0.75)	(0.75)	(0.75)	(0.75)	(0.69)	(0.69)	(0.69)	(0.70)
Log (Total Assets)	-0.561***	-0.563***	-0.561***	-0.563***	-0.551***	-0.552***	-0.551***	-0.552***
	(-6.06)	(-6.08)	(-6.06)	(-6.08)	(-5.96)	(-5.97)	(-5.96)	(-5.97)
Stock Market Turnover	-0.001	-0.001	-0.001	-0.001	0.001	0.001	0.001	0.001
	(-0.64)	(-0.64)	(-0.66)	(-0.66)	(0.76)	(0.76)	(0.75)	(0.75)
Stock Market/GDP	0.018***	0.018***	0.018***	0.018***	0.010***	0.010***	0.010***	0.010***
	(10.99)	(10.99)	(11.00)	(10.99)	(6.13)	(6.12)	(6.13)	(6.12)
Private Bond Market/GDP	-0.028***	-0.028***	-0.028***	-0.028***	-0.017***	-0.017***	-0.017***	-0.017***
	(-9.68)	(-9.67)	(-9.68)	(-9.67)	(-5.60)	(-5.60)	(-5.60)	(-5.59)
Constant	36.268***	36.288***	36.271***	36.291***	36.385***	36.397***	36.387***	36.400***
	(48.95)	(48.98)	(48.95)	(48.98)	(48.23)	(48.25)	(48.24)	(48.25)
Adj-Rsq.	0.069	0.069	0.069	0.069	0.067	0.067	0.067	0.067
Obs	196,283	196,283	196,283	196,283	196,283	196,283	196,283	196,283

Table 10: Influence of Marketing-Oriented Cross-Border Capital Flows on Liquidity

This table presents the results of the following Panel regressions with year and stock fixed effects and their corresponding t-statistics with standard errors clustered at the stock level,

$$Illiq_{i,t} = \alpha + \beta MktingForOwn_{i,t-1} + \gamma M_{i,t-1} + e_{i,t},$$

where $Illiq_{i,t}$ refers to the illiquidity proxies of stock i in year t, including the logarithm of Amihud (2002) illiquidity and proportion of zero returns, as well as the proxy for liquidity co-movement. $MktingForOwn_{i,t-1}$ is the ownership of marketing-oriented active foreign funds either by all foreign funds of marketing-oriented families ($MktingForOwnAll_{i,t-1}$) or by newly launched marketing-oriented funds ($MktingForOwnNew_{i,t-1}$), as defined in Table 9. Vector *M* stacks all other stock and country control variables, including domestic and foreign IO, Stock Return, Log(Stock Size), Turnover, Log(Net Income), Log(Sales), Log(Total Assets), Stock Market Turnover, Stock Market/GDP, and Private Bond Market/GDP. Appendix A provides detailed definitions for each variable. Numbers with "*", "**", and "***" are significant at the 10%, 5%, and 1% levels, respectively.

Table 10—Continued

Out-of-sample Stock Illiquidity Measures Regressed on Marketing-Oriented Mutual Fund Ownership												
	Log (Amihud)				%Zero				Liquidity Co-movement			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
MktingForOwnAll_Num	0.002**				0.063***				0.001***			
	(2.16)				(5.54)				(3.69)			
MktingForOwnNew_Num		0.003***				0.070***				0.001***		
		(2.73)				(5.88)				(4.01)		
MktingForOwnAll_Rank			0.002**				0.067***				0.001***	
			(2.28)				(5.91)				(3.44)	
MktingForOwnNew_Rank				0.003***				0.074***				0.001***
				(2.98)				(6.34)				(4.04)
Domestic IO	-0.025***	-0.025***	-0.025***	-0.025***	-0.267***	-0.267***	-0.267***	-0.267***	0.009***	0.009***	0.009***	0.009***
	(-25.95)	(-25.97)	(-25.95)	(-25.98)	(-22.18)	(-22.20)	(-22.18)	(-22.19)	(25.80)	(25.78)	(25.80)	(25.78)
Foreign IO	-0.002	-0.002	-0.002	-0.002	-0.111***	-0.109***	-0.113***	-0.111***	0.001***	0.001***	0.001***	0.001***
	(-1.41)	(-1.48)	(-1.45)	(-1.55)	(-7.32)	(-7.35)	(-7.39)	(-7.41)	(4.20)	(4.50)	(4.20)	(4.39)
Lag (Stock Return)	-0.003***	-0.003***	-0.003***	-0.003***	-0.052***	-0.052***	-0.052***	-0.052***	-0.001**	-0.001**	-0.001**	-0.001**
	(-4.37)	(-4.38)	(-4.37)	(-4.39)	(-5.29)	(-5.31)	(-5.30)	(-5.32)	(-2.29)	(-2.30)	(-2.29)	(-2.30)
Log (Stock Size)	-1.081***	-1.081***	-1.081***	-1.081***	-4.539***	-4.536***	-4.539***	-4.536***	-0.003	-0.003	-0.003	-0.003
	(-131.38)	(-131.40)	(-131.37)	(-131.38)	(-34.88)	(-34.85)	(-34.88)	(-34.85)	(-1.14)	(-1.13)	(-1.15)	(-1.13)
Turnover	-0.813***	-0.813***	-0.813***	-0.813***	6.757***	6.750***	6.763***	6.759***	0.061***	0.061***	0.061***	0.061***
	(-30.68)	(-30.69)	(-30.65)	(-30.65)	(16.32)	(16.31)	(16.32)	(16.32)	(8.23)	(8.21)	(8.24)	(8.23)
Log (Net Income)	-0.032***	-0.032***	-0.032***	-0.032***	0.306***	0.305***	0.306***	0.305***	0.002***	0.002***	0.002***	0.002***
	(-20.89)	(-20.89)	(-20.89)	(-20.90)	(13.29)	(13.28)	(13.29)	(13.27)	(2.75)	(2.74)	(2.75)	(2.74)
Log (Sales)	-0.025***	-0.025***	-0.025***	-0.025***	0.140	0.140	0.140	0.141	-0.002	-0.002	-0.002	-0.002
	(-3.18)	(-3.18)	(-3.18)	(-3.18)	(0.99)	(1.00)	(0.99)	(1.00)	(-0.58)	(-0.58)	(-0.59)	(-0.58)
Log (Total Assets)	0.022***	0.022***	0.022***	0.022***	0.689***	0.686***	0.688***	0.686***	-0.010***	-0.010***	-0.010***	-0.010***
	(2.71)	(2.70)	(2.71)	(2.70)	(4.13)	(4.12)	(4.13)	(4.12)	(-2.95)	(-2.96)	(-2.95)	(-2.96)
Stock Market Turnover	-0.000	-0.000	-0.000	-0.000	-0.024***	-0.024***	-0.024***	-0.024***	0.000***	0.000***	0.000***	0.000***
	(-0.57)	(-0.57)	(-0.58)	(-0.59)	(-25.01)	(-25.02)	(-25.03)	(-25.04)	(3.36)	(3.36)	(3.35)	(3.34)
Stock Market/GDP	0.001***	0.001***	0.001***	0.001***	-0.009***	-0.009***	-0.009***	-0.009***	-0.001***	-0.001***	-0.001***	-0.001***
	(7.54)	(7.53)	(7.54)	(7.53)	(-3.79)	(-3.80)	(-3.78)	(-3.80)	(-14.86)	(-14.87)	(-14.86)	(-14.87)
Private Bond Market/GDP	0.005***	0.005***	0.005***	0.005***	0.028***	0.028***	0.028***	0.028***	-0.001***	-0.001***	-0.001***	-0.001***
	(16.50)	(16.51)	(16.50)	(16.51)	(5.45)	(5.46)	(5.46)	(5.47)	(-13.85)	(-13.84)	(-13.85)	(-13.84)
Constant	8.253***	8.254***	8.253***	8.255***	47.761***	47.794***	47.765***	47.798***	-1.110***	-1.109***	-1.110***	-1.109***
	(111.94)	(111.95)	(111.95)	(111.96)	(37.68)	(37.70)	(37.68)	(37.71)	(-42.18)	(-42.15)	(-42.17)	(-42.14)
Adj-Rsq.	0.527	0.527	0.527	0.527	0.079	0.079	0.079	0.080	0.052	0.052	0.052	0.052
Obs	183,210	183,210	183,210	183,210	190,913	190,913	190,913	190,913	174,691	174,691	174,691	174,691

Table 11: Influence of Marketing-Oriented Cross-Border Capital Flows on Stock Market Integration

This table presents the results of the following Panel regressions with year and stock fixed effects and their corresponding t-statistics with standard errors clustered at the stock level,

$$Integration_{i,t} = \alpha + \beta MktingForOwn_{i,t-1} + \gamma M_{i,t-1} + e_{i,t},$$

where $Integration_{i,t}$ refers to the market integration proxies (|*Intercept_8Fac*| and *Co-movement_8Fac*) of stock i in year t, $MktingForOwn_{i,t-1}$ is the ownership of marketing-oriented active foreign funds either by all foreign funds of marketing-oriented families ($MktingForOwnAll_{i,t-1}$) or by newly launched marketing-oriented funds ($MktingForOwnNew_{i,t-1}$), as defined in Table 9. Vector M stacks all other stock and country control variables, including domestic and foreign IO, Stock Return, Log(Stock Size), Turnover, Log(Net Income), Log(Sales), Log(Total Assets), Stock Market Turnover, Stock Market/GDP, and Private Bond Market/GDP. The integration is defined with respect to Fama-French-Carhart four domestic factors (market, size, book-to-market, and momentum) and four foreign factors (value-weighted four factors excluding the domestic country). Appendix A provides detailed definitions for each variable. Numbers with "*", "**", and "***" are significant at the 10%, 5%, and 1% levels, respectively.

Out-of-sample Market Integration Measures (International 8-Factor, in %) Regressed on Marketing-Oriented Mutual Fund Ownership								
	|Intercept_8Fac|				Co-movement_8Fac			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
MktingForOwnAll_Num	-0.006				-0.011			
	(-0.34)				(-0.93)			
MktingForOwnNew_Num		-0.004				-0.016		
		(-0.19)				(-1.40)		
MktingForOwnAll_Rank			-0.002				-0.017	
			(-0.14)				(-1.48)	
MktingForOwnNew_Rank				0.001				-0.020*
				(0.03)				(-1.79)
Domestic IO	-0.156***	-0.156***	-0.156***	-0.156***	0.050***	0.050***	0.050***	0.050***
	(-5.39)	(-5.39)	(-5.39)	(-5.39)	(3.93)	(3.93)	(3.93)	(3.93)
Foreign IO	0.128***	0.127***	0.127***	0.126***	-0.011	-0.010	-0.009	-0.009
	(7.09)	(7.17)	(6.91)	(7.04)	(-0.95)	(-0.92)	(-0.74)	(-0.80)
Lag (Stock Return)	-0.214***	-0.215***	-0.215***	-0.215***	0.015	0.015	0.015	0.015
	(-8.92)	(-8.92)	(-8.92)	(-8.92)	(1.57)	(1.58)	(1.58)	(1.58)
Log (Stock Size)	-6.446***	-6.446***	-6.446***	-6.446***	2.348***	2.347***	2.347***	2.347***
	(-22.87)	(-22.86)	(-22.87)	(-22.86)	(18.69)	(18.69)	(18.69)	(18.68)
Turnover	0.114	0.115	0.115	0.116	10.441***	10.442***	10.438***	10.439***
	(0.17)	(0.17)	(0.17)	(0.17)	(29.76)	(29.77)	(29.75)	(29.76)
Log (Net Income)	-1.653***	-1.653***	-1.653***	-1.653***	0.378***	0.378***	0.378***	0.379***
	(-29.28)	(-29.28)	(-29.28)	(-29.28)	(16.19)	(16.20)	(16.19)	(16.20)
Log (Sales)	-0.612**	-0.612**	-0.612**	-0.612**	0.013	0.013	0.013	0.012
	(-2.38)	(-2.38)	(-2.38)	(-2.38)	(0.10)	(0.10)	(0.10)	(0.10)
Log (Total Assets)	0.059	0.059	0.059	0.059	1.502***	1.502***	1.502***	1.502***
	(0.22)	(0.22)	(0.22)	(0.22)	(10.78)	(10.78)	(10.78)	(10.78)
Stock Market Turnover	0.040***	0.040***	0.040***	0.040***	-0.002**	-0.002**	-0.002**	-0.002**
	(17.32)	(17.32)	(17.32)	(17.32)	(-2.25)	(-2.25)	(-2.24)	(-2.23)
Stock Market/GDP	0.028***	0.028***	0.028***	0.028***	-0.028***	-0.028***	-0.028***	-0.028***
	(7.14)	(7.14)	(7.14)	(7.14)	(-16.66)	(-16.66)	(-16.67)	(-16.66)
Private Bond Market/GDP	0.017**	0.017**	0.017**	0.017**	0.032***	0.032***	0.032***	0.032***
	(2.13)	(2.13)	(2.13)	(2.13)	(7.23)	(7.23)	(7.23)	(7.23)
Constant	94.188***	94.187***	94.188***	94.189***	3.466***	3.458***	3.464***	3.455***
	(42.10)	(42.10)	(42.10)	(42.10)	(3.06)	(3.05)	(3.06)	(3.05)
Adj-Rsq.	0.178	0.178	0.178	0.178	0.214	0.214	0.214	0.214
Obs	190,913	190,913	190,913	190,913	190,909	190,909	190,909	190,909

Internet Appendix

Inefficient Globalization of Finance: Evidence from Marketing-Oriented Overseas Expansions of Low-Skilled Mutual Fund Families

In this Internet Appendix, we provide two sets of robustness tests of the main results. First, we confirm our main findings on mutual fund family skills in the full sample and in a sub-sample excluding the closet indexers, and we employ alternative performance measures. Next, we conduct robustness tests regarding the market influence of cross-border capital flows from three dimensions: informational efficiency, liquidity, and market integration. We adopt placebo tests to confirm our main results and exclude the closet indexers in our analyses.

