The Determinants of Mutual Fund Performance: A Cross-Country Study

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Abstract

This paper studies the performance of mutual funds around the world using a sample of 10,568 open-end actively managed equity funds from 19 countries between 1999 and 2005. Performance is measured using four alternative benchmark models, including an international version of the Cahart four-factor model. We regress abnormal performance on fund attributes such as age, size, fees, management structure, and management tenure. We also investigate whether country characteristics such as economic development, financial development, familiarity, and investor protection have additional explanatory power. The results show that large funds tend to perform better, which suggests the presence of significant economies of scale. When investing abroad, young funds are more able to obtain better performance. Performance is higher in funds with higher fees and that are managed by an individual manager with more experience. Mutual fund performance is better in countries with stronger legal institutions. Domestic funds located in developed countries, in particular with liquid stock markets, perform better. When investing abroad, familiarity and proximity enhances the performance of mutual funds.

JEL classification: G15; G18; G23

Keywords: Mutual funds; Performance; Fund attributes; Investor protection

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1 Introduction

In recent decades, mutual funds have been the fastest growing type of financial intermediary. The global mutual fund industry held assets of $17.8 trillion in 2005 [see Investment Company Institute (2006)], almost doubling those managed in 1998 ($9.6 trillion). Although the growth of the mutual fund industry started in the U.S., where the mutual fund industry plays an extremely important role in the economy, the trend has spread more recently to a significant number of countries around the world.[1] As a result, investors are increasingly concerned about fund selection, demanding detailed mutual fund information and investment advice.

As a result of the large number of funds in existence, evaluating and selecting funds can be particularly difficult and challenging. Consequently, a new industry has emerged dedicated to collecting data on mutual funds, comparing and rating fund performances, and supplying investors with information for their investment decisions.

Parallel to the fast growth in the mutual fund industry, a significant number of studies have been trying to explain mutual fund performance. Almost all of these studies focus on the U.S. market, as historical data is available and investor's financial culture is well developed. Studies have considered fund attributes as potential determinants of fund performance including size, age, fees, trading activity, flows, and past returns [see, for example, Jensen (1967), Grinblatt and Titman (1989), Ippolito (1989), Elton, Das, and Hlavka (1993), Hendricks, Patel, and Zeckhauser (1993), Brown and Goetzmann (1995), Malkiel (1995), Gruber (1996), Carhart (1997), Sirri and Tufano (1998), Zheng (1999), and Chen, Hong, Huang, and Kubik (2004)].

The bulk of the literature has not addressed the non-U.S. mutual fund industry, although several authors study individual European countries. McDonald (1973), and Dermine and Roller (1992) study French mutual funds. Wittrock and Steiner (1995) analyze performance persistence in German mutual funds. Ward and Saunders (1976), Brown, Draper, and

[1] Mutual funds industry controls a sizeable stake of corporate equity and plays a fundamental role in the determination of stock prices (see, e.g.,Grimblatt, Titman, and Wermers (1995), and Gompers and Metrick (2001)).

McKenzie (1997), and Blake and Timmermann (1998) study U.K. mutual fund performance. Shukla and Imwegen (1995) analyze and compare U.K. and U.S. performance. Ter Horst, Nijman, and Roon (1999) analyze the style and evaluate the performance of Dutch funds. Dahlquist, Engström, and Söderlind (2000) study the relation between fund performance and fund attributes in the Swedish market between 1992-1997. Cesari and Panetta (2002) examine the performance of Italian equity funds.

Grunbichler and Pleschiutschnig (1999) presented the first comprehensive study on European mutual funds performance. Using a sample of 333 equity mutual funds domiciled in various European countries, they investigate performance persistence between 1988-1998 by looking at a sample of surviving funds investing in the European region. Otten and Schweitzer (2002) analyze the development and performance of the European mutual fund industry, and compare it with the industry in the U.S. They find that a few large domestic fund groups dominate the mutual fund markets in the individual European countries. Additionally, they also show that Europe is still lagging behind the U.S. mutual fund industry when comparing total asset size, average fund size, and market importance. Otten and Bams (2002)' paper on European mutual funds use a sample of 506 funds from 5 countries (France, Germany, Italy, Netherlands, and U.K.) to investigate mutual fund performance. They find that the expense ratio and age are negatively related to risk-adjusted performance, while fund assets are positively related.

There are also a limited number of studies on non-European mutual funds. For example, Cai, Chan, and Yamada (1997) and Brown, Goetzmann, Hiraki, Otsuki, and Shiraishi (2001) study the Japanese mutual funds. Bird, Chin, and McCrae (1983), Gallagher (2003), and Gallagher and Martin (2005) examine the performance of actively managed Australian mutual funds. Kryzanowski, Lalancette, and To (1994) and Kryzanowski, Lalancette, and To (1998) study Canadian mutual funds.

This paper studies the relation between mutual fund performance, fund attributes, and country characteristics worldwide. The study distinguishes itself from the previous studies by

making several important contributions. First, it is the first study to use a large sample of international funds including, for instance, funds from Asian countries. The database consists of 10,568 open-end actively managed equity funds from 19 countries around the world (for the 1999-2005 period). Performance is measured using several alternative benchmark models including a domestic and international version of the Carhart (1997) four-factor model. Second, fund performance is studied using an extensive list of fund attributes, including size, age, fees (initial charges, annual charges, and redemption charges), management structure, and management tenure. In addition, we also study country variables, such as economic development, financial development, familiarity, and investors' protection, as potential determinants of the cross-sectional differences of fund performance. This large cross-section of international mutual funds allows us to investigate what fund attributes and country characteristics explain the cross-section of mutual fund performance. Finally,we analyze whether the mutual fund geographic zone of investment influences its performance by splitting our sample into three subsamples: domestic funds, foreign funds, and global funds.

We find that larger funds perform better which suggests the presence of economies of scale in the mutual fund industry. This finding is consistent among mutual funds investing domestically (domestic funds) or abroad (foreign funds) and several other robustness tests. Fund age is negatively related with fund performance indicating that younger funds tend to perform better. This finding is present particularly in the subsamples of foreign and U.S. funds. When investing abroad, younger mutual funds are able to detect better investment opportunities.

We consider additional fund attributes to explain mutual fund performance. Fees (annual and initial charges) are positively associated with performance. If fees are seen as the price that uninformed investors pay to managers to invest their money, when paying higher fees investors are paying the benefits associated to that investment, and obtain better performance. Evidence on mutual fund management structure and tenure shows that funds managed by an individual manager and a more experienced manager have a stronger performance. Our

findings are consistent with the idea that manager tenure tends to decrease fees as more experienced managers are more efficient in analyzing and processing information.

Country characteristics can explain mutual fund performance beyond fund attributes. There is a positive relation between mutual fund performance and the country's level of financial development, in particular in countries with high trading activity and low transaction costs. The level of economic development is of particular importance for domestic funds. Familiarity arguments explain the performance of foreign funds as they obtain better performance when investing in countries that are geographically close and countries that share a common language. Finally, funds located in countries with strong legal institutions and investor protection tend to perform better.

The next section describes the data and presents descriptive statistics. Section 3 presents the determinants of mutual funds performance. Section 4 presents the empirical results. Section 5 includes additional tests and robustness checks. Section 6 concludes.

2 Data and Methodology

2.1 Sample Description

Data on mutual funds is drawn from the Lipper Hindsight database that covers a large sample of countries worldwide. The sample is restricted to equity funds, and excludes non-primary, closed-end funds, and index-tracking funds. This leads to a sample of 10,568 open-end actively managed funds from 19 countries for the 1999-2005 period. Table 1 presents the number and size (net asset value, NAV) of mutual funds by country as of December 2005. U.S. funds represent about 73% of the sample in terms of size, while they represent only 30% of the total number of funds. With the exception of the U.S. and Netherlands, the sample weight in terms of the number of funds is always higher than the weight in terms of size for all the other countries. This is consistent with the evidence in Otten and Bams (2002) and Otten and Schweitzer (2002) when comparing U.S. and European mutual funds. They find

that the average size of the European mutual funds is much smaller than the average size of the U.S. fund, while, in contrast, the number of funds is much higher. They also note that, due to a different equity culture, strong presence of banks and different pension system, the U.S. mutual fund market is dominated by equity-oriented funds, while European investors invest heavily in bond funds.

2.2 Fund Performance Benchmarks

We calculate the mutual funds (risk-adjusted) performance using four different benchmark models: (1) domestic market model; (2) international market model; (3) Carhart (1997) domestic four-factor model; and (4) Carhart (1997) international four-factor model. We consider models that include both domestic and foreign factors because there is a large number of funds investing overseas.

Domestic Market Model In the early studies, prior to the 1990s, the Capital Asset Pricing Model (CAPM) was widely used as the benchmark model to measure risk-adjusted portfolio performance.[2] In this model, Jensen's Alpha (α_i) is the intercept of the linear regression of excess portfolio returns (over the risk-free asset return) on the market return benchmark [see Jensen (1967)]. Alpha is the difference between the actual returns on portfolio and the return expected from it during a period of time, given the market performance and the portfolio's beta. It measures the manager's contribution to performance due to security selection or market timing. A positive (negative) alpha indicates that the portfolio over-performed (under-performed) the benchmark. The market model regression is given by:

$$R_{it} = \alpha_i + \beta_{0i} RM_t + \varepsilon_{it}, \tag{1}$$

where R_{it} is the return in U.S. dollars of fund i in excess of the one-month U.S. T-bill in month t, RM_t is the excess return on the domestic market in month t, and ε_{it} is the random

[2] See Ippolito (1989), for an overview.

error term.