Table IA1 tabulate the summary statistics for the full sample, and the distribution is largely similar to that of active funds. Table IA2 investigates the subsequent performance of newly launched funds after cross-border expansion. Panel A includes all (both active and passive) fund expansions and suggests that new funds launched for marketing purposes perform poorly in the subsequent five years after inception. In particular, a one-standard-deviation increase in the number (rank) of unexplored indices reduces annual returns and risk-adjusted performance by 0.41% and 1.84% (0.4% and 1.2%) in the overall sample. Cremers, Ferreira, Matos, Starks (2016) documented that some active funds are largely passively managed, and these closet indexers manage approximately 20% of the worldwide mutual fund assets. In Panel B, we further exclude the closet indexers, defined as funds with an active share below 60% (following Cremers and Petajisto (2009) and Cremers, Ferreira, Matos, and Starks (2016)). The results show a similar statistical and economic impact.

Panels C and D of Table IA2 examine alternative performance measures. Panel C constructs *New Fund 8-Factor-adjusted Return*, computed from an eight-factor model, including four Fama-French-Carhart (FFC) factors (market, size, book-to-market, and momentum) measured in the target country where the new fund is launched, as well as four foreign factors, that is, the value weighted average of the four factors in all other countries. Our main results are robust to this alternative performance measure for both the active funds sample and the full sample. While thus far we have focused on the net return delivered to mutual fund investors after all fees and expenses, Panel D employs gross-of-fee performance of newly launched active funds. Gross-of-fee fund return is computed as the fund total return plus one-twelfth of the annualized expense ratio, and gross-of-fee fund returns are further adjusted by a Fama-French-Carhart four-factor model. The results confirm that the fund performance is significantly worse after marketing-oriented cross-border expansions, even on a gross-of-fee basis.

A one-standard-deviation increase in the number (rank) of unexplored indices reduces annual returns and risk-adjusted gross-of-fee performance by 0.41% and 1.94% (0.33% and 1.16%). Overall, our findings imply that the cross-border expansion of mutual fund families due to marketing incentives is associated with lower performance.

Next, we investigate whether marketing-oriented overseas expansions are related to the managerial skills of the mutual fund families, proxied by the family performance in both the domestic and the foreign market. We first re-estimate the same specifications as Equations (6) and (7), and the results are reported in Table IA3. Panel A includes all families with overseas expansion, with Models 1 to 4 focusing on domestic performance and Models 5 to 10 focusing on foreign performance. Foreign performance is adjusted by an international Fama-French-Carhart four-factor model and an eight-factor model consisting of four domestic factors and four foreign factors, which are the value weighted average of four domestic factors in all other countries. A one-standard-deviation increase in the number (rank) of unexplored indices reduces returns and FFC four-factor-adjusted performance by 0.43% and 0.35% (0.48% and 0.34%) per year in the domestic market and by 0.26% and 0.26% (0.27% and 0.2%) per year in the foreign market. To better understand the economic magnitude, we also perform a portfolio-based analysis. Unreported results show that the families with high marketing incentives underperform those with low marketing incentives by 2.78% (2.77%) per year in FFC four-factor alpha in the domestic market and by 2.81% (3.11%) in the foreign market when marketing incentive is proxied by the number (rank) of unexplored indices. Panel B reports similar statistics in a sub-sample excluding closet indexers and confirms the negative relationship between mutual fund marketing incentives and its performance. For instance, a one-standard-deviation increase in the rank of unexplored indices reduces returns (FFC four-factor alpha) by 0.29% (0.19%) per year in the domestic market and by 0.19% (0.13%) per year in the foreign market. In addition, Panel C constructs gross-of-fee family performance for all families that launch active funds in another country. Gross-of-fee family domestic (foreign) return is computed as the lagged TNA-weighted gross-of-fee return of all its domestic (foreign) mutual funds. Gross-of-fee family returns are further adjusted by a Fama-French-Carhart four-factor model. A one-standard-deviation increase in the rank of unexplored indices reduces gross-of-fee FFC four-factor alpha by 0.22% per year in the domestic market and by 0.15% per year in the foreign market. To conclude, we provide

evidence that mutual fund families expand to differentiate themselves appear to be low-skilled and underperform in both the domestic and foreign markets. The results are robust to alternative samples and performance measures.

We move on to examine the relation between informational efficiency and the ownership of actively managed foreign funds offered by marketing-oriented and non-marketing-oriented fund families. Unlike in Table 9, we further include the ownership of non-marketing-oriented active foreign funds as a placebo test. Empirically, mutual fund families are sorted into terciles within the domicile country, according to their lagged marketing incentives, proxied by the number and the rank of unexplored indices at the family level (*Fam_Num_UIT* and *Fam_Rank_UIT*). Those in the top (bottom) tercile are defined as marketing-oriented (non-marketing-oriented) families. We then aggregate the ownership of non-marketing-oriented active foreign funds either by all foreign funds of non-marketing-oriented families (*Non-MktingForOwnAll*) or by newly launched non-marketing-oriented funds (*Non-MktingForOwnNew*). *Non-MktingForOwnAll* (*Non-MktingForOwnNew*) further refers to a set of variables, i.e., *Non-MktingForOwnAll_Num* and *Non-MktingForOwnAll_Rank* (*Non-MktingForOwnNew_Num* and *Non-MktingForOwnNew_Rank*) when marketing incentives of mutual fund families are proxied by *Fam_Num_UIT* and *Fam_Rank_UIT*, respectively. The results are reported in Table IA4. In Panel A, the informational efficiency is proxied by price delay to global and local market information, following Bae, Ozoguz, Tan, and Wirjanto (2012), as defined in Table 9 and Appendix A. In Panel B, we consider alternative measures of market efficiency. We first compute the *Variance Ratio* for stock i in year t as follows:

$$VR_{i,t} = \left| \frac{VAR5_{i,t}}{5 \times VAR1_{i,t}} - 1 \right|, \tag{A1}$$

where $VAR5_{i,t}$ and $VAR1_{i,t}$ refer to the variance of five-week and one-week accumulated returns of stock i in year t, following Griffin, Kelly, and Nardari (2010).

The second proxy – *Market Delay* – for stock i in year t is defined as follows:

$$Delay_{i,t} = 1 - \frac{R^2_{restricted,i,t}}{R^2_{unrestricted,i,t}}, \tag{A2}$$

where $R^2_{restricted,i,t}$ and $R^2_{unrestricted,i,t}$ refer to the adjusted R-square from restricted and unrestricted market models estimated using weekly returns in each year t. The restricted model (RM) and unrestricted model (UM) are defined, respectively, as follows:

$$RM: R_{i,w,t} = \alpha_i + \beta_{0,i} R_{mkt,w,t} + e_{i,w,t}, \quad \text{(A3)}$$

$$UM: R_{i,w,t} = \alpha_i + \sum_{k=0}^{4} \beta_{i,k,t} R_{mkt,w-k,t} + e_{i,w,t}, \quad \text{(A4)}$$

where $R_{i,w,t}$ refers to the accumulated return of stock i in week w of year t, and $R_{mkt,w,t}$ refers to the value-weighted market return in the same week, following Mech (1993), Hou and Moskowitz (2005), and Griffin, Kelly, and Nardari (2010).

In line with the findings in Table 9, the results in Panel A suggest that the capital flows associated with marketing-oriented cross-border expansions do not improve the price discovery in terms of incorporating both global and local market news. For instance, a one-standard-deviation increase in the ownership of marketing-oriented foreign funds identified based on the number (rank) of unexplored indices is related to 1.33% (1.35%) greater price delay (i.e., the influence of additional price delay scaled by the standard deviation of price delay) to the global market information and 0.96% (0.99%) greater price delay to the local market information. However, the cross-border expansions from skilled (least-marketing-oriented or non-marketing-oriented) foreign funds indeed improve the overall market efficiency in the target country by reducing the price delay to both global and local market information. A one-standard-deviation increase in the ownership of non-marketing-oriented foreign funds identified based on the number (rank) of unexplored indices is related to 0.84% (0.68%) less price delay to the global market information and 0.91% (0.61%) less price delay to the local market information. The results are robust to alternative measures of ownership when focusing only on newly launched funds, as well as alternative measures of market efficiency in Panel B. Hence, the harmful impact really comes from marketing-oriented and low-skilled foreign expansions.

Since the emerging markets have a generally more opaque information environment and are less efficient than developed markets, marketing-oriented overseas expansions can be more detrimental to emerging markets. To formally test this notion, we apply the analyses in Panel A to a sub-sample of emerging markets and report the findings in Panel C. The classification of emerging markets follows

Griffin, Kelly, and Nardari (2010). The results suggest that the marketing incentives contribute to the price delay in emerging markets only, and a one-standard-deviation increase in ownership of marketing-oriented foreign funds (none-marketing funds) is associated with 3.63% greater (2.37% less) price delay with respect to global market information and with 2.82% greater (2.07% less) price delay with respect to local market information. Therefore, marketing-oriented foreign capital flows could reduce price efficiency by approximately 4.9% to 6% than non-marketing-oriented foreign capital flows.

Next, we relate marketing incentives to stock liquidity and commonality in liquidity. Controlling for the ownership of non-marketing-oriented active foreign funds, Table IA5 Panel A provides supporting evidence that marketing-oriented foreign capital flows do not improve liquidity but increase the commonality in liquidity. In contrast, skilled (least-marketing-oriented) foreign funds display a similar pattern and fail to provide liquidity in the target country. Similarly, we assess whether marketing incentives affect market integration. The tests closely follow Table 11, while we further employ the ownership of non-marketing-oriented active foreign funds as a placebo test. The results in Panel B suggest that marketing-oriented foreign ownership in general is uncorrelated with integration with respect to the overall international market factors.

Finally, we show that the market influence of cross-border capital flows on informational efficiency, liquidity, and market integration still holds when we exclude closet indexers. The results in Table IA6, Panel A confirm that price delay to both global and local market information is enhanced after marketing-oriented cross-border expansions. In particular, a one-standard-deviation increase in ownership of marketing-oriented foreign funds identified based on the number (rank) of unexplored indices is related to 1.28% (1.19%) greater price delay (i.e., the influence of additional price delay scaled by the standard deviation of price delay) to the global market information and 0.92% (0.89%) greater price delay to the local market information. In terms of liquidity conditions, the findings in Panel B suggest that marketing-oriented foreign capital flows do not improve the stock liquidity in the target country but lead to higher commonality in liquidity. A one-standard-deviation increase in the ownership of marketing-oriented foreign funds identified based on the number (rank) of unexplored indices is associated with an increase in Amihud illiquidity by 0.41% (0.4%), the proportion of zero return days by 1.32% (1.31%), and commonality in liquidity with respect to the local market by 0.97% (0.96%, all

scaled by the standard deviation of illiquidity or liquidity commonality measures). In addition, the results for market integration are tabulated in Panel C. We find confirming evidence that marketing-oriented foreign ownership is not related to integration with respect to the overall international market factors.

In conclusion, our findings are robust to the alternative definition of active funds, i.e., based on 60% active share breakpoint, following Cremers and Petajisto (2009) and Cremers, Ferreira, Matos, and Starks (2016). Marketing-oriented overseas expansions are likely to be adopted by low-skilled fund companies to differentiate themselves, and such expansions are associated with low performance for all categories of funds a family offers. In addition, marketing-oriented cross-border capital flows reduce both price efficiency and liquidity conditions.

Table IA1: Summary Statistics

This table presents the summary statistics for the data used in the paper, including the mean, median, standard deviation, and the quantile distribution of number and rank of unexplored index at the country level as well as family level, monthly fund and family return, and other annual family and country characteristics. The sample consists of all mutual fund families with foreign expansion of all equity mutual funds over the period 2001−2012. Appendix A provides detailed definitions of each variable.

Quantile Distribution of Family and Country Characteristics (All Funds)							
	Mean	Std.Dev.	Quantile Distribution				
			10%	25%	Median	75%	90%
Num_UIT	8.649	8.521	0	0	6	16	21
Rank_UIT	0.746	0.289	0.310	0.400	0.905	1.000	1.000
Fam_Num_UIT	9.791	7.242	0.000	3.000	10.333	16.000	19.000
Fam_Rank_UIT	0.754	0.242	0.357	0.574	0.807	1.000	1.000
New Fund Return	0.432	0.744	-0.399	-0.037	0.347	0.864	1.449
New Fund 4-Factor-adjusted Return	0.029	0.588	-0.599	-0.283	-0.020	0.297	0.723
New Fund 8-Factor-adjusted Return	0.064	2.054	-0.600	-0.276	-0.025	0.298	0.705
New Fund Correlation Within Family	79.071	13.912	62.197	73.451	82.116	88.138	92.956
New Fund Correlation Outside Family	70.322	12.228	56.165	64.615	73.060	78.677	82.132
Family Domestic Return	0.548	1.093	-0.280	0.086	0.452	1.029	1.492
Family Domestic 4-Factor-adjusted Return	-0.103	0.471	-0.614	-0.318	-0.075	0.160	0.355
Family Foreign Return	0.533	0.898	-0.257	0.025	0.431	1.014	1.585
Family Foreign 4-Factor-adjusted Return	-0.163	0.523	-0.643	-0.373	-0.162	0.052	0.322
Family Foreign 8-Factor-adjusted Return	0.074	0.512	-0.418	-0.172	0.044	0.295	0.570
HHI_Dom_Fund	0.085	0.112	0.008	0.016	0.038	0.119	0.209
HHI_Dom_Fam	0.163	0.130	0.046	0.073	0.127	0.215	0.317
HHI_Target	0.104	0.203	0.004	0.005	0.008	0.079	0.316
HHI_Family	0.600	0.283	0.192	0.376	0.598	0.832	1.000
Within Family Correlation	0.693	0.174	0.479	0.604	0.703	0.825	0.899
Outside Family Correlation	0.576	0.143	0.406	0.511	0.595	0.656	0.742
Num_ID	48.101	54.795	2	6	23	64	157
Log (Family TNA)	21.032	2.442	17.677	19.466	21.292	22.881	23.929
Expense Ratio	1.028	0.621	0.115	0.549	1.111	1.431	1.763
Family Turnover	56.879	69.505	2.054	10.426	40.557	76.191	128.808
Log (Family Age)	4.546	0.799	3.526	4.205	4.679	5.049	5.402
Family Return	0.587	2.076	-2.171	-0.364	0.927	1.812	2.722
Family Flow	-0.732	8.041	-3.225	-1.118	-0.061	1.171	2.922
Log (Distance)	1.573	0.823	0.302	0.595	1.960	2.274	2.363
Stock Market Turnover	142.016	75.098	63.573	89.112	126.544	182.806	216.458
Stock Market/GDP	126.822	80.576	54.132	79.964	123.923	140.179	172.532
Private Bond Market/GDP	147.287	45.910	87.902	114.819	161.649	184.291	197.678

Table IA2: Performance of Marketing-Oriented Cross-Border Expansions

This table presents the results of the following regressions with year fixed effects and their corresponding robust t-statistics,

$$Perf_{f,t:t+4} = \alpha + \beta Num\_UIT_{f,t-1} + \gamma M_{f,t-1} + e_{f,t},$$

where $Perf_{f,t:t+4}$ refers to the average monthly return of fund f in five years (year t to $t+4$) after inception, $Num\_UIT_{f,t-1}$ refers to the number of index unexplored by foreign mutual funds in the country where fund f is launched, and an alternative measure $Rank\_UIT_{f,t-1}$ refers to the rank of unexplored index. Vector *M* stacks all other family and target country control variables, including return correlation within and outside family, Log(Family TNA), Expense Ratio, Family Turnover, Log(Family Age), Family Return, Log (Distance), Stock Market Turnover, Stock Market/GDP, and Private Bond Market/GDP. Raw returns are further adjusted by a Fama-French-Carhart four-factor model comprising the market, size, book-to-market, and momentum factors. Panel A includes all newly launched funds, and Panel B includes all newly launched active funds – defined as those with active share no less than 60% (following Cremers and Petajisto (2009) and Cremers, Ferreira, Matos, and Starks (2016)). Panel C reports similar statistics when raw returns are adjusted by an eight-factor model including four Fama-French-Carhart factors in the target country where the new fund is launched, as well as four foreign factors that are the value weighted average of the four factors in all other countries. Panel D reports similar statistics when we focus on gross-of-fee performance of newly launched active funds. Gross-of-fee fund return refers to the fund total return plus one-twelfth of the annualized expense ratio, and gross-of-fee fund returns are further adjusted by a Fama-French-Carhart four-factor model. Appendix A provides detailed definitions for each variable. Numbers with "*", "**", and "***" are significant at the 10%, 5%, and 1% levels, respectively.

Table IA2—Continued

Panel A: Out-of-sample Performance of Cross-Border Expansion (in %) Regressed on Marketing Incentives (All Funds)				
	New Fund Return		New Fund 4-Factor-adjusted	
	Model 1	Model 2	Model 3	Model 4
Num_UIT	-0.004***		-0.018***	
	(-2.87)		(-3.37)	
Rank_UIT		-0.115**		-0.346**
		(-2.37)		(-2.41)
Within Family Correlation	0.271***	0.284***	0.014	0.070
	(3.86)	(3.90)	(0.09)	(0.44)
Outside Family Correlation	-0.248*	-0.266*	0.092	-0.010
	(-1.93)	(-1.99)	(0.41)	(-0.04)
Log (Family TNA)	0.023***	0.024***	0.021***	0.024***
	(4.22)	(4.45)	(2.76)	(2.94)
Expense Ratio	0.001	0.004	-0.054*	-0.046
	(0.09)	(0.27)	(-1.79)	(-1.45)
Family Turnover	0.000	0.000	0.001***	0.001***
	(0.32)	(0.64)	(3.19)	(3.12)
Log (Family Age)	0.014	0.013	0.008	0.008
	(0.74)	(0.71)	(0.39)	(0.39)
Family Return	-0.002	-0.001	-0.020	-0.018
	(-0.24)	(-0.15)	(-1.58)	(-1.37)
Log (Distance)	0.001	0.001	0.018	0.038
	(0.06)	(0.09)	(0.62)	(1.17)
Stock Market Turnover	-0.000*	-0.000***	-0.001**	-0.001***
	(-2.01)	(-2.92)	(-2.50)	(-2.97)
Stock Market/GDP	-0.000	-0.000	-0.001***	-0.001***
	(-1.51)	(-1.52)	(-5.13)	(-4.16)
Private Bond Market/GDP	0.000	0.000	0.002*	0.001
	(0.45)	(0.34)	(2.03)	(1.33)
Constant	-0.493***	-0.457***	-0.505*	-0.349
	(-3.74)	(-3.24)	(-1.78)	(-1.17)
Adj-Rsq.	0.041	0.042	0.107	0.092
Obs	2,314	2,314	2,314	2,314

Panel B: Out-of-sample Performance of Cross-Border Expansion (in %) Regressed on Marketing Incentives (Exclude Closet Indexers)				
	New Fund Return		New Fund 4-Factor-adjusted	
	Model 1	Model 2	Model 3	Model 4
Num_UIT	-0.004**		-0.019***	
	(-2.15)		(-3.44)	
Rank_UIT		-0.107*		-0.397***
		(-1.73)		(-2.84)
Within Family Correlation	0.274***	0.281***	0.038	0.093
	(3.52)	(3.37)	(0.23)	(0.56)
Outside Family Correlation	-0.328*	-0.327**	0.178	0.061
	(-1.92)	(-2.53)	(0.73)	(0.24)
Log (Family TNA)	0.024***	0.025***	0.027***	0.030***
	(3.64)	(3.94)	(3.05)	(3.28)
Expense Ratio	0.004	0.004	-0.051	-0.040
	(0.24)	(0.30)	(-1.66)	(-1.27)
Family Turnover	0.000	0.000	0.001***	0.001***
	(0.52)	(1.27)	(3.80)	(3.71)
Log (Family Age)	0.017	0.018	-0.006	-0.009
	(0.92)	(1.01)	(-0.22)	(-0.34)
Family Return	-0.005	-0.018**	-0.028	-0.025
	(-0.62)	(-2.52)	(-1.57)	(-1.43)
Log (Distance)	0.003	0.002	0.013	0.030
	(0.20)	(0.11)	(0.43)	(0.88)
Stock Market Turnover	-0.000**	-0.000**	-0.001***	-0.001***
	(-2.13)	(-2.17)	(-2.96)	(-3.29)
Stock Market/GDP	-0.000	-0.000	-0.001***	-0.001***
	(-1.22)	(-1.03)	(-5.20)	(-4.58)
Private Bond Market/GDP	0.000	0.000	0.002**	0.001
	(0.77)	(0.22)	(2.10)	(1.65)
Constant	-0.503***	-0.482***	-0.619*	-0.419
	(-2.95)	(-3.41)	(-1.79)	(-1.13)
Adj-Rsq.	0.046	0.040	0.118	0.107
Obs	1,883	1,883	1,883	1,883

Panel C: Out-of-sample 8-Factor-adjusted Performance of Cross-Border Expansion (in %) Regressed on Marketing Incentives				
	Active Funds		All Funds	
	Model 1	Model 2	Model 3	Model 4
Num_UIT	-0.015***		-0.015***	
	(-3.57)		(-3.92)	
Rank_UIT		-0.361**		-0.332**
		(-2.31)		(-2.21)
Within Family Correlation	-0.541	-0.471	-0.521	-0.444
	(-0.93)	(-0.81)	(-0.89)	(-0.75)
Outside Family Correlation	0.486	0.365	0.532	0.401
	(0.56)	(0.42)	(0.65)	(0.48)
Log (Family TNA)	0.009	0.013	0.006	0.011
	(0.56)	(0.82)	(0.54)	(0.92)
Expense Ratio	-0.081	-0.067	-0.084	-0.074
	(-1.08)	(-0.88)	(-1.48)	(-1.24)
Family Turnover	0.003	0.003	0.003	0.003
	(1.25)	(1.31)	(1.27)	(1.33)
Log (Family Age)	-0.053	-0.055	-0.039	-0.041
	(-0.72)	(-0.74)	(-0.53)	(-0.54)
Family Return	-0.126	-0.123	-0.117	-0.114
	(-1.48)	(-1.46)	(-1.45)	(-1.43)
Log (Distance)	0.048	0.070**	0.058*	0.085**
	(1.60)	(2.48)	(1.93)	(2.47)
Stock Market Turnover	0.001	0.001	0.001	0.001
	(1.50)	(1.18)	(1.50)	(1.03)
Stock Market/GDP	-0.000	-0.000	-0.000	-0.000
	(-0.56)	(-0.75)	(-0.65)	(-0.87)
Private Bond Market/GDP	-0.001	-0.001	-0.001	-0.001*
	(-1.15)	(-1.63)	(-1.12)	(-1.95)
Constant	3.399*	3.499*	3.464*	-0.475
	(1.78)	(1.78)	(2.03)	(-0.77)
Adj-Rsq.	0.032	0.032	0.036	0.036
Obs	1,220	1,220	1,312	1,312