However, the inclusion of indices that span the major types of securities held by the funds under study might lead to incorrect conclusions about performance [Gruber (1996)]. Furthermore, the CAPM model assumes that the systematic risk of the portfolio is stationary over the evaluation period. This is not true, especially when the portfolio manager is timing the market by adjusting his portfolio exposure to the movements in the market return [Grinblatt and Titman (1989)]. For actively managed funds, and due to the possibility of a wide diversity of investment styles, one single market index is not sufficient to capture a fund's investment behavior. Besides, if a certain fund characteristic is correlated with an omitted benchmark, then using a single benchmark can result in incorrect inferences about the fund's characteristic and performance [Prather, Bertin, and Henker (2004)].

Domestic Cahart Model Fama and French (1993) propose a three-factor model that improves average CAPM pricing errors by including a size and a book-to-market factor. However, the three-factor model cannot explain the cross-sectional variation of momentum-sorted portfolio returns. Carhart (1997) proposes a four-factor model by adding a factor that captures the Jegadeesh and Titman (1993) momentum anomaly. The model regression is estimated as follows:

$$R_{it} = \alpha_i + \beta_{0i} RM_{mt} + \beta_{1i} SMB_t + \beta_{2i} HML_t + \beta_{3i} MOM_t + \varepsilon_{it}, \tag{2}$$

where SMB (Small minus Big) is the average return on the small capitalization portfolios minus the average return on the large capitalization portfolios; HML (High minus Low) is the difference in return between the portfolio with high book-to-market stocks and the portfolio with low book-to-market stocks; and MOM (Momentum) is the difference in return between the portfolio with the past-12-month winners and the portfolio with the past-12-month losers.

International Market Model We expand the domestic market model to include both domestic and foreign factors. Allowing for domestic and foreign market factors, the market model regression is as follows:

$$R_{it} = \alpha_i + \beta_{0i} RM_t + \beta_{0Fi} RMF_t + \varepsilon_{it}, \tag{3}$$

where RMF_t is the excess return on the foreign market in month t.

International Cahart Model We also expand the four-factor Carhart (1997) model to include foreign SMB, HML, and MOM factors. Therefore, international Carhart (1997) model allowing for domestic and foreign components is as follows:

$$\begin{aligned} R_{it} &= \alpha_i + \beta_{0i} RM_t + \beta_{1i} SMB_t + \beta_{2i} HML_t + \beta_{3i} MOM_t \\ &\quad + \beta_{0Fi} RMF_t + \beta_{1Fi} SMBF_t + \beta_{2Fi} HMLF_t + \beta_{3Fi} MOMF_t + \varepsilon_{it}, \end{aligned} \tag{4}$$

where $SMBF_t$ is the foreign size factor, $HMLF_t$ is the foreign book-to-market factor, and $MOMF_t$ is the foreign momentum factor.

2.2.1 Estimation and Descriptive Statistics

Returns on each fund are calculated using monthly net asset values (in U.S. dollars) from July 1999 to December 2005. The net asset values are from the Lipper Hindsight database. We require a minimum of 24 months of return data to perform the alpha's estimation for each fund.[3]

We construct the monthly benchmark factors for each individual country using all stocks included in the Datastream database. The domestic market return RM is computed using

[3]The "look-ahead" bias is present in our paper and it results from the existence of some new funds that do not have enough tracking history for the regression analysis [see Brown, Goetzmann, Ibbotson, and Ross (1992)].

the value-weighted average return of all stocks in each country in each month. To construct the foreign market return, we compute the value-weighted average return of all stocks (except those of the domestic market) in each month.

To form the size and book-to-market equity portfolios, we follow the procedure described in Fama and French (1993). For each country, SMB and HML portfolios are constructed at the end of each year t using six value-weighted portfolios formed on the intersection of two size portfolios (market equity, ME) and three book equity to market equity (BE/ME) portfolios. The size breakpoint for year t is the median market equity in each country at the end of year t. Half of the firms are classified as small market capitalization and the other half as big market capitalization. For the BE/ME classification, the 30th and 70th percentiles of the book-to-market equity in each country at the end of year t are the breakpoints. The bottom 30% are designated as value portfolio, the middle 40% as neutral, and the highest 30% as growth. The SMB factor is the monthly average returns of the three small portfolios minus the monthly average returns of the three big portfolios:

$$\begin{aligned} SMB \;\; = \;\; & (Small\ Value + Small\ Neutral + Small\ Growth \\ & -Big\ Value - Big\ Neutral\ \ - Big\ Growth)/3. \end{aligned} \tag{5}$$

The $SMBF$ factor is the monthly average of domestic SMB factors excluding the domestic country of the fund.

The HML factor is the monthly average returns of the two low portfolios minus the monthly average return of the two growth portfolios:

$$HML = (Small\ Value + Big\ Value - Small\ Growth - Big\ Growth)/2. \tag{6}$$

The $HMLF$ factor is the monthly average of domestic HML factors excluding the domestic country of the fund.

The momentum factor (MOM) is calculated using six value-weighted portfolios constructed yearly, as a result of the intersections of two portfolios formed on size (ME) and three portfolios formed on prior (2-12) monthly return. The size breakpoint is the median market equity in each country at the end of year t. For the return classification, the 30th and 70th percentiles of the prior returns (2-12) in each country at the end of year t are the breakpoints. The bottom 30% are designated as down prior return portfolio, the middle 40% as medium, and the highest 30% as up. The MOM factor is the monthly average return on the two high prior return portfolios minus the monthly average return on the two low prior return portfolios:

$$MOM = (Small\ Hight + Big\ Hight - Small\ Low\ - Big\ Low)/2. \tag{7}$$

The $MOMF$ factor is the monthly average of domestic MOM factors excluding the domestic country of the fund.

The average and standard deviation of the benchmark factor as well as the factor loadings are found in the Appendix.

Table 2 reports the mutual funds excess returns and the alpha's descriptive statistics by country for the four benchmark models. The average alphas are negative in the majority of the countries in the four alternative benchmark models. There are, however, some exceptions. For example, considering the international four-factor model, there are four countries with positive alphas (Germany, Hong Kong, Sweden, and Thailand). Overall, we find evidence of underperformance in the worldwide mutual fund industry.

3 Determinants of Mutual Fund Performance

Our study aims to explain the relationship between mutual fund performance, fund attributes, and country characteristics. This section describes the main hypotheses. The predetermined variables are divided into two groups, fund and country-level variables. Fund-level

variables include size, age, fees (annual charges, initial charges, and redemption charges), management structure, and management tenure. Country-level variables include economic development, financial development, familiarity, and investor protection.

3.1 Fund Attributes

A number of fund performance studies consider fund-specific attributes as potential determinants of fund performance. This relation is a first step towards forecasting and explaining mutual fund performance. Besides, as Prather et al. (2004) sustain, even if a large portion of mutual fund excess performance is idiosyncratic and remains unexplained by fund characteristic variables, identifying which characteristics do not show any effect on performance is just as important as choosing a mutual fund. Table 3 presents descriptive statistics of fund attributes by country.

3.1.1 Fund Size

For many years the mutual fund size has been one of the most studied variables in mutual fund research, and the relationship between fund size and performance still puzzles practitioners and academics. Several studies try to answer questions such as: Does the fund size affect investors' fund selection ability? Are investors more cautious when investing in small funds than in large funds? Is management skill more pronounced when a fund is small?

Large mutual funds present several advantages when compared to small ones. First, they experience economies of scale. Larger funds are able to spread fixed expenses over a larger asset base, and have more resources for research. Additionally, managers of large funds can obtain positions in beneficial investment opportunities not available to smaller market participants [Ciccotello and Grant (1996)]. Large funds are able to negotiate smaller spreads as they have large market positions and trading volumes,[Glosten and Harris (1988)]. Furthermore, brokerage commissions decline with the size of the transaction [Brennan and Hughes (1991)].

However, larger funds face some problems and management challenges and the scaleability of investments is determinant for the persistence of fund performance [see, for example, Gruber (1996) and Berk and Green (2004)]. While small funds can concentrate their money on a few investment positions, when funds become larger fund managers must continue to find worthwhile investment opportunities and the effect of managerial skill becomes diluted. This size phenomenon may also lead some large active managers to place an upper limit on their total funds under management, in order to reduce diseconomies of scale in their quest for active returns. Cremers and Petajistoy (2006) show that small funds are more active, while a significant fraction of large non-index funds are closet indexers. Moreover, larger mutual fund managers must necessarily transact larger volumes of stock, calling the attention of other market participants and therefore suffer higher price impact costs [Chen et al. (2004) name this effect the liquidity hypothesis].

Grinblatt and Titman (1989) and Grinblatt and Titman (1994) find mixed evidence that fund returns decline with fund size. Ciccotello and Grant (1996) argue that historical returns of large funds are found to be superior to small funds, given that yesterday's best performing funds tend to become today's largest funds as individuals invest heavily in response to the communications about the fund's past success. However, their results suggest that, once large, equity funds do not outperform their peers, especially for funds with aggressive growth objectives.

Using a sample of European mutual funds, Otten and Bams (2002) find a positive relation between risk-adjusted performance and fund size suggesting the presence of economies of scale.

Others find a negative relation between size and performance. Indro, Jiang, Hu, and Lee (1999) argue that as funds become larger marginal returns become lower and so funds suffer diseconomies of scale. They show that the funds that suffer an overinvestment in research do not capture the additional returns due to their diseconomies of scale. Their paper also shows that fund managers' ability to trade without signaling their intentions to the market decline

significantly as the fund becomes larger. Chen et al. (2004), using mutual fund data from 1962 to 1999, show that fund returns decline with lagged fund size. The results are most pronounced among funds that have to invest in small and illiquid stocks, suggesting that the adverse scale effects are related to liquidity. However, results on the sample period from 1981 to 1999 are not statistically significant, despite keeping the negative sign. Dahlquist et al. (2000) study mutual fund performance in the Swedish market and find that larger equity funds tend to perform worse than smaller equity funds, but the reverse is true for bond funds. Overall, the evidence on the size-performance relationship is far from unanimous.