Panel D: Out-of-sample Gross-of-Fee Performance of Cross-Border Expansion (in %) Regressed on Marketing Incentives (Active Funds)				
	New Fund Return		New Fund 4-Factor-adjusted	
	Model 1	Model 2	Model 3	Model 4
Num_UIT	-0.004***		-0.019***	
	(-2.97)		(-3.53)	
Rank_UIT		-0.094**		-0.334**
		(-2.08)		(-2.38)
Within Family Correlation	0.313***	0.325***	0.007	0.063
	(4.19)	(4.23)	(0.05)	(0.40)
Outside Family Correlation	-0.242	-0.265	0.198	0.087
	(-1.56)	(-1.64)	(0.80)	(0.35)
Log (Family TNA)	0.024***	0.025***	0.021**	0.024***
	(4.14)	(4.28)	(2.60)	(2.80)
Expense Ratio	0.026*	0.028*	-0.027	-0.017
	(1.77)	(1.94)	(-0.91)	(-0.55)
Family Turnover	0.000	0.000	0.001***	0.001***
	(0.27)	(0.58)	(2.93)	(2.94)
Log (Family Age)	0.017	0.016	0.008	0.007
	(0.88)	(0.87)	(0.35)	(0.34)
Family Return	-0.000	0.000	-0.022	-0.020
	(-0.04)	(0.01)	(-1.54)	(-1.38)
Log (Distance)	0.010	0.013	0.031	0.054*
	(0.75)	(1.04)	(1.24)	(1.86)
Stock Market Turnover	-0.000**	-0.000***	-0.001**	-0.001***
	(-2.52)	(-3.49)	(-2.69)	(-2.98)
Stock Market/GDP	-0.000*	-0.000*	-0.001***	-0.001***
	(-1.70)	(-1.71)	(-5.30)	(-4.13)
Private Bond Market/GDP	0.000	-0.000	0.002*	0.001
	(0.25)	(-0.03)	(1.87)	(1.07)
Constant	-0.571***	-0.529**	-0.075	0.105
	(-2.85)	(-2.44)	(-0.22)	(0.27)
Adj-Rsq.	0.049	0.048	0.110	0.093
Obs	2,198	2,198	2,198	2,198

Table IA3: Performance of Domestic and Foreign Funds Managed by Marketing-Oriented Families

Panel A Models 1 to 4 present the results of the following regressions with year fixed effects and their corresponding robust t-statistics,

$$DomPerf_{F,t:t+4} = \alpha + \beta MktingIncentive_{F,t-1} + \gamma M_{F,t-1} + e_{F,t},$$

where $DomPerf_{F,t:t+4}$ refers to the average monthly return of the existing domestic portfolios of fund family F in five years (year t to $t+4$) after its foreign expansion, and in particular the family domestic return is computed as the lagged TNA-weighted return of all its domestic mutual funds. $MktingIncentive_{F,t-1}$ refers to the two measures of marketing incentives of a family, including $Fam\_Num\_UIT_{F,t-1}$ (the number of unexplored index at the family level) and $Fam\_Rank\_UIT_{F,t-1}$ (the rank of unexplored index at the family level). Vector *M* stacks all other family and domicile country control variables, including Herfindahl index in domicile country and within fund family, return correlation within and outside family, number of index in domicile country, Log(Family TNA), Expense Ratio, Family Turnover, Log(Family Age), and Family Return. Raw returns are further adjusted by a Fama-French-Carhart four-domestic-factor model comprising the market, size, book-to-market, and momentum factors. Models 5 to 10 present similar statistics of the following regressions,

$$ForPerf_{F,t:t+4} = \alpha + \beta MktingIncentive_{F,t-1} + \gamma M_{F,t-1} + e_{F,t},$$

where $ForPerf_{F,t:t+4}$ refers to the average monthly return of the existing foreign portfolios of fund family F in five years (year t to $t+4$) after its foreign expansion, and in particular the family foreign return is computed as the lagged TNA-weighted return of all its foreign mutual funds. All other variables are defined as above. Raw returns are also adjusted by an eight-factor model including Fama-French-Carhart four domestic factors, as well as four foreign factors that are the value weighted average of the four factors in all other countries. Our sample includes all families that launch funds in another country. Panel B reports similar statistics for all families that launch active funds in another country, and active funds are defined as those with active share no less than 60% (following Cremers and Petajisto (2009) and Cremers, Ferreira, Matos, and Starks (2016)). Panel C reports similar statistics when we focus on gross-of-fee family performance for all families that launch active funds in another country. Gross-of-fee fund return refers to the fund total return plus one-twelfth of the annualized expense ratio, and gross-of-fee family domestic (foreign) return is computed as the lagged TNA-weighted gross-of-fee return of all its domestic (foreign) mutual funds. Gross-of-fee family returns are further adjusted by a Fama-French-Carhart four-factor model. Appendix A provides detailed definitions for each variable. Numbers with "*", "**" and "***" are significant at the 10%, 5% and 1% level, respectively.

Table IA3—Continued

Panel A: Out-of-sample Performance in Mutual Fund Families (in %) Regressed on Marketing Incentives (All Funds)										
	Family Domestic Return		Family Domestic 4-Factor-adjusted		Family Foreign Return		Family Foreign 4-Factor-adjusted		Family Foreign 8-Factor-adjusted	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Fam_Num_UIT	-0.005**		-0.004**		-0.003**		-0.003**		-0.005***	
	(-1.97)		(-2.12)		(-2.50)		(-2.34)		(-2.86)	
Fam_Rank_UIT		-0.167**		-0.117**		-0.092**		-0.070*		-0.118**
		(-2.53)		(-2.47)		(-2.49)		(-1.93)		(-2.34)
HHI_Dom_Fund	0.207	0.252	0.616*	0.652**	0.760***	0.769***	0.889***	0.486***	-0.097	-0.083
	(0.66)	(0.81)	(1.87)	(1.99)	(3.53)	(3.58)	(4.75)	(2.69)	(-0.38)	(-0.32)
HHI_Family	0.150**	0.155**	0.112**	0.116**	0.029	0.030	0.030	0.041	0.030	0.034
	(2.37)	(2.44)	(2.14)	(2.20)	(0.74)	(0.76)	(0.78)	(1.11)	(0.60)	(0.67)
Within Family Correlation	0.098	0.107	-0.027	-0.019	0.163*	0.169*	-0.248**	-0.262***	0.086	0.097
	(0.56)	(0.61)	(-0.19)	(-0.13)	(1.65)	(1.71)	(-2.37)	(-2.65)	(0.78)	(0.87)
Outside Family Correlation	0.628*	0.591	0.021	-0.009	0.069	0.056	0.016	0.178	-0.388*	-0.417**
	(1.70)	(1.60)	(0.07)	(-0.03)	(0.39)	(0.32)	(0.12)	(1.12)	(-1.95)	(-2.08)
Num_ID	0.000	0.000	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.000	0.000*
	(0.11)	(0.10)	(3.30)	(3.50)	(4.83)	(5.15)	(5.64)	(5.40)	(1.37)	(1.73)
Log (Family TNA)	0.009	0.010	0.007	0.007	0.012**	0.013**	0.003	0.011*	0.013	0.014*
	(1.13)	(1.22)	(1.05)	(1.13)	(2.16)	(2.33)	(0.51)	(1.78)	(1.60)	(1.79)
Expense Ratio	-0.117***	-0.115***	-0.087***	-0.085***	0.055***	0.056***	-0.025	0.010	0.087***	0.088***
	(-3.26)	(-3.23)	(-4.51)	(-4.45)	(3.60)	(3.62)	(-1.63)	(0.63)	(3.98)	(4.01)
Family Turnover	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000*	-0.000	0.000	0.000
	(-0.58)	(-0.57)	(-1.14)	(-1.13)	(-1.27)	(-1.21)	(-1.69)	(-0.39)	(1.27)	(1.34)
Log (Family Age)	0.030	0.031*	0.000	0.001	0.026*	0.025*	0.020	0.011	-0.006	-0.007
	(1.60)	(1.66)	(0.02)	(0.04)	(1.92)	(1.83)	(1.38)	(0.80)	(-0.31)	(-0.38)
Family Return	0.014	0.014	0.048***	0.049***	-0.015	-0.015	0.005	0.037***	0.046***	0.046***
	(0.74)	(0.76)	(3.57)	(3.60)	(-1.30)	(-1.28)	(1.18)	(3.16)	(2.95)	(2.98)
Constant	0.308	0.374	0.011	0.052	0.318*	0.336*	-0.151	-0.282	0.129	0.136
	(1.22)	(1.45)	(0.06)	(0.27)	(1.85)	(1.95)	(-1.19)	(-1.58)	(0.62)	(0.65)
Adj-Rsq.	0.510	0.511	0.112	0.113	0.677	0.677	0.082	0.164	0.100	0.098
Obs	1,049	1,049	1,045	1,045	1,569	1,569	1,566	1,566	1,362	1,362

Table IA3—Continued

Panel B: Out-of-sample Performance of Mutual Fund Families (in %) Regressed on Marketing Incentives (Exclude Closet Indexers)										
	Family Domestic Return		Family Domestic 4-Factor-adjusted		Family Foreign Return		Family Foreign 4-Factor-adjusted		Family Foreign 8-Factor-adjusted	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Fam_Num_UIT	-0.008***		-0.003		-0.003**		-0.003**		-0.004**	
	(-2.85)		(-1.51)		(-2.27)		(-1.96)		(-2.21)	
Fam_Rank_UIT		-0.147**		-0.097**		-0.096**		-0.064*		-0.098*
		(-2.10)		(-1.99)		(-2.48)		(-1.70)		(-1.79)
HHI_Dom_Fund	0.312	0.100	-0.007	-0.178	0.213**	0.217**	-0.217*	-0.214*	-0.301	-0.286
	(1.59)	(0.54)	(-0.04)	(-1.50)	(2.01)	(2.05)	(-1.83)	(-1.96)	(-1.51)	(-1.43)
HHI_Family	0.780***	0.554	-0.001	0.482***	0.003	-0.007	-0.028	0.131	0.058	0.061
	(2.70)	(1.37)	(-0.00)	(2.60)	(0.02)	(-0.04)	(-0.20)	(0.77)	(1.06)	(1.12)
Within Family Correlation	-0.000	0.000	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.138	0.149
	(-0.52)	(0.32)	(3.40)	(4.30)	(3.85)	(4.13)	(5.19)	(4.85)	(1.15)	(1.24)
Outside Family Correlation	1.715***	0.105	0.485	0.340	0.710***	0.720***	0.940***	0.519***	-0.430**	-0.460**
	(3.89)	(0.33)	(1.44)	(1.03)	(3.11)	(3.15)	(4.64)	(2.65)	(-1.99)	(-2.13)
Num_ID	0.084	0.148**	0.102*	0.136**	0.050	0.050	0.043	0.049	0.000	0.000
	(1.01)	(2.18)	(1.85)	(2.42)	(1.19)	(1.18)	(1.06)	(1.22)	(0.95)	(1.27)
Log (Family TNA)	-0.009	0.010	0.005	0.007	0.013**	0.013**	0.005	0.013**	0.019**	0.021**
	(-0.80)	(1.12)	(0.74)	(0.99)	(2.16)	(2.29)	(0.77)	(2.09)	(2.42)	(2.53)
Expense Ratio	-0.177***	-0.124***	-0.093***	-0.093***	0.059***	0.060***	-0.019	0.014	0.085***	0.086***
	(-4.41)	(-3.25)	(-4.63)	(-4.66)	(3.65)	(3.67)	(-1.18)	(0.86)	(3.59)	(3.61)
Family Turnover	0.001*	-0.000	-0.000	-0.000*	-0.000	-0.000	-0.000	0.000	0.000*	0.000*
	(1.68)	(-0.31)	(-1.19)	(-1.76)	(-0.76)	(-0.72)	(-0.81)	(0.20)	(1.70)	(1.74)
Log (Family Age)	0.073***	0.030	-0.000	-0.001	0.025*	0.023	0.017	0.006	-0.006	-0.007
	(2.79)	(1.55)	(-0.01)	(-0.04)	(1.71)	(1.61)	(1.11)	(0.43)	(-0.29)	(-0.34)
Family Return	-0.106***	0.004	0.046***	0.014**	-0.003	-0.003	0.008*	0.041***	0.050***	0.050***
	(-10.74)	(0.21)	(3.32)	(2.29)	(-0.29)	(-0.25)	(1.83)	(3.21)	(3.06)	(3.09)
Constant	-0.243	0.373	0.056	-0.345**	0.350*	0.377**	-0.195	-0.335*	-0.048	-0.039
	(-0.98)	(1.31)	(0.28)	(-2.32)	(1.91)	(2.05)	(-1.40)	(-1.68)	(-0.22)	(-0.18)
Adj-Rsq.	0.257	0.503	0.110	0.073	0.682	0.682	0.082	0.166	0.101	0.100
Obs	926	926	922	922	1,383	1,383	1,380	1,380	1,209	1,209

Table IA3—Continued

Panel C: Out-of-sample Gross-of-Fee Performance in Mutual Fund Families (in %) Regressed on Marketing Incentives (Active Funds)										
	Family Domestic Return		Family Domestic 4-Factor-adjusted		Family Foreign Return		Family Foreign 4-Factor-adjusted		Family Foreign 8-Factor-adjusted	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Fam_Num_UIT	-0.003		-0.004**		-0.007***		-0.002*		-0.005***	
	(-1.14)		(-2.03)		(-3.03)		(-1.83)		(-2.73)	
Fam_Rank_UIT		-0.135*		-0.110**		-0.058		-0.078**		-0.116**
		(-1.81)		(-2.28)		(-1.00)		(-2.14)		(-2.25)
HHI_Dom_Fund	0.723*	0.754*	0.609*	0.642*	1.737***	-0.004	0.511***	0.515***	-0.041	-0.029
	(1.71)	(1.79)	(1.83)	(1.94)	(4.49)	(-0.01)	(2.67)	(2.68)	(-0.16)	(-0.11)
HHI_Family	0.201***	0.204***	0.136**	0.138***	-0.092	-0.018	0.047	0.047	0.034	0.036
	(2.69)	(2.74)	(2.55)	(2.60)	(-1.33)	(-0.30)	(1.24)	(1.23)	(0.66)	(0.71)
Within Family Correlation	0.027	0.035	0.007	0.017	0.101	0.203	-0.227**	-0.224**	0.130	0.140
	(0.13)	(0.16)	(0.05)	(0.11)	(0.63)	(1.30)	(-2.20)	(-2.17)	(1.14)	(1.23)
Outside Family Correlation	0.988**	0.960**	-0.005	-0.038	-0.102	-0.126	0.156	0.152	-0.431**	-0.460**
	(2.34)	(2.27)	(-0.02)	(-0.12)	(-0.44)	(-0.44)	(0.96)	(0.94)	(-2.13)	(-2.26)
Num_ID	0.000	0.000	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.000	0.000*
	(1.34)	(1.29)	(3.05)	(3.27)	(3.75)	(3.74)	(5.30)	(5.49)	(1.44)	(1.77)
Log (Family TNA)	-0.002	-0.002	0.007	0.007	-0.012	0.022**	0.009	0.010*	0.010	0.011
	(-0.18)	(-0.15)	(1.03)	(1.09)	(-1.15)	(2.43)	(1.59)	(1.71)	(1.20)	(1.38)
Expense Ratio	-0.069**	-0.068**	-0.052***	-0.050***	0.053**	0.097***	0.048***	0.048***	0.129***	0.130***
	(-2.46)	(-2.45)	(-2.73)	(-2.64)	(2.08)	(4.44)	(3.05)	(3.06)	(5.80)	(5.82)
Family Turnover	-0.000	-0.000	-0.000	-0.000	0.000**	0.000	-0.000	-0.000	0.000	0.000
	(-1.23)	(-1.23)	(-1.07)	(-1.08)	(1.98)	(0.56)	(-0.38)	(-0.33)	(0.99)	(1.06)
Log (Family Age)	0.006	0.007	-0.006	-0.005	0.009	-0.022	0.005	0.004	-0.011	-0.012
	(0.24)	(0.28)	(-0.32)	(-0.30)	(0.37)	(-0.96)	(0.37)	(0.29)	(-0.54)	(-0.60)
Family Return	-0.011	-0.010	0.044***	0.044***	-0.124***	-0.018	0.035***	0.035***	0.045***	0.045***
	(-0.56)	(-0.54)	(3.15)	(3.18)	(-19.20)	(-1.00)	(2.96)	(2.99)	(2.89)	(2.92)
Constant	-0.317	-0.250	-0.289*	-0.246	0.751***	0.463*	-0.236	-0.214	-0.014	0.004
	(-1.17)	(-0.90)	(-1.82)	(-1.52)	(3.27)	(1.71)	(-1.29)	(-1.17)	(-0.07)	(0.02)
Adj-Rsq.	0.426	0.427	0.102	0.102	0.236	0.469	0.165	0.165	0.111	0.110
Obs	1,012	1,012	1,012	1,012	1,522	1,522	1,522	1,522	1,322	1,322

Table IA4: Influence of Marketing-Oriented Cross-Border Capital Flows on Stock Market Efficiency

Panel A presents the results of the following Panel regressions with year and stock fixed effects and their corresponding t-statistics with standard errors clustered at the stock level,

$$Delay_{i,t} = \alpha + \beta_1 MktingForOwn_{i,t-1} + \beta_2 NonMktingForOwn_{i,t-1} + \gamma M_{i,t-1} + e_{i,t},$$

where $Delay_{i,t}$ refers to market delay of stock i in year t to the global market information ($Delay\_Global_{i,t}$) or the local market information ($Delay\_Local_{i,t}$), $MktingForOwn_{i,t-1}$ and $NonMktingForOwn_{i,t-1}$ refer to the ownership of marketing-oriented and non-marketing-oriented active foreign funds either by all foreign funds ($MktingForOwnAll_{i,t-1}$ and $NonMktingForOwnAll_{i,t-1}$) or by newly launched funds ($MktingForOwnNew_{i,t-1}$ and $NonMktingForOwnNew_{i,t-1}$). Mutual fund families are sorted into terciles within the domicile country according to their lagged marketing incentives, proxied by the number and the rank of unexplored index at the family level ($Fam\_Num\_UIT_{F,t-1}$ and $Fam\_Rank\_UIT_{F,t-1}$). Those in the top (bottom) tercile are defined as marketing-oriented (non-marketing-oriented) families. $MktingForOwnAll_{i,t-1}$ ($MktingForOwnNew_{i,t-1}$) further refers to a set of variables, i.e., $MktingForOwnAll\_Num_{i,t-1}$ and $MktingForOwnAll\_Rank_{i,t-1}$ ($MktingForOwnNew\_Num_{i,t-1}$ and $MktingForOwnNew\_Rank_{i,t-1}$) when marketing incentives of mutual fund families are proxied by $Fam\_Num\_UIT_{F,t-1}$ and $Fam\_Rank\_UIT_{F,t-1}$, respectively. Similar definitions also apply to $NonMktingForOwnAll_{i,t-1}$ and $NonMktingForOwnNew_{i,t-1}$. Vector *M* stacks all other stock and country control variables, including domestic and foreign IO, Stock Return, Log(Stock Size), Turnover, Log(Net Income), Log(Sales), Log(Total Assets), Stock Market Turnover, Stock Market/GDP, and Private Bond Market/GDP. Panel B reports similar statistics when dependent variables are replaced with *Variance Ratio* and *Market Delay*. Panel C reports similar statistics as in Panel A for sub-samples of emerging markets. Appendix A provides detailed definitions for each variable. Numbers with "*", "**", and "***" are significant at the 10%, 5%, and 1% levels, respectively.

Panel A: Out-of-sample Market Efficiency Measures (in %) Regressed on Marketing-Oriented Mutual Fund Ownership

	Delay_Global				Delay_Local			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
MktingForOwnAll_Num	0.045***				0.033***			
	(4.01)				(3.28)			
Non-MktingForOwnAll_Num	-0.028***				-0.031***			
	(-2.95)				(-2.89)			
MktingForOwnNew_Num		0.047***				0.033***		
		(3.97)				(3.14)		
Non-MktingForOwnNew_Num		-0.033***				-0.036***		
		(-3.65)				(-3.63)		
MktingForOwnAll_Rank			0.044***				0.033***	
			(3.99)				(3.24)	
Non-MktingForOwnAll_Rank			-0.023**				-0.021*	
			(-2.25)				(-1.94)	
MktingForOwnNew_Rank				0.050***				0.035***
				(4.35)				(3.31)
Non-MktingForOwnNew_Rank				-0.029***				-0.026**
				(-2.85)				(-2.41)
Domestic IO	-0.059***	-0.059***	-0.059***	-0.059***	-0.041***	-0.040***	-0.041***	-0.040***
	(-5.61)	(-5.59)	(-5.60)	(-5.59)	(-3.82)	(-3.80)	(-3.81)	(-3.80)
Foreign IO	-0.005	-0.004	-0.007	-0.007	0.001	0.002	-0.002	-0.002
	(-0.74)	(-0.67)	(-1.08)	(-1.03)	(0.17)	(0.24)	(-0.35)	(-0.26)
Stock Return	-0.063***	-0.063***	-0.063***	-0.063***	-0.073***	-0.072***	-0.073***	-0.073***
	(-7.60)	(-7.59)	(-7.59)	(-7.59)	(-8.55)	(-8.53)	(-8.55)	(-8.54)
Log (Stock Size)	-1.868***	-1.868***	-1.868***	-1.868***	-2.059***	-2.060***	-2.059***	-2.059***
	(-24.76)	(-24.76)	(-24.77)	(-24.76)	(-27.03)	(-27.05)	(-27.03)	(-27.03)
Turnover	-3.428***	-3.424***	-3.427***	-3.421***	-2.940***	-2.935***	-2.940***	-2.936***
	(-15.08)	(-15.06)	(-15.07)	(-15.05)	(-12.46)	(-12.43)	(-12.46)	(-12.44)
Log (Net Income)	-0.119***	-0.119***	-0.119***	-0.119***	-0.082***	-0.082***	-0.082***	-0.082***
	(-6.39)	(-6.39)	(-6.40)	(-6.41)	(-4.37)	(-4.37)	(-4.37)	(-4.38)
Log (Sales)	0.066	0.066	0.066	0.066	0.062	0.061	0.061	0.062
	(0.76)	(0.76)	(0.76)	(0.76)	(0.71)	(0.70)	(0.70)	(0.71)
Log (Total Assets)	-0.562***	-0.562***	-0.562***	-0.562***	-0.552***	-0.551***	-0.551***	-0.551***
	(-6.07)	(-6.07)	(-6.07)	(-6.07)	(-5.97)	(-5.97)	(-5.97)	(-5.97)
Stock Market Turnover	-0.001	-0.001	-0.001	-0.001	0.001	0.001	0.001	0.001
	(-0.66)	(-0.67)	(-0.68)	(-0.69)	(0.74)	(0.73)	(0.73)	(0.73)
Stock Market/GDP	0.018***	0.018***	0.018***	0.018***	0.011***	0.010***	0.010***	0.010***
	(11.03)	(11.01)	(11.03)	(11.00)	(6.17)	(6.15)	(6.16)	(6.14)
Private Bond Market/GDP	-0.028***	-0.028***	-0.028***	-0.028***	-0.017***	-0.017***	-0.017***	-0.017***
	(-9.70)	(-9.68)	(-9.69)	(-9.68)	(-5.62)	(-5.60)	(-5.61)	(-5.60)
Constant	36.270***	36.273***	36.275***	36.281***	36.386***	36.381***	36.391***	36.391***
	(48.95)	(48.95)	(48.96)	(48.96)	(48.24)	(48.22)	(48.24)	(48.24)
Adj-Rsq.	0.069	0.069	0.069	0.069	0.067	0.067	0.067	0.067
Obs	196,283	196,283	196,283	196,283	196,283	196,283	196,283	196,283