In our study, the size of a fund ($SIZE$) is measured by total asset value, at the end of 2005, of each fund's portfolio net of fees and expenses. Country average data is presented in Panel A of Table 3. U.S. and Netherlands are the countries with the highest fund size, while Malaysia and Thailand present the lowest. Our sample confirms Otten and Bams (2002) and Otten and Schweitzer (2002) evidence that the average size of European (as well as non-U.S.) funds is much smaller than the average size of the U.S. funds.

3.1.2 Fund Age

Fund age provides a measure of the fund's longevity and manager's ability. The effect of age on performance can run in both directions. We may argue that younger mutual funds will be more alert but, on the other hand, several studies show that they suffer from their youth as they usually face higher costs during the start up period. Gregory, Matatko, and Luther (1997) show that the performance of younger mutual funds may be affected by an investment learning period. They also show that there is a relationship between fund age and fund size. Younger funds also tend to be smaller than older ones. Bauer, Koedijk, and Otten (2002) find that the underperformance may be explained by the exposure of younger mutual funds to higher market risk while they invest in fewer titles. Due to small size, young mutual funds' returns and ratings are also more vulnerable to manipulation. In contrast, Otten and Bams (2002) find that age is negatively related with performance. Their results

show that younger funds perform better than older funds. Peterson, Pietranico, Riepe, and Xu (2001), and Prather et al. (2004) find no relationship between age and the performance of the mutual fund. Here, the existing evidence is also mixed.

Country average data on fund age ($FAGE$) is presented in Panel A of Table 3.

3.1.3 Fund Fees

The relationship between mutual fund returns and collected fees provides a powerful test of the value of active management. Sharpe (1991) states that on average active investors (in aggregate) cannot outperform the returns obtained from passive investment strategies. The reasoning is that the performance of the index equals the weighted-average return of both active and passive investors before investment expenses. Accordingly, active management will be a zero-sum game. Mutual fund charges can be seen as the price that uninformed investors pay to managers to invest their money [Ippolito (1989)]. Moreover, when investing in mutual funds, investors are also paying for the benefits associated to that investment.

Chordia (1996) identifies three benefits that mutual funds provide to investors. The first one is diversification. Small investors usually have no available resources to diversify their portfolios. The second one is transaction cost savings. Finally, the third is that mutual funds enable investors to share liquidity risk. Chordia (1996) notice that open-end funds try to dissuade redemptions through front and back-end load fees. Mutual funds would expect to improve results if they can persuade investors not to redeem their holdings. He finds that redemption fees can be more successful than front-end load fees at avoiding redemptions.

Gruber (1996) finds that what leads investors to buying actively managed funds and paying the associated fees is that future performance can in part be predicted from past performance. As the price at which funds are bought and sold is equal to net asset value and does not reflect the superior or inferior management, only a group of "sophisticated" investors seems to recognize this evidence, investing in mutual funds based on performance.

Fees vary considerably around the world [Khorana, Servaes, and Tufano (2006)]. Using a

sample of 46,799 mutual funds offered for sale in 18 countries, they find that large funds and fund complexes charge lower fees, as do index funds, funds of funds, and funds selling cross-country, while funds distributed in more countries and funds domiciled in offshore locations charge higher fees. Fees are negatively related with the quality of a country's judicial system, the country's GDP per capita, population's education, and age of mutual fund industry. The relation however is positive with the size of the mutual fund industry.

The empirical evidence on the relationship between mutual fund returns and fees is mixed. Using a sample of U.S. mutual funds, Ippolito (1989) finds that funds with higher management fees perform better. Droms and Walker (1996) also find a significantly positive relation between the return of the funds and their fees. Others find a negative relation between fees and performance. Gruber (1996) finds that expenses are not higher for top performing funds, and that the expense ratio for the top performing funds goes up more slowly over time than the expense ratio for the bottom performing funds. Golec (1996) and Carhart (1997) find that higher fees are associated with lower investment performance. Dellva and Olson (1998) find that funds with front-end load charges earn lower risk-adjusted returns. Otten and Bams (2002) find a negative relation between performance and the expense ratio, using a sample of European mutual funds.

We can identify a substantial variety of charges or fees, including administrative, management, advisory, exchange, load, redemption, and exchange. In this paper, we isolate three different types of charge: annual charges ($ACHARGE$), initial charges ($ICHARGE$), and redemption charges ($RCHARGE$). Panel A of Table 3 presents descriptive statistics of the fee variables by country.

Fund fees vary considerably across countries despite the global nature of the mutual fund industry. For example, annual charges for the average equity funds offered in the U.S. are 0.718% and 0.977% in Belgium (the lowest values in our sample), while annual charges are 1.875% in Portugal and 2.199% in South Korea (the highest values in our sample). Initial charges also differ considerably across countries. We find the lowest value in Spain

(0.004%) and South Korea (0.046%), while Austria (4.604%) and Singapore (4.49%) present the highest values. With respect to redemption charges, a considerable number of countries have no charges (Germany, Hong Kong, Italy, Malaysia, and South Korea), while the highest values are found in Portugal (2%) and Netherlands (1.071%).

3.1.4 Management Structure

While individual managers are not subject to group polarization, teams of decision-makers have more resources, resulting in a higher number of alternatives for specific decisions, which can help to decrease uncertainty. Accordingly, funds managed by a team will perform better than those managed by an individual manager [Prather, Middelton, and Cusack (2001)]. On the other hand, Chen et al. (2004) associate fund size and management structure. While small funds can be run by a single manager, a large fund usually cannot. They suggest that larger funds experience organizational diseconomies and that one type, known as hierarchy costs, may be especially relevant.[4] The point is that when a fund is co-managed there is more fighting to implement ideas and managers may end up expending too much research effort to convince others to implement their ideas than they ideally would if they controlled their own funds. Using data on whether funds are solo-managed or team-managed and the composition of the fund investments, their study finds some preliminary evidence that size erodes fund performance because of the interaction of liquidity and organizational diseconomies.

We use a management structure variable, $MSTR$, as an explanatory variable; this is a dummy variable that equals zero if the fund is managed by an individual manager and one if the fund is team-managed. Country average data is shown in Panel A of Table 3. This variable identifies the organizational structure that impacts the decision-making process of the fund, and it may help explain mutual fund performance.

[4] On hierarchy costs see, for example, Aghion and Tirole (1997), and Stein (2002).

3.1.5 Management Tenure

As a measure of managerial experience, we can argue that managers with longer-tenure would perform better than others and, consequently, investors would prefer to invest in funds run by experienced managers. Manager tenure may also be associated with lower fees paid by investors, given that experienced managers might be more efficient when analyzing and processing information [Filbeck and Tompkins (2004)]. However, Peterson et al. (2001) refer that, on average, departing managers underperform two years prior to departure and they also present higher portfolio turnover and management fees. Besides, despite suffering from inexperience, managers that run a fund for a shorter period are usually more alert and have more incentives to perform better.

Chevalier and Ellison (1999) find no significant relationship between mutual funds performance and management tenure. Filbeck and Tompkins (2004) find a significant positive relationship between management tenure and performance, supporting that more experienced managers perform better. In contrast, Peterson et al. (2001) find that there is a an average negative return premium associated with management tenure.

The management tenure variable ($MTEN$) is calculated as the number of years that the current manager has managed the fund. This variable is intended as a measure of managerial experience, and hence it may influence mutual fund performance. Average data on this variable is presented in Panel A of Table 3, and it is only available for eight of the nineteen countries in our sample (Hong Kong, India, Malaysia, Singapore, Taiwan, Thailand, and U.S.).

3.2 Country Characteristics

The sample includes 19 countries and therefore we examine the role of country characteristics in explaining mutual fund performance. We consider ten different country-level variables that are classified into five groups: economic development, financial development, familiarity, investor protection, and other variables. Panel B of Table 3 presents descriptive statistics of

country-level variables.

3.2.1 Economic Development

Economic development is described as a sustainable increase in living standards of a certain country or region inhabitants'; it is associated with higher per capita income and better education, as well as also with more developed industries, and more incentives for innovation and for new investments. Therefore, a country's level of economic development might influence the performance of the mutual fund industry. To capture the economic development we use the gross domestic product per capita ($GDPC$) in U.S. dollars. $GDPC$ captures investors' and country wealth. We expect higher $GDPC$ to lead to higher mutual fund performance. Data on this variable is from the World Development Indicators (WDI) database.

3.2.2 Financial Development

A more developed financial market has some advantages, not only due to its credibility, but also because of higher liquidity and lower transaction costs. Also, a more developed financial market suggests a more developed financial culture, which might explain more demand for financial products and the existence of a more sophisticated industry. These features can indirectly create a relation between financial development and greater mutual fund performance. We have a set of three different variables to capture the financial development. First, we consider the market capitalization of listed companies as a percentage of gross domestic product ($MCAP$), that captures the relative size of the stock market of each country. Second, we consider the turnover ratio ($TURN$), defined as the ratio of the total value of stocks traded to the average market capitalization. This variable is a measure of trading activity**.** Data on these two variables are from the WDI database. The third variable is country trading costs in basis points ($TCOST$). As mentioned by Chan, Faff, Gallagher, and Looi (2005), trading costs are important in fund performance evaluation as they provide valuable information about the extent of leakage in performance from active trading. It

is quite obvious that, when compared, actively managed funds involve substantially higher trading costs [Kleim and Madhavan (1997)], and hence, trading costs are also related to fund size. As funds become larger, they will necessarily trade larger quantities.

Khorana, Servaes, and Tufano (2005) state that trading costs can have an impact on the development of mutual funds industry. The impact can be ambiguous, because if higher trading costs can be synonymous with less investment in mutual funds, it may also contribute to an improvement, because individual investors would face even higher costs if they were to trade on their own. They find a negative impact of trading costs on mutual fund industry size.

Trading costs can be broken down into two components: explicit transaction costs, including brokerage and taxes, and implicit costs, that include market impact costs, opportunity costs of delay in trading, and bid-ask spreads. While explicit costs are easily identifiable and quantifiable, identifying and quantifying implicit costs is not so easy.

We calculate the annual average transaction cost (including commissions, fees, and price impact) using the Global Universe Data-ElkinsMcSherry database. Countries with less developed markets are countries with higher trading costs (Malaysia, India, Thailand, South Korea, and Taiwan), while more developed markets like the U.S. and Japan have lower trading costs.

3.2.3 Familiarity

Familiarity may be intended as a cheap source of information. The extent of investment might be due to investors being more or less familiar with the markets.

There is substantial evidence on the relation between familiarity and higher performance. Using data on the electronic trading system Xetra of the German Security Exchange, Hau (2001b) studies equity trades of professional traders located in 23 different cities and eight European countries. Results indicate that traders located outside Germany in non-German-speaking cities show lower proprietary trading profit. In another paper, using data on the

11 large Xetra blue-chip stocks, Hau (2001a) analyzes the degree of financial market segmentation due to international information barriers. Results show that proprietary accounts of foreign traders present a systematic and economically significant underperformance both in terms of absolute profitability as well as for performance measurements standardized for account size. Massa and Simonov (2006) find that familiarity is not a behavioral bias but is information driven. More familiarity-based investment allows investors to earn higher returns than they would have otherwise earned if they had hedged.

We identify two classes of familiarity variables that can potentially influence the performance of mutual funds. We expect to find a positive relation between familiarity and fund performance.

The first variable is the proportion of countries that have a common national or official language with each given country ($LANG$). Data are from the World Factbook 2004. The second variable is the average distance between a country's capital to all other countries' capitals, measured in kilometers ($DIST$). It is quite obvious that European countries have closest proximity, when compared with the other countries. Data on this variable is from www.nber.org/~wei.

3.2.4 Investor Protection

The overall legal environment is a determinant of a country's level of financial development. Differences in laws and regulations affect the investors' behavior. Investors will be reluctant to invest in markets where their rights are not properly defended. As reported by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997), countries with poor investor protection have significantly smaller debt and equity markets. They also notice that the quality of the legal system is important for the enforcement of contracts and also captures the government's general attitude towards business. These countries are usually less developed countries, with less economic growth [see, for example King and Levine (1993) and Levine and Zervos (1998)]. Accordingly, we expect to find a positive relation between investors' protection

variables and mutual fund performance. We use two different investor protection variables.

The first variable is a dummy variable that identifies the origin type of the country's legal system ($COMMON$) that equals one if the origin is English common law, and zero otherwise. The English common law provides better legal protection to investors when compared to the German and French civil law system. Following La Porta et al. (1997) classification, in our sample we have seven countries based on the English common law system (U.K., U.S., Thailand, Singapore, Malaysia, India, and Hong Kong). The second variable is a disclosure quality index ($DISCLO$), a measure of transparency (higher implies more transparency). We use the Global Competitiveness Report survey measurement to measure transparency.

3.2.5 Other Variables

We also include two other country-level variables, the country's mutual fund industry age ($IAGE$), and the average correlation between a country's market return and all other countries' returns ($CORR$).

The mutual fund industry has been one of the fastest growing types of financial intermediary in recent years. However, in a significant number of countries, it is a relatively recent financial innovation, especially when comparing these countries with the U.S., where the mutual fund industry has existed since 1924. The older the industry, the greater is the investors' experience, and the more investment there will be in mutual funds. Mutual fund managers' experience will also be greater. Additionally, we hypothesize that the older the industry, the more efficient the market will be and that may lead to better performance. The age of industry is measured in number of years since the first open-end fund was sold in the country. Data is from Khorana et al. (2005).

The correlation coefficient is a proxy for the diversification potential. Diversification tends to offer investors potential gains; so, the more diversified mutual funds portfolios become, the stronger their performance would be. When the correlation of a certain country with the others is higher it means that mutual funds must invest in foreign markets in order

to diversify their portfolio, however the lowest will be the diversification opportunities. If the fund only invests domestically, the portfolio diversification will go down as the country correlation increases.

For each country we calculated the average correlation coefficient between the country's market return and all other countries' market return. Correlations are calculated using five years monthly historical returns from Datastream country indexes.

Considering the potential for interrelationships among these explanatory variables, we calculate pairwise correlations and present this information in Table 4. Despite a few strongly correlated variables, multicollinearity does not appear to be a serious issue as most correlation coefficients are low. Fund-level variable correlations are very low among each other. Fund-level variable correlations are also very low with most of the country-level variables.

4 Empirical Results

In this section we aim to explain individual mutual fund performance worldwide using both fund attributes and country characteristics. The first subsection presents univariate results for mutual fund performance. The second subsection presents multivariate results. The final subsection presents further multivariate results that take into account the geographic scope of the mutual fund.

4.1 Univariate Regression Results

Table 5 shows the univariate regression results of mutual fund performance as measured by alpha. We consider four alternative benchmark models to estimate alpha, as described earlier. The table reports the number of observations and, for each benchmark model, the estimated coefficient and the t-statistic.

With regard to the fund-level attribute results, $SIZE$ is positively related with fund performance across the four benchmark models; this means that larger funds perform better

and suggests the presence of economies of scale.

Fund age is only statistically significant in the domestic four-factor model. This variable is negatively related with performance, which indicates that younger funds seem to perform better. Among the fee variables, we find that only redemption charges seem to be relevant to explain mutual fund performance. Results show a positive and statistically significant relation between $RCHARGE$ and fund performance for all benchmark models (except for the international four-factor model). This is consistent with Chordia (1996) argument that, by imposing higher redemption charges, mutual funds have fewer cash positions and can enhance performance. $ACHARGE$ coefficients are not consistent across benchmark models, while $ICHARGE$ coefficients are insignificant. Results on the management structure variable are not consistent across benchmark models. Management tenure is negatively related to fund performance, indicating that less experienced managers seem to perform better.

The results for country characteristics show that mutual fund performance is positively related with economic development ($GDPC$) and market capitalization of listed companies as a percentage of gross domestic product ($MCAP$). Trading activity ($TURN$) is positively related with fund performance in all four cases. Results on the trading cost variable are not consistent across benchmark models. The results support that the level of development enhances mutual fund performance.

The common language dummy variable ($LANG$) is positively and significantly related to fund performance in all four performance benchmark models. Funds in countries that share a common language seem to present a better performance.

The quality of the country's legal institutions and financial reporting, and investor protection ($COMMON$ and $DISCLO$) seems to be positively related with fund performance.

The industry age coefficient is not consistent across benchmark models. Return correlation ($CORR$) results support a positive relation with fund performance.

4.2 Multivariate Regression Results

Table 6 presents the multivariate regression results for fund attributes and country-level variables for the four performance benchmark models. We include only two fund level variables: $SIZE$ and $FAGE$ to maximize the sample sizes. In a later section, we introduce the remaining fund variables as determinants of mutual fund performance. For each benchmark model, we also consider one specification that includes fund and country variables and another that includes fund variables and country fixed effects. This latter specification controls for all potential heterogeneity across countries.

The mutual fund size is positively and significantly related to fund performance in all four cases. Results indicate that larger funds perform better than smaller funds, suggesting the presence of scale economies. This finding confirms, for example, the Otten and Bams (2002) results using a sample of European mutual funds.

The fund age is negatively and significantly related with fund performance. Younger funds seem to perform better than older funds. As we mentioned before, although the performance of younger funds may suffer from a learning period, younger mutual funds will be more attentive to investment opportunities. Our finding confirms, for example, the Otten and Bams (2002) results using a sample of European mutual funds. The results on mutual fund attributes are entirely confirmed in the specification with country fixed effects in all four cases.

There is no evidence that the level of economic development is linked to the performance of the mutual fund industry. In contrast, there is strong evidence that financial development is positively linked to mutual fund performance, as measured by the market capitalization of listed companies as a percentage of gross domestic product ($MCAP$), trading activity ($TURN$), and trading costs ($TCOST$). Indeed, the first two variables are positively related with performance, while $TCOST$ is negatively related. As expected, countries with higher $MCAP$ and $TURN$ might enhance performance due to their credibility and liquidity, and positively influence mutual fund performance. Similarly, mutual fund performance is

enhanced in markets with lower trading costs.

The common language variable ($LANG$) is positively related with mutual fund performance, despite only being statistically significant in the international four-factor model. These findings indicate that the sharing of a common language with other countries spurs mutual fund performance, which supports the familiarity hypothesis. The other familiarity variable $DIST$ is negatively related with fund returns for all benchmark models. Funds perform better if a country is geographically closer to other countries. Our results confirm the importance of familiarity variables as a lower degree of information asymmetry is positively associated with investment performance.

The common law legal origin dummy, $COMMON$, presents a positive and significant coefficient in all benchmark models. $DISCLO$ results indicate that higher transparency seems to be associated with higher performances, even though results are only statistically significant for the international market model. These findings support the hypothesis that in countries with strong legal institutions and investor protection, mutual funds are able to achieve higher levels of performance.

Results on the industry age and correlation variables indicate a negative relation between these variables and mutual fund performance. In all four alternative benchmark models, we find a negative relation between $IAGE$ and mutual fund performance. As mentioned, industry age is connected with the investors' and the mutual fund managers' experience. We do not find that experience leads to better performance. Indeed, countries with a younger mutual fund industry seem to perform better. $CORR$ results for the four benchmark models show a negative relation between return correlation and mutual fund performance, indicating that performance decreases as country correlation with the rest of the world increases.