Panel B: Out-of-sample Market Efficiency Measures (in %) Regressed on Marketing-Oriented Mutual Fund Ownership

	Variance Ratio				Market Delay			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
MktingForOwnAll_Num	0.046**				0.049***			
	(2.37)				(3.48)			
Non-MktingForOwnAll_Num	-0.054***				-0.039***			
	(-2.75)				(-2.62)			
MktingForOwnNew_Num		0.052**				0.048***		
		(2.47)				(3.33)		
Non-MktingForOwnNew_Num		-0.074***				-0.057***		
		(-4.01)				(-3.89)		
MktingForOwnAll_Rank			0.046**				0.045***	
			(2.38)				(3.19)	
Non-MktingForOwnAll_Rank			-0.053***				-0.025*	
			(-2.68)				(-1.69)	
MktingForOwnNew_Rank				0.052**				0.052***
				(2.54)				(3.64)
Non-MktingForOwnNew_Rank				-0.077***				-0.046***
				(-3.91)				(-3.15)
Domestic IO	0.036**	0.037***	0.037**	0.037**	-0.105***	-0.104***	-0.104***	-0.104***
	(2.55)	(2.58)	(2.55)	(2.58)	(-5.97)	(-5.96)	(-5.96)	(-5.95)
Foreign IO	0.008	0.009	0.007	0.008	-0.049***	-0.046***	-0.053***	-0.050***
	(0.68)	(0.80)	(0.57)	(0.72)	(-4.32)	(-4.14)	(-4.69)	(-4.57)
Stock Return	-0.138***	-0.138***	-0.138***	-0.138***	-0.160***	-0.160***	-0.160***	-0.160***
	(-10.87)	(-10.85)	(-10.86)	(-10.85)	(-11.93)	(-11.92)	(-11.93)	(-11.92)
Log (Stock Size)	-2.143***	-2.145***	-2.144***	-2.146***	-4.223***	-4.225***	-4.223***	-4.224***
	(-20.59)	(-20.61)	(-20.60)	(-20.62)	(-32.33)	(-32.35)	(-32.34)	(-32.34)
Turnover	-0.138	-0.123	-0.139	-0.122	-6.373***	-6.364***	-6.374***	-6.365***
	(-0.39)	(-0.35)	(-0.39)	(-0.34)	(-15.83)	(-15.80)	(-15.83)	(-15.80)
Log (Net Income)	-0.290***	-0.290***	-0.291***	-0.291***	-0.279***	-0.279***	-0.279***	-0.280***
	(-9.27)	(-9.27)	(-9.28)	(-9.28)	(-9.02)	(-9.02)	(-9.02)	(-9.03)
Log (Sales)	0.070	0.070	0.070	0.071	0.093	0.093	0.092	0.093
	(0.55)	(0.55)	(0.55)	(0.55)	(0.63)	(0.63)	(0.63)	(0.63)
Log (Total Assets)	-0.385***	-0.383***	-0.384***	-0.383***	-1.105***	-1.104***	-1.104***	-1.104***
	(-2.76)	(-2.75)	(-2.76)	(-2.75)	(-7.08)	(-7.07)	(-7.07)	(-7.07)
Stock Market Turnover	-0.005***	-0.005***	-0.005***	-0.005***	-0.002*	-0.002*	-0.002*	-0.002*
	(-3.74)	(-3.75)	(-3.75)	(-3.76)	(-1.69)	(-1.70)	(-1.70)	(-1.71)
Stock Market/GDP	-0.002	-0.002	-0.002	-0.002	0.039***	0.039***	0.039***	0.039***
	(-0.77)	(-0.79)	(-0.77)	(-0.79)	(13.78)	(13.77)	(13.77)	(13.76)
Private Bond Market/GDP	0.024***	0.024***	0.024***	0.024***	-0.054***	-0.054***	-0.054***	-0.054***
	(5.83)	(5.85)	(5.83)	(5.85)	(-10.87)	(-10.86)	(-10.86)	(-10.86)
Constant	43.742***	43.723***	43.752***	43.730***	74.997***	74.987***	75.003***	75.001***
	(40.46)	(40.45)	(40.47)	(40.45)	(58.45)	(58.43)	(58.45)	(58.45)
Adj-Rsq.	0.017	0.017	0.017	0.017	0.100	0.100	0.100	0.100
Obs	196,287	196,287	196,287	196,287	196,287	196,287	196,287	196,287

Panel C: Out-of-sample Market Efficiency Measures (in %) Regressed on Marketing-Oriented Mutual Fund Ownership (Emerging Markets)

	Delay_Global				Delay_Local			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
MktingForOwnAll_Num	0.044***				0.035***			
	(3.92)				(3.33)			
Non-MktingForOwnAll_Num	-0.029***				-0.026**			
	(-3.12)				(-2.36)			
MktingForOwnNew_Num		0.047***				0.037***		
		(4.04)				(3.47)		
Non-MktingForOwnNew_Num		-0.030***				-0.029***		
		(-3.70)				(-2.91)		
MktingForOwnAll_Rank			0.046***				0.034***	
			(4.15)				(3.17)	
Non-MktingForOwnAll_Rank			-0.029***				-0.018	
			(-2.88)				(-1.62)	
MktingForOwnNew_Rank				0.052***				0.036***
				(4.56)				(3.47)
Non-MktingForOwnNew_Rank				-0.030***				-0.019*
				(-3.21)				(-1.83)
Domestic IO	-0.020	-0.020	-0.018	-0.019	-0.012	-0.012	-0.010	-0.011
	(-0.63)	(-0.64)	(-0.57)	(-0.61)	(-0.40)	(-0.41)	(-0.33)	(-0.36)
Foreign IO	-0.023***	-0.025***	-0.025***	-0.027***	-0.011	-0.011	-0.014*	-0.015*
	(-3.60)	(-3.81)	(-3.86)	(-4.17)	(-1.40)	(-1.48)	(-1.79)	(-1.89)
Stock Return	0.009	0.009	0.009	0.009	0.022	0.022	0.022	0.023
	(0.50)	(0.51)	(0.51)	(0.51)	(1.23)	(1.25)	(1.25)	(1.26)
Log (Stock Size)	-1.558***	-1.562***	-1.560***	-1.563***	-1.943***	-1.946***	-1.945***	-1.947***
	(-8.97)	(-8.98)	(-8.97)	(-8.98)	(-11.30)	(-11.32)	(-11.31)	(-11.32)
Turnover	-1.059***	-1.056***	-1.057***	-1.042***	-1.295***	-1.291***	-1.294***	-1.287***
	(-2.71)	(-2.70)	(-2.70)	(-2.67)	(-3.22)	(-3.21)	(-3.22)	(-3.20)
Log (Net Income)	-0.142**	-0.142**	-0.143**	-0.145**	0.010	0.009	0.009	0.008
	(-2.45)	(-2.46)	(-2.47)	(-2.50)	(0.18)	(0.16)	(0.17)	(0.14)
Log (Sales)	0.250	0.250	0.246	0.251	-0.054	-0.053	-0.057	-0.054
	(1.34)	(1.34)	(1.32)	(1.34)	(-0.28)	(-0.28)	(-0.30)	(-0.28)
Log (Total Assets)	-0.216	-0.215	-0.214	-0.215	-0.045	-0.043	-0.043	-0.044
	(-1.12)	(-1.11)	(-1.11)	(-1.11)	(-0.24)	(-0.23)	(-0.23)	(-0.23)
Stock Market Turnover	0.016***	0.016***	0.016***	0.016***	0.018***	0.018***	0.018***	0.018***
	(6.37)	(6.38)	(6.35)	(6.35)	(6.12)	(6.14)	(6.11)	(6.13)
Stock Market/GDP	0.008**	0.008**	0.008**	0.008**	0.007*	0.007*	0.007*	0.007*
	(2.10)	(2.08)	(2.09)	(2.06)	(1.91)	(1.89)	(1.90)	(1.87)
Private Bond Market/GDP	0.008	0.008	0.008	0.008	0.012	0.012	0.012	0.012
	(0.67)	(0.67)	(0.66)	(0.66)	(1.04)	(1.04)	(1.03)	(1.04)
Constant	20.782***	20.793***	20.823***	20.833***	23.094***	23.093***	23.134***	23.137***
	(13.43)	(13.44)	(13.46)	(13.46)	(14.91)	(14.91)	(14.94)	(14.94)
Adj-Rsq.	0.046	0.047	0.046	0.047	0.057	0.057	0.056	0.057
Obs	33,180	33,180	33,180	33,180	33,180	33,180	33,180	33,180

Table IA5: Influence of Marketing-Oriented Cross-Border Capital Flows on Liquidity and Stock Market Integration

Panel A presents the results of the following Panel regressions with year and stock fixed effects and their corresponding t-statistics with standard errors clustered at the stock level,

$$Illiq_{i,t} = \alpha + \beta_1 MktingForOwn_{i,t-1} + \beta_2 NonMktingForOwn_{i,t-1} + \gamma M_{i,t-1} + e_{i,t},$$

where $Illiq_{i,t}$ refers to the illiquidity proxies of stock i in year t, including the logarithm of Amihud (2002) illiquidity and proportion of zero returns, as well as the proxy for liquidity co-movement. $MktingForOwn_{i,t-1}$ and $NonMktingForOwn_{i,t-1}$ refer to the ownership of marketing-oriented and non-marketing-oriented active foreign funds either by all foreign funds ($MktingForOwnAll_{i,t-1}$ and $NonMktingForOwnAll_{i,t-1}$) or by newly launched funds ($MktingForOwnNew_{i,t-1}$ and $NonMktingForOwnNew_{i,t-1}$), as defined in Table IA4. Vector *M* stacks all other stock and country control variables, including domestic and foreign IO, Stock Return, Log(Stock Size), Turnover, Log(Net Income), Log(Sales), Log(Total Assets), Stock Market Turnover, Stock Market/GDP, and Private Bond Market/GDP. Panel B reports similar statistics of the following Panel regressions,

$$Integration_{i,t} = \alpha + \beta_1 MktingForOwn_{i,t-1} + \beta_2 NonMktingForOwn_{i,t-1} + \gamma M_{i,t-1} + e_{i,t},$$

where $Integration_{i,t}$ refers to the market integration proxies (|*Intercept_8Fac*| and *Co-movement_8Fac*) of stock i in year t, and all other variables are defined as above. The integration is defined with respect to Fama-French-Carhart four domestic factors (market, size, book-to-market, and momentum) and four foreign factors (value-weighted four factors excluding the domestic country). Appendix A provides detailed definitions for each variable. Numbers with "*", "**", and "***" are significant at the 10%, 5%, and 1% levels, respectively.