Overall, we find evidence that mutual fund performance is related to fund attributes and country characteristics. There is evidence that large funds achieve higher risk-adjusted returns. Fund age is negatively associated with performance. The country's financial development fosters mutual fund industry performance. Familiarity, through proximity or common

language, with other countries also seems to have a positive impact on performance. Mutual funds in countries with strong investor protection perform better.

In some cases, we do not find consistent results across the four benchmark models. This may be related to the fact that our sample includes different geographic investment scopes such as domestic and foreign. The next subsection explores the possibility that some of the results may be clarified when taking the geographic style of the fund into consideration. Further, it also allows the robustness of our results to be examined for the different types of fund.

4.3 Performance and Geographic Style

We split the sample of mutual fund into three subsamples according to mutual funds' geographic investment style: (1) domestic funds; (2) foreign funds (i.e., invest in country different from their location); and (3) global funds. We classify the mutual funds into this classification using the Lipper global classification. Tables 7-9 present the results of the multivariate performance regressions for each subsample of funds.

$SIZE$ is positively related with fund performance across the three subsamples. Thus, this finding is robust to the three sub-samples and strongly supports the hypothesis that fund size has an important role in explaining mutual fund performance. Larger funds perform better than smaller funds, indicating the presence of economies of scale.

The negative relation between fund age and performance seems to be driven by foreign and global funds, rather than domestic funds. Indeed, we do not find evidence of a reliable relation between age and performance in Table 7 for domestic funds. When investing abroad, young funds seem to be capable of facing the exposure to new markets and new products and avoid some of the problems associated with "youth". The results on the mutual fund age variable are corroborated by the specifications using country fixed effects.

We next examine the country determinants of mutual fund performance according to the geographic investment style. We find some differences across different types of fund.

The level of economic and financial development of the country where the fund is located seems to be more relevant in explaining the performance of domestic funds than of foreign or global funds.

This does not come as a surprise as the level of economic development is related with the existence of good investment opportunities in the domestic stock market. Financial development, as measured by liquidity and lower transaction costs in the domestic market, is also positively associated with domestic mutual fund performance. For foreign and global mutual funds, financial development is significant in some cases as it may reflect a well-developed mutual fund industry. In contrast, the home country level of development does not seem to affect (and even in some cases is a negative determinant) foreign and global mutual performance. The explanation is that funds investing abroad search for cheap stocks or countries with high potential of valuation or diversification opportunities (perhaps because when mutual funds invest abroad, they all tend to look for the same kind of firms; see Ferreira and Matos (2006)).

While the country's level of development is more important to explain domestic fund performance, the level of familiarity with the rest of the world is more important to explain the performance of funds that invest abroad. The evidence confirms that familiarity variables are not relevant for funds that invest domestically, while for foreign and global funds there is evidence that proximity and common language to other countries spur the performance of funds when they invest abroad. The evidence supports the hypothesis that funds facing a lower degree of information asymmetry do better in terms of performance when they invest outside of their home country.

Using the whole sample of funds, we have found evidence that mutual fund have better performance in countries with common law origin because investor rights are better protected. Indeed, we find that the $COMMON$ coefficient is positive and significant in all four cases for domestic funds (see Table 7). The $COMMON$ coefficient is also positive and significant for funds investing abroad (see Tables 8 and 9). Thus, there is strong evidence that

the mutual fund industry achieves better performance when the legal system is stronger.

Finally, with regard to industry age we find contrasting evidence in domestic and foreign funds. Industry age is positively related with the performance of the domestic fund subsample, but it is negatively related with the performance of foreign and global mutual funds. $IAGE$ is commonly associated with investors' and mutual fund managers' experience, and industry efficiency. Our results show that this factor seems to be most important in domestic mutual funds. Funds in countries with young industries seem to have good performance when they invest abroad.

The $CORR$ variable also presents different results depending on whether the mutual fund invests domestically or abroad. The domestic fund subsample regression results show an insignificant relation between $CORR$ and mutual fund performance. On the other hand, the performance of funds that invest abroad seems better when the correlation is low because it means that they are able to benefit the most from international diversification opportunities.

5 Additional Tests and Robustness

This section considers several robustness tests. First, we reestimate multivariate regressions excluding U.S. mutual funds, as U.S.-domiciled mutual funds represent a substantial part of our sample. Second, we introduce additional fund-level variables: annual charge ($ACHARGE$), initial charge ($ICHARGE$), redemption charge ($RCHARGE$), management structure ($MSTR$), and management tenure ($MTEN$). Finally, we reestimate multivariate regressions using the relative size of mutual funds.

5.1 Non-U.S. Mutual Funds

U.S.-domiciled mutual funds represent more than 30% of our sample in terms of number of funds, and about 73% of our sample in terms of net asset value. Thus, U.S. has the largest industry in the world and can have a very strong influence on our results. The goal here is to

test the robustness of our results excluding U.S. mutual funds. Furthermore, the results for non-U.S. funds may show some differences between the determinants of U.S. versus non-U.S. mutual funds performance. Results are reported in Table 10.

We find that the $SIZE$ variable is positive and significant, confirming the results obtained using the full sample. We find a significant relation between $FAGE$ and performance outside the U.S. but only in one case (domestic four-factor model). Thus, the evidence of a negative relation between age and performance is stronger in the U.S. than outside of the U.S. mutual fund industry. The results on the fund attributes are entirely supported by the country fixed effects specification. [5]

The results for the country characteristics are in general supportive of our previous findings using the full sample of mutual funds. We still find no association between economic development and fund performance. Financial development, especially expressed in terms of trading activity and low transaction costs, is positively associated with fund performance. Familiarity, proxied by the use of language common to other countries, spurs fund performance. Mutual funds located in countries with strong legal institutions outperform fund located in countries with weak legal institutions. Finally, countries where the industry is younger perform better.

5.2 Additional Fund Attributes

The multivariate performance regressions in Tables 7-10 only include $SIZE$ and $FAGE$ as fund attributes. In this subsection, we introduce five new fund-level variables: annual charges ($ACHARGE$), initial charges ($ICHARGE$), redemption charges ($RCHARGE$), management structure ($MSTR$), and management tenure ($MTEN$).

Table 11 shows regression results including the fee variables. $SIZE$ and $FAGE$ maintain the previous coefficients. We find that only $ACHARGE$ and $ICHARGE$ seems to

[5] We also calculate multivariate regressions for U.S. mutual funds sample. $SIZE$ variable is positively and significantly related to fund performance in all four cases. $FAGE$ is negative and significant for all four alternative benchmark models, confirming that the negative relation between fund age and performance is stronger in the U.S. than outside of the U.S.

be relevant to explain mutual fund performance, although $ACHARGE$ is not statistically significant for the international four-factor model, and $ICHARGE$ is only statistically significant in two cases (market model and four-factor model). The results indicate a positive relation between these types of fee and mutual funds performance. As we noted before, the relationship between mutual fund returns and charges is mixed. Our results are consistent with Ippolito (1989) and Droms and Walker (1996) findings of a positive relation between performance and fees. This finding suggests that higher fees compensate the benefits associated to that investment as fees are positively associated with performance. Higher fees mean, for example, that investors are paying to have a lot of research done.

As reported by [Khorana et al. (2006)], there is a significant relationship between fees and some country characteristics (the quality of the judicial system, the GDPC, the population's education, and the age of the mutual fund industry, for example). To analyze the impact of this relation in our initial results, we reestimate multivariate regressions including all the country-level variables for each fee (see Table12). Results on fee variables do not change, confirming our prior results that only $ACHARGE$ and $ICHARGE$ are relevant to explain mutual fund performance ($ACHARGE$ and $ICHARGE$ are now statistically significant for all four benchmark models. Results on the two other fund-level variables $SIZE$ and $FAGE$ also remain unchanged. If we exclude GDPC, that is now significant when we include $ACHARGE$ in the regression, country-level variable results persists.

Table 13 shows regression results including the management variables. $SIZE$ and $FAGE$ maintain the previous coefficients. Results show a negative relation between $MSTR$ and fund performance, but only significant in the case of international four-factor model. This indicates that funds managed by an individual manager tend to perform better. Teams of decision-makers may have more resources, resulting in a higher number of alternatives to specific decisions, and that can help decrease uncertainty and reduce error biases. However, when a fund is team-managed there is more fighting to implement ideas, and managers may end up spending too much research effort to implement their ideas. This hierarchy

of costs can lead to worse performances. Controlling for fund age, the $MTEN$ variable coefficient is positive and significant in all four cases. These results support the idea that more experienced managers tend to perform better. Intended as a measure of managerial experience, longer-tenure managers would perform better and, consequently, investors would prefer to invest in those funds. Filbeck and Tompkins (2004) associate manager tenure with lower fees paid by investors, given that experienced managers might be more efficient when analyzing and processing information.

5.3 Size

One of the important findings of this study is that fund size is positively associated with higher performance. The fact that we use a large sample, contrary to the majority of previous studies that used national funds, might not account for country heterogeneity in industry size. The average size of mutual funds differs from country to country. As mentioned previously, the average size of European (as well as non-U.S.) funds is much smaller than the average size of the U.S. funds -, it is possible that our regression results are influenced by this fact. Results (not tabulated here) using the relative size of equity mutual funds, calculated as the ratio of the mutual fund size divided by the country size, confirm our primary findings.

6 Conclusion

This study examines the relation between mutual fund performance, fund attributes, and country characteristics. Data on mutual funds is drawn from the Lipper Hindsight database that covers mutual funds around the world. The final sample includes 10,568 open-end actively managed equity funds from 19 countries for the 1999-2005 period. We consider several fund attributes as potential determinants of fund performance: size, age, fees, management structure, and management tenure. In addition, we also consider country characteristics as determinants of mutual fund performance: economic development, financial development,

familiarity, and investor protection.