Panel A: Out-of-sample Stock Illiquidity Measures Regressed on Marketing-Oriented Mutual Fund Ownership

	Log (Amihud)				%Zero				Liquidity Co-movement			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
MktingForOwnAll_Num	0.001				0.051***				0.001***			
	(1.49)				(4.38)				(3.02)			
Non-MktingForOwnAll_Num	0.002*				0.045***				0.001			
	(1.90)				(3.14)				(1.63)			
MktingForOwnNew_Num		0.002*				0.064***				0.001***		
		(1.92)				(5.47)				(2.72)		
Non-MktingForOwnNew_Num		0.003***				0.027**				0.002***		
		(2.59)				(2.10)				(4.35)		
MktingForOwnAll_Rank			0.002*				0.056***				0.001***	
			(1.70)				(4.71)				(3.23)	
Non-MktingForOwnAll_Rank			0.001				0.034**				0.000	
			(1.25)				(2.30)				(0.19)	
MktingForOwnNew_Rank				0.002**				0.070***				0.001***
				(2.26)				(5.95)				(2.97)
Non-MktingForOwnNew_Rank				0.002				0.014				0.001***
				(1.51)				(1.12)				(2.83)
Domestic IO	-0.024***	-0.025***	-0.024***	-0.025***	-0.267***	-0.267***	-0.267***	-0.267***	0.009***	0.009***	0.009***	0.009***
	(-25.91)	(-25.91)	(-25.96)	(-25.97)	(-22.15)	(-22.20)	(-22.19)	(-22.20)	(25.82)	(25.80)	(25.80)	(25.77)
Foreign IO	-0.002*	-0.002*	-0.002*	-0.002*	-0.120***	-0.113***	-0.120***	-0.113***	0.001***	0.001***	0.001***	0.001***
	(-1.76)	(-1.93)	(-1.66)	(-1.79)	(-7.65)	(-7.39)	(-7.57)	(-7.37)	(3.60)	(3.26)	(4.07)	(3.71)
Lag (Stock Return)	-0.003***	-0.003***	-0.003***	-0.003***	-0.052***	-0.052***	-0.052***	-0.052***	-0.001**	-0.001**	-0.001**	-0.001**
	(-4.36)	(-4.40)	(-4.37)	(-4.40)	(-5.28)	(-5.31)	(-5.29)	(-5.32)	(-2.28)	(-2.31)	(-2.29)	(-2.31)
Log (Stock Size)	-1.081***	-1.081***	-1.081***	-1.081***	-4.538***	-4.534***	-4.538***	-4.535***	-0.003	-0.003	-0.003	-0.003
	(-131.40)	(-131.39)	(-131.38)	(-131.36)	(-34.87)	(-34.83)	(-34.87)	(-34.83)	(-1.14)	(-1.06)	(-1.15)	(-1.09)
Turnover	-0.813***	-0.814***	-0.813***	-0.813***	6.752***	6.741***	6.762***	6.755***	0.061***	0.061***	0.061***	0.061***
	(-30.67)	(-30.70)	(-30.62)	(-30.64)	(16.32)	(16.31)	(16.33)	(16.32)	(8.23)	(8.15)	(8.24)	(8.21)
Log (Net Income)	-0.032***	-0.032***	-0.032***	-0.032***	0.306***	0.305***	0.306***	0.305***	0.002***	0.002***	0.002***	0.002***
	(-20.89)	(-20.90)	(-20.89)	(-20.90)	(13.29)	(13.28)	(13.30)	(13.27)	(2.75)	(2.74)	(2.75)	(2.75)
Log (Sales)	-0.025***	-0.025***	-0.025***	-0.025***	0.138	0.140	0.139	0.141	-0.002	-0.002	-0.002	-0.002
	(-3.19)	(-3.19)	(-3.19)	(-3.18)	(0.98)	(0.99)	(0.98)	(1.00)	(-0.59)	(-0.60)	(-0.59)	(-0.59)
Log (Total Assets)	0.022***	0.022***	0.022***	0.022***	0.690***	0.686***	0.689***	0.685***	-0.009***	-0.010***	-0.010***	-0.010***
	(2.72)	(2.70)	(2.72)	(2.70)	(4.14)	(4.12)	(4.14)	(4.12)	(-2.94)	(-2.97)	(-2.95)	(-2.97)
Stock Market Turnover	-0.000	-0.000	-0.000	-0.000	-0.024***	-0.024***	-0.024***	-0.024***	0.000***	0.000***	0.000***	0.000***
	(-0.55)	(-0.54)	(-0.57)	(-0.57)	(-25.00)	(-25.00)	(-25.02)	(-25.03)	(3.37)	(3.41)	(3.35)	(3.38)
Stock Market/GDP	0.001***	0.001***	0.001***	0.001***	-0.009***	-0.009***	-0.009***	-0.009***	-0.001***	-0.001***	-0.001***	-0.001***
	(7.50)	(7.51)	(7.52)	(7.52)	(-3.84)	(-3.81)	(-3.82)	(-3.80)	(-14.90)	(-14.93)	(-14.86)	(-14.90)
Private Bond Market/GDP	0.005***	0.005***	0.005***	0.005***	0.028***	0.028***	0.028***	0.028***	-0.001***	-0.001***	-0.001***	-0.001***
	(16.51)	(16.52)	(16.51)	(16.52)	(5.46)	(5.46)	(5.47)	(5.47)	(-13.84)	(-13.82)	(-13.84)	(-13.82)
Constant	8.253***	8.256***	8.253***	8.255***	47.760***	47.807***	47.760***	47.803***	-1.110***	-1.108***	-1.110***	-1.109***
	(111.95)	(111.98)	(111.95)	(111.97)	(37.68)	(37.71)	(37.68)	(37.71)	(-42.18)	(-42.13)	(-42.17)	(-42.13)
Adj-Rsq.	0.527	0.527	0.527	0.527	0.080	0.079	0.080	0.080	0.052	0.052	0.052	0.052
Obs	183,210	183,210	183,210	183,210	190,913	190,913	190,913	190,913	174,691	174,691	174,691	174,691

Panel B: Out-of-sample Market Integration Measures (International 8-Factor, in %) Regressed on Marketing-Oriented Mutual Fund Ownership

	|Intercept_8Fac|				Co-movement_8Fac			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
MktingForOwnAll_Num	0.002				-0.020*			
	(0.08)				(-1.67)			
Non-MktingForOwnAll_Num	-0.028				0.033**			
	(-1.39)				(2.56)			
MktingForOwnNew_Num		-0.004				-0.024**		
		(-0.21)				(-2.07)		
Non-MktingForOwnNew_Num		0.002				0.035***		
		(0.10)				(2.67)		
MktingForOwnAll_Rank			0.004				-0.022*	
			(0.19)				(-1.84)	
Non-MktingForOwnAll_Rank			-0.020				0.016	
			(-0.93)				(1.28)	
MktingForOwnNew_Rank				0.002				-0.025**
				(0.10)				(-2.18)
Non-MktingForOwnNew_Rank				-0.006				0.019
				(-0.27)				(1.46)
Domestic IO	-0.157***	-0.156***	-0.156***	-0.156***	0.050***	0.050***	0.050***	0.050***
	(-5.40)	(-5.39)	(-5.39)	(-5.39)	(3.95)	(3.93)	(3.94)	(3.93)
Foreign IO	0.134***	0.127***	0.131***	0.127***	-0.018	-0.016	-0.012	-0.011
	(7.01)	(6.87)	(6.78)	(6.84)	(-1.54)	(-1.41)	(-0.99)	(-1.02)
Lag (Stock Return)	-0.215***	-0.215***	-0.215***	-0.215***	0.015	0.015	0.015	0.015
	(-8.92)	(-8.92)	(-8.92)	(-8.92)	(1.58)	(1.57)	(1.58)	(1.58)
Log (Stock Size)	-6.447***	-6.446***	-6.447***	-6.446***	2.349***	2.350***	2.348***	2.348***
	(-22.87)	(-22.86)	(-22.87)	(-22.86)	(18.70)	(18.70)	(18.69)	(18.69)
Turnover	0.117	0.114	0.115	0.117	10.437***	10.430***	10.438***	10.434***
	(0.17)	(0.17)	(0.17)	(0.17)	(29.75)	(29.74)	(29.75)	(29.75)
Log (Net Income)	-1.653***	-1.653***	-1.653***	-1.653***	0.378***	0.378***	0.378***	0.379***
	(-29.29)	(-29.28)	(-29.29)	(-29.28)	(16.20)	(16.20)	(16.20)	(16.20)
Log (Sales)	-0.611**	-0.612**	-0.612**	-0.612**	0.012	0.012	0.012	0.012
	(-2.38)	(-2.38)	(-2.38)	(-2.38)	(0.09)	(0.10)	(0.10)	(0.10)
Log (Total Assets)	0.058	0.059	0.059	0.059	1.503***	1.502***	1.502***	1.502***
	(0.22)	(0.22)	(0.22)	(0.22)	(10.78)	(10.78)	(10.78)	(10.78)
Stock Market Turnover	0.040***	0.040***	0.040***	0.040***	-0.002**	-0.002**	-0.002**	-0.002**
	(17.31)	(17.32)	(17.31)	(17.31)	(-2.23)	(-2.22)	(-2.23)	(-2.22)
Stock Market/GDP	0.028***	0.028***	0.028***	0.028***	-0.028***	-0.028***	-0.028***	-0.028***
	(7.16)	(7.14)	(7.15)	(7.14)	(-16.71)	(-16.69)	(-16.69)	(-16.67)
Private Bond Market/GDP	0.017**	0.017**	0.017**	0.017**	0.032***	0.032***	0.032***	0.032***
	(2.13)	(2.13)	(2.13)	(2.13)	(7.24)	(7.24)	(7.24)	(7.23)
Constant	94.188***	94.188***	94.192***	94.187***	3.466***	3.475***	3.461***	3.462***
	(42.10)	(42.11)	(42.11)	(42.11)	(3.06)	(3.07)	(3.06)	(3.06)
Adj-Rsq.	0.178	0.178	0.178	0.178	0.214	0.214	0.214	0.214
Obs	190,913	190,913	190,913	190,913	190,909	190,909	190,909	190,909

Table IA6: Influence of Marketing-Oriented Cross-Border Capital Flows (Exclude Closet Indexers)

Panel A presents the results of the following Panel regressions with year and stock fixed effects and their corresponding t-statistics with standard errors clustered at the stock level,

$$Delay_{i,t} = \alpha + \beta MktingForOwn_{i,t-1} + \gamma M_{i,t-1} + e_{i,t},$$

where $Delay_{i,t}$ refers to market delay of stock i in year t to the global market information ($Delay\_Global_{i,t}$) or the local market information ($Delay\_Local_{i,t}$). $MktingForOwn_{i,t-1}$ and $NonMktingForOwn_{i,t-1}$ refer to the ownership of marketing-oriented and non-marketing-oriented active foreign funds either by all foreign funds ($MktingForOwnAll_{i,t-1}$ and $NonMktingForOwnAll_{i,t-1}$) or by newly launched funds ($MktingForOwnNew_{i,t-1}$ and $NonMktingForOwnNew_{i,t-1}$), as defined in Table IA4. Vector *M* stacks all other stock and country control variables, including domestic and foreign IO, Stock Return, Log(Stock Size), Turnover, Log(Net Income), Log(Sales), Log(Total Assets), Stock Market Turnover, Stock Market/GDP, and Private Bond Market/GDP. Panel B reports similar statistics of the following Panel regressions,

$$Illiq_{i,t} = \alpha + \beta MktingForOwn_{i,t-1} + \gamma M_{i,t-1} + e_{i,t},$$

where $Illiq_{i,t}$ refers to the illiquidity proxies of stock i in year t, including the logarithm of Amihud (2002) illiquidity and proportion of zero returns, as well as the proxy for liquidity co-movement, and all other variables are defined as above. Panel C reports similar statistics of the following Panel regressions,

$$Integration_{i,t} = \alpha + \beta MktingForOwn_{i,t-1} + \gamma M_{i,t-1} + e_{i,t},$$

where $Integration_{i,t}$ refers to the market integration proxies (|*Intercept_8Fac*| and *Co-movement_8Fac*) of stock i in year t, and all other variables are defined as above. The integration is defined with respect to Fama-French-Carhart four domestic factors (market, size, book-to-market, and momentum) and four foreign factors (value-weighted four factors excluding the domestic country). Active funds are defined as those with active share no less than 60%, following Cremers and Petajisto (2009) and Cremers, Ferreira, Matos, and Starks (2016). Appendix A provides detailed definitions for each variable. Numbers with "*", "**", and "***" are significant at the 10%, 5%, and 1% levels, respectively.