The results show that funds size is positively related with fund performance. Larger funds perform better suggesting the presence of significant economies of scale in the mutual fund industry worldwide. This finding is consistent among domestic and foreign funds, and in several other robustness tests. Fund age is negatively related with fund performance indicating that younger funds tend to perform better. This finding seems mainly driven by the samples of foreign and U.S. funds. When investing abroad, young mutual funds seem to offer investors higher returns.

Additional tests show that fees (annual and initial charges) are positively associated with performance. If fees are seen as the price that uninformed investors pay to managers to invest their money, when paying higher fees investors are paying the benefits associated to that investment, and obtain better performance. Mutual funds managed by an individual manager perform better. The possible benefits associated with team-management funds are exceeded by the costs. Management tenure is positively linked to performance. This finding supports the hypothesis that the benefits of management experience outweigh the costs, such as lack of effort or attention.

Country characteristics are able to explain mutual fund performance more than fund attributes. There is a positive relation between mutual fund performance and the country's level of development. The relation between performance and financial development is particularly strong in the case of countries with high trading activity and low transaction costs. The level of economic development is of particular importance for domestic funds. Familiarity arguments explain the performance of foreign funds as they obtain better performance when investing in countries geographically close and that share a common language. Finally, funds located in countries with strong legal institutions and investor protection tend to perform better.

References

Aghion, P., and J. Tirole, 1997, Formal and real authority in organizations, *Journal of Political Economy* 105, 1–29.

Bauer, R., K. Koedijk, and R. Otten, 2002, International evidence on ethical mutual fund performance and investment style, Working Paper, Limburg Institute of Financial Economics, Maastricht University.

Berk, J., and R. Green, 2004, Mutual fund flows and performance in rational markets, *Journal of Political Economy* 112, 1269–1295.

Bird, R., H. Chin, and M. McCrae, 1983, The performance of Australian superannuation funds, *Australian Journal of Management* 8, 49–69.

Blake, D., and A. Timmermann, 1998, Mutual fund performance: Evidence for the UK, *European Finance Review* 2, 57–77.

Brennan, M., and P. Hughes, 1991, Stock prices and the supply of information, *Journal of Finance* 46, 1665–1691.

Brown, G., P. Draper, and E. McKenzie, 1997, Consistency of UK pension fund investment performance, *Journal of Business Finance and Accounting* 24, 155–169.

Brown, S., and W. Goetzmann, 1995, Performance persistance, *Journal of Finance* 50, 679–698.

Brown, S., W. Goetzmann, T. Hiraki, T. Otsuki, and N. Shiraishi, 2001, The Japanese open-end fund puzzle., *Journal of Business* 74, 59–77.

Brown, S., W. Goetzmann, R. Ibbotson, and S. Ross, 1992, Survivorship bias in performance studies, *Review of Financial Studies* 5, 553–580.

Cai, J., K. Chan, and T. Yamada, 1997, The performance of Japanese mutual funds, *Review of Financial Studies* 10, 237–273.

Carhart, M., 1997, On persistence in mutual fund performance, *Journal of Finance* 52, 57–82.

Cesari, R., and F. Panetta, 2002, The performance of Italian equity funds, *Journal of Banking and Finance* 26, 99–126.

Chan, H., R. Faff, D. Gallagher, and A. Looi, 2005, Fund size, fund flow, transaction costs and performance: Size matters!, Working Paper.

Chen, J., H. Hong, M. Huang, and J. Kubik, 2004, Does fund size erode performance? Liquidity, organizational diseconomies, and active money management, *American Economic Review* 94, 1276–1302.

Chevalier, J., and G. Ellison, 1999, Are some mutual fund managers better than others? Cross-sectional patterns in behavior and performance, *Journal of Finance* 54, 875–899.

Chordia, T., 1996, The structure of mutual fund charges, *Journal of Financial Economics* 41, 3–39.

Ciccotello, C., and T. Grant, 1996, Equity fund size and growth: Implications for performance and selection, *Financial Services Review* 5, 1–12.

Cremers, M., and A. Petajistoy, 2006, How active is your fund manager? A new measure that predicts performance, Working Paper.

Dahlquist, M., S. Engström, and P. Söderlind, 2000, Performance and characteristics of Swedish mutual funds, *Journal of Financial and Quantitative Analysis* 35, 409–423.

Dellva, W., and G. Olson, 1998, The relationship between mutual fund fees and expenses and their effect on performance, *Financial Review* 33, 85–104.

Dermine, J., and L.-H. Roller, 1992, Economies of scale and scope in French mutual funds, *Journal of Financial Intermediation* 2, 83–93.

Droms, W., and D. Walker, 1996, Mutual fund investment performance, *Quartelery Review of Economics and Finance* 36, 347–363.

Elton, G., S. Das, and M. Hlavka, 1993, Efficiency with costly information: A reinterpretation of evidence from managed portfolios, *Review of Financial Studies* 6, 1–22.

Fama, E., and K. French, 1993, Common risk factors in the returns on stocks and bonds, *Journal of Financial Economics* 33, 3–56.

Ferreira, M., and P. Matos, 2006, The colors of investors' money: Which firms attract institutional investors from around the world?, Working Paper.

Filbeck, G., and D. Tompkins, 2004, Management tenure and risk-adjusted performance on mutual funds, *The Journal of Investing* 13, 72–80.

Gallagher, D., 2003, Investment manager characteristics, strategy, top management changes, and fund performance, *Accounting and Finance* 43, 283–309.

Gallagher, D., and K. Martin, 2005, Size and investment performance: A research note, *Abacus* 41, 55–65.

Glosten, L., and L. Harris, 1988, Estimating the components of the bid-ask spread, *Journal of Financial Economics* 21, 123–142.

Golec, J. H., 1996, The effects of mutual fund managers' characteristics on their portfolio performance, risk, and fees, *Financial Services Review* 5(2), 133–148.

Gompers, Paul, and Andrew Metrick, 2001, Institutional investors and equity prices, *The Quarterly Journal of Economics* 116, 229–259.

Gregory, A., J. Matatko, and R. Luther, 1997, Ethical unit trust financial performance: Small company effects and fund size effects, *Journal of Business Finance and Accounting* 24, 705–725.

Grimblatt, M., S. Titman, and R. Wermers, 1995, Momentum investment strategies, portfolio performance, and herding: A study of mutual fund behavior, *American Economic Review* 85, 1088–1105.

Grinblatt, M., and S. Titman, 1989, Mutual fund performance: An analysis of quarterly portfolio holdings, *Journal of Business* 62, 393–416.

Grinblatt, M., and S. Titman, 1994, A study of montly mutual fund returns and portfolio performance evaluation techniques, *Journal of Financial and Quantitative Analysis* 29, 419–444.

Gruber, M., 1996, Another puzzle: The growth in actively managed mutual funds, *Journal of Finance* 51, 783–807.

Grunbichler, A., and U. Pleschiutschnig, 1999, Performance persistence: Evidence for the European mutual funds market, Working Paper, University of St. Gallen.

Hau, H., 2001a, The geography of financial markets: Geographic patterns of trading profitability in Xetra, *European Economic Review* 45, 757–769.

Hau, H., 2001b, Location matters: An examination of trading profits, *Journal of Finance* 56, 1959–1983.

Hendricks, D., J. Patel, and R. Zeckhauser, 1993, Hot hands in mutual funds: Short-run persistence of relative performance 1974-1988, *Journal of Finance* 48, 93–130.

Indro, D., C. Jiang, M. Hu, and W. Lee, 1999, Mutual fund performance: Does fund size matter?, *Financial Analysts Journal* 55, 74–87.

Ippolito, R., 1989, Efficiency with costly information: A study of mutual fund performance, *Journal of Economics* 104, 1–23.

Jegadeesh, N., and S. Titman, 1993, Returns to buying winner and selling losers: Implications for stock market efficiency, *Journal of Finance* 48, 65–91.

Jensen, M., 1967, The performance of mutual funds in the period 1945-1964, *Journal of Finance* 23, 389–416.

Khorana, A., H. Servaes, and P. Tufano, 2005, Explaining the size of the mutual fund industry around the world, *Journal of Financial Economics* 78, 145–185.

Khorana, A., H. Servaes, and P. Tufano, 2006, Mutual fund fees around the world, Working Paper, Georgia Institute of Technology.

King, R., and R. Levine, 1993, Finance, entrepreneurship, and growth: Theory and evidence, *Journal of Monetary Economics* 32, 513–542.

Kleim, D., and A. Madhavan, 1997, Transaction costs and investment style: An interexchange analysis of institutional equity trades, *Journal of Financial Economics* 46, 265–292.

Kryzanowski, L., S. Lalancette, and M. To, 1994, Performance attribution using a multivariate intertemporal asset pricing model with one state variable, *Canadian Journal of Administrative Sciences* 11, 75–85.

Kryzanowski, L., S. Lalancette, and M. To, 1998, Benchmark invariancy, seasonality, and APM-free portfolio performance measures, *Review of Quantitative Finance and Accounting* 10, 75–94.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, 1997, Legal determinants of external finance, *Journal of Finance* 52, 1131–1150.

Levine, R., and S. Zervos, 1998, Stock markets, banks, and economic growth, *American Economic Review* 88, 537–558.

Malkiel, B., 1995, Returns from investing in equity mutual funds, 1971-1991, *Journal of Finance* 50, 549–573.

Massa, M., and A. Simonov, 2006, Hedging, familiarity and portfolio choice, *Review of Financial Studies* 19, 633–685.

McDonald, J., 1973, French mutual fund performance: Evaluation of internationnaly-diversified portfolios, *Journal of Finance* 28, 1161–1180.

Otten, R., and D. Bams, 2002, European mutual fund performance, *European Financial Management* 8, 75–101.