Panel A: Out-of-sample Market Efficiency Measures (in %) Regressed on Marketing-Oriented Mutual Fund Ownership

	Delay_Global				Delay_Local			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
MktingForOwnAll_Num	0.045***				0.033***			
	(4.09)				(3.53)			
MktingForOwnNew_Num		0.045***				0.034***		
		(3.95)				(3.49)		
MktingForOwnAll_Rank			0.042***				0.032***	
			(3.87)				(3.32)	
MktingForOwnNew_Rank				0.043***				0.032***
				(3.75)				(3.27)
Domestic IO	-0.059***	-0.059***	-0.059***	-0.059***	-0.040***	-0.040***	-0.040***	-0.040***
	(-5.60)	(-5.60)	(-5.60)	(-5.60)	(-3.81)	(-3.81)	(-3.81)	(-3.81)
Foreign IO	-0.012*	-0.011*	-0.011*	-0.010	-0.007	-0.006	-0.006	-0.006
	(-1.91)	(-1.75)	(-1.77)	(-1.64)	(-1.02)	(-0.93)	(-0.92)	(-0.84)
Stock Return	-0.063***	-0.064***	-0.063***	-0.064***	-0.073***	-0.073***	-0.073***	-0.073***
	(-7.59)	(-7.60)	(-7.58)	(-7.60)	(-8.54)	(-8.55)	(-8.54)	(-8.55)
Log (Stock Size)	-1.867***	-1.865***	-1.867***	-1.865***	-2.058***	-2.056***	-2.058***	-2.056***
	(-24.76)	(-24.72)	(-24.76)	(-24.73)	(-27.02)	(-27.00)	(-27.02)	(-27.00)
Turnover	-3.430***	-3.432***	-3.430***	-3.432***	-2.942***	-2.944***	-2.943***	-2.944***
	(-15.09)	(-15.10)	(-15.09)	(-15.10)	(-12.47)	(-12.48)	(-12.47)	(-12.48)
Log (Net Income)	-0.119***	-0.119***	-0.119***	-0.119***	-0.082***	-0.082***	-0.082***	-0.082***
	(-6.39)	(-6.39)	(-6.39)	(-6.39)	(-4.37)	(-4.37)	(-4.37)	(-4.37)
Log (Sales)	0.066	0.066	0.066	0.066	0.061	0.061	0.061	0.061
	(0.75)	(0.75)	(0.75)	(0.75)	(0.70)	(0.70)	(0.70)	(0.70)
Log (Total Assets)	-0.561***	-0.563***	-0.561***	-0.563***	-0.551***	-0.552***	-0.551***	-0.552***
	(-6.06)	(-6.08)	(-6.06)	(-6.08)	(-5.96)	(-5.98)	(-5.96)	(-5.98)
Stock Market Turnover	-0.001	-0.001	-0.001	-0.001	0.001	0.001	0.001	0.001
	(-0.66)	(-0.66)	(-0.65)	(-0.65)	(0.75)	(0.75)	(0.75)	(0.75)
Stock Market/GDP	0.018***	0.018***	0.018***	0.018***	0.010***	0.010***	0.010***	0.010***
	(11.00)	(10.99)	(11.00)	(10.99)	(6.13)	(6.12)	(6.13)	(6.12)
Private Bond Market/GDP	-0.028***	-0.028***	-0.028***	-0.028***	-0.017***	-0.017***	-0.017***	-0.017***
	(-9.68)	(-9.67)	(-9.68)	(-9.67)	(-5.60)	(-5.59)	(-5.60)	(-5.59)
Constant	36.267***	36.288***	36.265***	36.286***	36.384***	36.400***	36.383***	36.398***
	(48.95)	(48.98)	(48.95)	(48.97)	(48.23)	(48.25)	(48.23)	(48.25)
Adj-Rsq.	0.069	0.069	0.069	0.069	0.067	0.067	0.067	0.067
Obs	196,283	196,283	196,283	196,283	196,283	196,283	196,283	196,283

Panel B: Out-of-sample Stock Illiquidity Measures Regressed on Marketing-Oriented Mutual Fund Ownership												
	Log (Amihud)				%Zero				Liquidity Co-movement			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
MktingForOwnAll_Num	0.003***				0.075***				0.001***			
	(2.81)				(6.78)				(3.92)			
MktingForOwnNew_Num		0.003***				0.077***				0.001***		
		(3.06)				(6.58)				(4.17)		
MktingForOwnAll_Rank			0.003***				0.075***				0.001***	
			(2.61)				(6.82)				(3.97)	
MktingForOwnNew_Rank				0.003***				0.078***				0.001***
				(3.00)				(6.68)				(4.18)
Domestic IO	-0.025***	-0.025***	-0.025***	-0.025***	-0.267***	-0.267***	-0.267***	-0.267***	0.009***	0.009***	0.009***	0.009***
	(-25.97)	(-25.98)	(-25.97)	(-25.98)	(-22.19)	(-22.20)	(-22.19)	(-22.20)	(25.79)	(25.78)	(25.79)	(25.78)
Foreign IO	-0.002	-0.002	-0.002	-0.002	-0.113***	-0.111***	-0.112***	-0.111***	0.001***	0.001***	0.001***	0.001***
	(-1.57)	(-1.56)	(-1.51)	(-1.54)	(-7.46)	(-7.42)	(-7.48)	(-7.42)	(4.20)	(4.30)	(4.20)	(4.31)
Lag (Stock Return)	-0.003***	-0.003***	-0.003***	-0.003***	-0.052***	-0.052***	-0.052***	-0.052***	-0.001**	-0.001**	-0.001**	-0.001**
	(-4.38)	(-4.39)	(-4.37)	(-4.39)	(-5.30)	(-5.32)	(-5.30)	(-5.32)	(-2.29)	(-2.30)	(-2.29)	(-2.31)
Log (Stock Size)	-1.081***	-1.081***	-1.081***	-1.081***	-4.539***	-4.535***	-4.539***	-4.535***	-0.003	-0.003	-0.003	-0.003
	(-131.40)	(-131.39)	(-131.40)	(-131.39)	(-34.89)	(-34.84)	(-34.89)	(-34.84)	(-1.15)	(-1.12)	(-1.15)	(-1.11)
Turnover	-0.813***	-0.813***	-0.813***	-0.813***	6.759***	6.755***	6.758***	6.755***	0.061***	0.061***	0.061***	0.061***
	(-30.66)	(-30.67)	(-30.67)	(-30.67)	(16.32)	(16.32)	(16.32)	(16.32)	(8.23)	(8.22)	(8.23)	(8.22)
Log (Net Income)	-0.032***	-0.032***	-0.032***	-0.032***	0.306***	0.305***	0.305***	0.305***	0.002***	0.002***	0.002***	0.002***
	(-20.89)	(-20.89)	(-20.89)	(-20.89)	(13.29)	(13.28)	(13.28)	(13.28)	(2.75)	(2.74)	(2.75)	(2.74)
Log (Sales)	-0.025***	-0.025***	-0.025***	-0.025***	0.141	0.141	0.141	0.141	-0.002	-0.002	-0.002	-0.002
	(-3.18)	(-3.18)	(-3.18)	(-3.18)	(1.00)	(1.00)	(1.00)	(1.00)	(-0.58)	(-0.58)	(-0.58)	(-0.58)
Log (Total Assets)	0.022***	0.022***	0.022***	0.022***	0.688***	0.685***	0.688***	0.685***	-0.010***	-0.010***	-0.010***	-0.010***
	(2.71)	(2.70)	(2.71)	(2.70)	(4.13)	(4.12)	(4.13)	(4.12)	(-2.95)	(-2.97)	(-2.95)	(-2.97)
Stock Market Turnover	-0.000	-0.000	-0.000	-0.000	-0.024***	-0.024***	-0.024***	-0.024***	0.000***	0.000***	0.000***	0.000***
	(-0.58)	(-0.58)	(-0.57)	(-0.58)	(-25.03)	(-25.04)	(-25.03)	(-25.04)	(3.35)	(3.34)	(3.35)	(3.34)
Stock Market/GDP	0.001***	0.001***	0.001***	0.001***	-0.009***	-0.009***	-0.009***	-0.009***	-0.001***	-0.001***	-0.001***	-0.001***
	(7.54)	(7.54)	(7.54)	(7.53)	(-3.78)	(-3.79)	(-3.78)	(-3.80)	(-14.86)	(-14.87)	(-14.86)	(-14.87)
Private Bond Market/GDP	0.005***	0.005***	0.005***	0.005***	0.028***	0.028***	0.028***	0.028***	-0.001***	-0.001***	-0.001***	-0.001***
	(16.50)	(16.51)	(16.50)	(16.51)	(5.46)	(5.47)	(5.46)	(5.47)	(-13.85)	(-13.83)	(-13.85)	(-13.84)
Constant	8.253***	8.254***	8.253***	8.254***	47.758***	47.792***	47.755***	47.791***	-1.110***	-1.109***	-1.110***	-1.109***
	(111.95)	(111.95)	(111.95)	(111.95)	(37.68)	(37.70)	(37.68)	(37.70)	(-42.18)	(-42.15)	(-42.18)	(-42.15)
Adj-Rsq.	0.527	0.527	0.527	0.527	0.080	0.080	0.080	0.080	0.052	0.052	0.052	0.052
Obs	183,210	183,210	183,210	183,210	190,913	190,913	190,913	190,913	174,691	174,691	174,691	174,691

Panel C: Out-of-sample Market Integration Measures (International 8-Factor, in %) Regressed on Marketing-Oriented Mutual Fund Ownership								
	|Intercept_8Fac|				Co-movement_8Fac			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
MktingForOwnAll_Num	-0.006				-0.010			
	(-0.30)				(-0.88)			
MktingForOwnNew_Num		-0.007				-0.015		
		(-0.36)				(-1.24)		
MktingForOwnAll_Rank			-0.012				-0.006	
			(-0.66)				(-0.52)	
MktingForOwnNew_Rank				-0.008				-0.011
				(-0.42)				(-0.93)
Domestic IO	-0.156***	-0.156***	-0.156***	-0.156***	0.050***	0.050***	0.050***	0.050***
	(-5.39)	(-5.39)	(-5.39)	(-5.39)	(3.93)	(3.93)	(3.93)	(3.93)
Foreign IO	0.128***	0.128***	0.129***	0.128***	-0.011	-0.010	-0.012	-0.011
	(7.16)	(7.17)	(7.28)	(7.24)	(-1.00)	(-0.94)	(-1.11)	(-1.03)
Lag (Stock Return)	-0.215***	-0.214***	-0.214***	-0.214***	0.015	0.015	0.015	0.015
	(-8.92)	(-8.92)	(-8.92)	(-8.92)	(1.57)	(1.57)	(1.56)	(1.57)
Log (Stock Size)	-6.446***	-6.447***	-6.447***	-6.447***	2.348***	2.347***	2.348***	2.348***
	(-22.87)	(-22.86)	(-22.87)	(-22.86)	(18.70)	(18.69)	(18.70)	(18.69)
Turnover	0.114	0.114	0.113	0.114	10.441***	10.441***	10.442***	10.442***
	(0.17)	(0.17)	(0.16)	(0.17)	(29.76)	(29.76)	(29.76)	(29.76)
Log (Net Income)	-1.653***	-1.653***	-1.653***	-1.653***	0.378***	0.378***	0.378***	0.378***
	(-29.28)	(-29.28)	(-29.28)	(-29.28)	(16.19)	(16.20)	(16.19)	(16.19)
Log (Sales)	-0.612**	-0.613**	-0.613**	-0.613**	0.013	0.013	0.013	0.013
	(-2.38)	(-2.39)	(-2.39)	(-2.39)	(0.10)	(0.10)	(0.10)	(0.10)
Log (Total Assets)	0.059	0.059	0.059	0.059	1.502***	1.502***	1.501***	1.502***
	(0.22)	(0.22)	(0.22)	(0.22)	(10.78)	(10.78)	(10.78)	(10.78)
Stock Market Turnover	0.040***	0.040***	0.040***	0.040***	-0.002**	-0.002**	-0.002**	-0.002**
	(17.32)	(17.32)	(17.32)	(17.32)	(-2.25)	(-2.25)	(-2.26)	(-2.25)
Stock Market/GDP	0.028***	0.028***	0.028***	0.028***	-0.028***	-0.028***	-0.028***	-0.028***
	(7.14)	(7.14)	(7.14)	(7.14)	(-16.66)	(-16.66)	(-16.66)	(-16.66)
Private Bond Market/GDP	0.017**	0.017**	0.017**	0.017**	0.032***	0.032***	0.032***	0.032***
	(2.13)	(2.13)	(2.13)	(2.13)	(7.23)	(7.23)	(7.23)	(7.23)
Constant	94.189***	94.185***	94.189***	94.185***	3.467***	3.460***	3.467***	3.462***
	(42.10)	(42.10)	(42.10)	(42.10)	(3.06)	(3.05)	(3.06)	(3.06)
Adj-Rsq.	0.178	0.178	0.178	0.178	0.214	0.214	0.214	0.214
Obs	190,913	190,913	190,913	190,913	190,909	190,909	190,909	190,909