Otten, R., and M. Schweitzer, 2002, A comparison between the european and the U.S. mutual fund industry, *Managerial Finance* 28, 14–35.

Peterson, J., P. Pietranico, M. Riepe, and F. Xu, 2001, Explaining the performance of domestic equity mutual funds, *Journal of Investing* 10, 81–92.

Prather, L., W. Bertin, and T. Henker, 2004, Mutual fund charateristics, managerial attributes and fund performance, *Review of Financial Economics* 13, 305–326.

Prather, L., K. Middelton, and A. Cusack, 2001, Are N+1 heads better than one? The timing and selecting of australian-managed investment funds, *Pacific-Basin Finance Journal* 9, 379–400.

Sharpe, W., 1991, The arithmetic of active management, *The Financial Analysts' Journal* 47, 7–9.

Shukla, R., and G. Van Imwegen, 1995, Do locals perform better than foreigners? An analysis of UK and US mutual fund managers, *Journal of Economics and Business* 47, 241–254.

Sirri, E., and P. Tufano, 1998, Costly search and mutual fund flows, *Journal of Finance* 53, 1589–1622.

Stein, J., 2002, Information production and capital allocation: Decentralized versus hierarchical firms, *Journal of Finance* 57(5), 1891–1921.

Ter Horst, J., T. Nijman, and F. De Roon, 1999, Style analysis and performance evaluation of Dutch mutual funds, *Center Discussion Paper 9850* .

Ward, C., and A. Saunders, 1976, UK unit trust performance 1964-1974, *Journal of Business Finance and Accounting* 3/4, 83–97.

Wittrock, C., and M. Steiner, 1995, Performance-messung ohne rückgriff auf kapitalmarkttheoretische renditeerwatungsmodelle, *Kredit und Kapital* 1–45.

Zheng, L., 1999, Is money smart? A study of mutual fund investors' fund selection ability., *Journal of Finance* 54, 901–933.

Table 1: **Number and Size of Mutual Funds by Country**

The table presents our sample total number and total net asset values (in millions of U.S. dollars) by country, reporting data at the end of 2005. The sample is drawn from the Lipper Hindsight database, and it is limited to equity primary, open-end, and actively managed funds.

	Total Number of Funds	Total Net Asset Values
Austria	409	13,110
Belgium	225	25,480
France	1,420	184,239
Germany	471	128,531
Hong Kong	25	563
India	191	6,463
Italy	405	89,912
Japan	877	99,720
Malaysia	193	6,131
Netherlands	15	12,982
Portugal	58	2,603
Singapore	292	9,765
South Korea	532	25,814
Spain	508	30,940
Sweden	78	19,796
Taiwan	242	10,977
Thailand	148	1,967
U.K.	1,259	401,104
U.S.	3,220	2,851,844
Total	10,568	3,921,940

Table 2: **Excess Returns and Alphas Descriptive Statistics by Country**

The table reports excess returns and alpha's descriptive statistics by country, including number of observations, mean, and standard deviation. Excess returns are calculated as return on fund i in month t minus the return on a one-month T-bill in month t. Alpha is calculated using four different models: domestic market model, international market model, Cahart model, and international Cahart model. All values are in percentage.

				Alpha							
		Excess Returns		Domestic Market Model		International Market Model		Cahart Model		International Cahart Model	
	N	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev
Austria	375	-0.041	7.891	-1.097	0.875	-0.981	0.871	-0.827	0.843	-0.580	0.820
Belgium	220	-0.126	7.652	-0.543	0.807	-0.613	0.881	-0.595	0.823	-0.479	0.677
France	1,285	-2.691	11.203	-0.453	1.595	-0.450	1.601	-0.324	1.796	-0.456	1.627
Germany	437	-0.144	6.116	-0.194	0.501	-0.132	0.476	-0.208	0.595	0.201	0.423
Hong Kong	10	1.025	5.375	0.392	0.319	0.355	0.323	0.386	0.327	0.079	0.370
India	119	1.400	9.871	0.044	1.130	-0.027	1.180	-0.261	1.667	-0.115	1.532
Italy	388	0.034	4.735	-0.230	0.451	-0.249	0.487	-0.194	0.472	-0.128	0.346
Japan	677	0.001	6.747	-0.094	0.552	-0.147	0.638	-0.159	0.708	-0.181	0.742
Malaysia	138	-0.473	6.689	-0.748	0.739	-0.772	0.765	-0.747	0.733	-1.143	1.160
Netherlands	10	-1.322	14.836	-1.456	1.336	-1.458	1.362	-1.199	1.452	-1.579	1.606
Portugal	54	0.103	5.513	-0.177	0.471	-0.137	0.439	-0.203	0.554	-0.363	0.407
Singapore	224	0.038	6.171	-0.178	0.681	-0.272	0.675	-0.219	0.785	-0.173	0.588
South Korea	374	0.484	9.746	-0.381	0.544	-0.364	0.562	-0.298	0.543	-0.403	0.876
Spain	445	0.025	5.589	-0.368	0.619	-0.417	0.638	-0.267	0.614	-0.269	0.467
Sweden	76	0.194	7.034	0.000	0.893	0.035	0.910	0.008	0.928	0.080	0.827
Taiwan	219	-0.003	8.485	0.261	0.534	0.266	0.527	0.234	0.519	0.438	0.568
Thailand	92	0.204	9.269	-0.233	0.513	-0.173	0.462	-0.352	0.574	-0.316	0.652
UK	720	0.221	6.279	0.014	0.578	0.028	0.526	-0.051	0.586	-0.209	0.491
US	2,926	-0.117	6.156	-0.019	0.533	0.043	0.561	-0.307	0.408	-0.284	0.484
Total	8,789	-0.003	7.524	-0.208	0.869	-0.188	0.883	-0.282	0.904	-0.275	0.872

Table 3: **Descriptive Statistics of Explanatory Variables**

The table reports summary statistics of control variables by country. Panel A presents fund attributes, including: size, expressed as total net asset value in millions of U.S. dollars ($SIZE$); fund age, in years ($FAGE$) ; charges (in percentage), that we subdivide in annual charges ($ACHARGE$), initial charges ($ICHARGE$), and redemption charges ($RCHARGE$); management structure, dummy variable that equals 1 if the fund is team-managed and zero otherwise ($MSTR$); and management tenure, expressed in years ($MTEN$). Panel B presents country characteristics, that are classified into five groups: (1) Economic development variables, that include GDP per capita in U.S. dollars ($GDPC$); (2) Financial development variables, including market capitalization of listed companies expressed as a percentage of GDP ($MCAP$), turnover ratio in percentage ($TURN$), and trading costs in basis points ($TCOST$); (3) Familiarity variables, that include common language dummy variable ($LANG$), and distance between countries in kilometers ($DIST$); (4) Investor protection variables, including disclosure, a measure of transparency ($DISCLO$); and legal system dummy variable that equals one if the origin type of the country's legal system is English common law and zero otherwise ($COMMON$); and (5) Other variables, that include industry age variable in years ($IAGE$), and average return correlation ($CORR$).

Panel A: Fund Attributes

	$SIZE$	$FAGE$	$ACHARGE$	$ICHARGE$	$RCHARGE$	$MSTR$	$MTEN$
Austria	42.68	2,271	1.418	4.604	0.007	0.59	
Belgium	112.80	2,783	0.977	2.815	0.035	0.07	
France	129.42	3,254	1.485	1.836	0.041	0.01	
Germany	271.82	3,914	1.283	4.265	0.000	0.53	
Hong Kong	32.96	2,068	1.459	3.917	0.000	0.92	4,070
India	33.88	1,613	1.190	1.593	0.007	0.02	706
Italy	222.23	3,034	1.834	0.824	0.000	0.06	
Japan	113.26	2,189	1.489	0.780	0.169	NA	
Malaysia	32.31	2,506	1.515	4.163	0.000	0.92	2,620
Netherlands	862.07	6,184	1.045	1.094	1.071	0.00	
Portugal	44.70	2,996	1.875	0.200	2.000	0.00	
Singapore	35.37	2,257	1.238	4.490	0.003	0.85	2,241
South Korea	48.33	1,539	2.199	0.046	0.000	0.95	1,539
Spain	61.03	2,412	1.852	0.004	0.031	0.11	
Sweden	256.08	4,251	1.577	0.199	0.030	0.00	
Taiwan	45.18	2,544	1.554	0.800	0.004	0.00	488
Thailand	13.24	2,077	1.235	0.457	0.328	0.82	2,339
U.K.	319.62	4,474	1.351	4.335	0.053	0.12	
U.S.	892.98	4,151	0.718	4.139	0.250	0.65	2,170

Table 3: continued

Panel B: Country Characteristics

	GDPC	*MCAP*	*TURN*	*TCOST*	*LANG*	*DIST*	*DISCLO*	*COMMON*	*IAGE*	*CORR*
Austria	29,843	18.48	29.29	34.50	0.111	4,735	6.00	0	49	0.442
Belgium	28,398	92.65	60.00	30.40	0.222	4,827	5.90	0	58	0.525
France	27,012	89.81	79.41	29.69	0.056	4,941	5.90	0	41	0.665
Germany	26,314	52.84	117.59	28.73	0.111	4,680	6.00	0	56	0.670
Hong Kong	26,718	390.93	50.50	46.34	0.278	6,297	5.80	1	45	0.591
India	2,658	37.50	147.92	68.96	0.278	5,897	4.80	1	41	0.471
Italy	26,134	51.81	103.29	34.69	0.000	5,066	4.97	0	22	0.602
Japan	27,132	71.08	75.46	21.21	0.000	7,471	5.60	0	40	0.372
Malaysia	9,071	150.32	31.17	69.17	0.000	7,788	5.10	1	46	0.342
Netherlands	30,031	127.64	129.15	27.82	0.056	4,800	6.10	0	76	0.661
Portugal	18,731	45.85	58.05	36.75	0.000	5,976	5.10	0	19	0.555
Singapore	23,991	163.71	54.59	47.80	0.278	8,026	5.90	1	46	0.509
South Korea	17,669	55.58	279.65	64.99	0.000	6,754	4.70	0	13	0.512
Spain	22,916	82.24	179.72	36.54	0.000	5,579	5.60	0	47	0.644
Sweden	27,067	111.52	105.09	31.51	0.000	4,763	6.30	0	47	0.632
Taiwan	25,168	NA	NA	56.17	0.278	7,127	5.40	0	21	0.446
Thailand	6,964	48.86	93.73	65.00	0.000	7,050	4.30	1	10	0.418
U.K.	28,024	153.29	95.57	51.42	0.278	4,955	6.30	1	71	0.642
U.S.	35,709	141.47	162.91	26.81	0.278	9,308	6.61	1	81	0.606

Table 4: **Pairwise Correlations Across Explanatory Variables**

The table reports pairwise correlations for fund-level and country-level variables. Fund-level variables, include: size, expressed as total net asset value in millions of U.S. dollars ($SIZE$); fund age, in years ($FAGE$); charges (in percentage), that we subdivide in annual charges ($ACHARGE$), initial charges ($ICHARGE$), and redemption charges ($RCHARGE$); management structure, dummy variable that equals 1 if the fund is team-managed and zero otherwise ($MSTR$); and management tenure, expressed in years ($MTEN$). Country-level variables are classified into five groups: (1) Economic development variables, that include GDP per capita in U.S. dollars ($GDPC$); (2) Financial development variables, including market capitalization of listed companies expressed as a percentage of GDP ($MCAP$), turnover ratio in percentage ($TURN$), and trading costs in basis points ($TCOST$); (3) Familiarity variables, that include common language dummy variable ($LANG$), and distance between countries in kilometers ($DIST$); (4) Investor protection variables, including disclosure, a measure of transparency ($DISCLO$); and legal system dummy variable that equals one if the origin type of the country's legal system is English common law and zero otherwise ($COMMON$); and (5) Other variables, that include industry age variable in years ($IAGE$), and average return correlation ($CORR$).

		1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*
$SIZE$	1	1.00																
$FAGE$	2	0.26	1.00															
$ACHARGE$	3	-0.14	-0.19	1.00														
$ICHARGE$	4	0.11	0.19	-0.33	1.00													
$RCHARGE$	5	-0.02	-0.04	-0.01	-0.04	1.00												
$MSTR$	6	0.04	-0.04	-0.12	-0.05	-0.02	1.00											
$MTEN$	7	0.14	0.40	-0.03	0.19	0.10	0.00	1.00										
$GDPC$	8	0.13	0.21	-0.51	0.46	0.01	0.10	0.07	1.00									
$MCAP$	9	0.10	0.19	-0.43	0.34	-0.01	0.12	0.15	0.48	1.00								
$TURN$	10	0.07	0.01	0.03	-0.56	-0.05	0.31	-0.13	0.11	0.09	1.00							
$TCOST$	11	-0.08	-0.10	0.39	-0.06	-0.08	0.02	-0.09	-0.74	-0.03	0.14	1.00						
$LANG$	12	0.12	0.20	-0.58	0.67	-0.07	0.14	0.05	0.54	0.73	0.15	-0.02	1.00					
$DIST$	13	0.13	0.07	-0.48	-0.32	0.09	0.47	0.13	0.48	0.48	0.46	-0.30	0.47	1.00				
$DISCLO$	14	0.13	0.25	-0.61	0.63	-0.01	0.07	0.10	0.88	0.67	0.01	-0.57	0.73	0.43	1.00			
$COMMON$	15	0.12	0.18	-0.52	0.46	0.00	0.28	0.14	0.32	0.79	0.19	0.12	0.82	0.60	0.57	1.00		
$IAGE$	16	0.14	0.24	-0.63	0.62	0.00	0.15	0.10	0.75	0.72	0.13	-0.41	0.80	0.52	0.93	0.75	1.00	
$CORR$	17	0.06	0.20	-0.19	0.14	-0.10	-0.29	0.02	0.39	0.33	0.22	-0.19	0.29	-0.19	0.48	0.16	0.40	1.00

Table 5: **Univariate Regressions of Mutual Fund Performance**

The table reports univariate OLS regressions explaining the performance of the mutual fund industry across countries. The dependent variable is alpha, calculated according to four different models: domestic market model, international market model, the four-factor model, also known as Cahart model, and the international Cahart model. Panel A presents fund attributes, including: size, expressed as total net asset value in millions of U.S. dollars ($SIZE$); fund age, in years ($FAGE$) ; charges (in percentage), that we subdivide in annual charges ($ACHARGE$), initial charges ($ICHARGE$), and redemption charges ($RCHARGE$); management structure, dummy variable that equals 1 if the fund is team-managed and zero otherwise ($MSTR$); and management tenure, expressed in years ($MTEN$). Panel B, presents country characteristics, that are classified into five groups: (1) Economic development variables, that include GDP per capita in U.S. dollars ($GDPC$); (2) Financial development variables, including market capitalization of listed companies expressed as a percentage of GDP ($MCAP$), turnover ratio in percentage ($TURN$), and trading costs in basis points ($TCOST$); (3) Familiarity variables, that include common language dummy variable ($LANG$), and distance between countries in kilometers ($DIST$); (4) Investor protection variables, including disclosure, a measure of transparency ($DISCLO$); and legal system dummy variable that equals one if the origin type of the country's legal system is English common law and zero otherwise ($COMMON$); and (5) Other variables, that include industry age variable, in years ($IAGE$), and average return correlation ($CORR$).

		Domestic Market Model		International Market Model		Cahart Model		International Cahart Model	
	N	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat
Panel A: Fund Attributes									
$SIZE$ (log)	8,624	**0.072**	16.324	**0.079**	17.473	**0.033**	6.474	**0.034**	5.913
$FAGE$ (log)	8,783	0.009	0.464	0.022	1.133	**-0.057**	-2.629	-0.018	-0.833
$ACHARGE$	7,024	**-0.108**	-9.628	**-0.135**	-11.567	**0.042**	3.800	0.020	1.646
$ICHARGE$	3,371	0.004	0.615	0.007	1.265	-0.001	-0.109	0.013	1.897
$RCHARGE$	5,168	**0.114**	3.574	**0.100**	3.062	**0.072**	2.365	0.022	0.704
$MSTR$	8,091	0.036	1.918	**0.063**	3.319	**-0.077**	-4.134	**-0.064**	-3.460
$MTEN$ (log)	3,258	-0.018	-1.224	-0.028	-1.835	**-0.028**	-2.300	**-0.039**	-2.700
Panel B: Country Characteristics									
$GDPC$ (log)	8,789	**0.129**	4.688	**0.184**	6.418	0.018	0.507	0.056	1.591
$MCAP$ (log)	8,570	**0.348**	21.989	**0.347**	22.159	**0.131**	8.160	0.006	0.351
$TURN$	8,570	**0.334**	18.623	**0.355**	19.784	**0.137**	7.768	**0.142**	7.596
$TCOST$	8,789	**-0.091**	-3.794	**-0.123**	-5.038	**0.076**	2.843	-0.024	-0.784
$LANG$	8,789	**1.256**	18.878	**1.431**	21.024	**0.197**	2.784	**0.368**	5.215
$DIST$	8,789	**0.542**	16.578	**0.593**	17.969	0.024	0.703	0.010	0.316
$DISCLO$	8,789	**0.159**	14.115	**0.205**	17.527	-0.016	-1.329	0.003	0.232
$COMMON$	8,789	**0.308**	17.225	**0.346**	19.057	0.021	1.133	-0.026	-1.398
$IAGE$	8,789	**0.163**	12.608	**0.201**	15.119	**-0.045**	-3.565	-0.024	-1.589
$CORR$	8,789	**0.422**	4.051	**0.569**	5.372	**0.309**	2.747	0.211	1.818

Table 6: **Multivariate Regressions of Mutual Fund Performance**

The table reports multivariate OLS regressions explaining the performance of the mutual fund industry across countries. The dependent variable is alpha, calculated according to four different models: domestic market model, international market model, the four-factor model, also known as Cahart model, and the international Cahart model. Explanatory variables are categorized in: fund-level variables, including, fund size, expressed as total net asset value in millions of U.S. dollars ($SIZE$); and fund age, in years ($FAGE$); and country-level variables, classified in five categories: (1) Economic development variables, that include GDP per capita in U.S. dollars ($GDPC$); (2) Financial development variables, including market capitalization of listed companies expressed as a percentage of GDP ($MCAP$), turnover ratio in percentage ($TURN$), and trading costs in basis points ($TCOST$); (3) Familiarity variables, that include common language dummy variable ($LANG$), and distance between countries in kilometers ($DIST$); (4) Investor protection variables, including disclosure, a measure of transparency ($DISCLO$); and legal system dummy variable that equals one if the origin type of the country's legal system is English common law and zero otherwise ($COMMON$); and (5) Other variables, that include industry age variable, in years ($IAGE$), and average return correlation ($CORR$).

	Domestic Market Model		International Market Model		Cahart Model		International Cahart Model	
Constant	**12.902**		**12.204**		**10.749**		**10.970**	
	(11.828)		(11.042)		(8.286)		(8.255)	
$SIZE$ (log)	**0.063**	**0.066**	**0.064**	**0.066**	**0.048**	**0.052**	**0.036**	**0.040**
	(10.954)	(11.433)	(10.855)	(11.196)	(7.392)	(8.051)	(4.962)	(5.621)
$FAGE$ (log)	**-0.103**	**-0.107**	**-0.101**	**-0.104**	**-0.116**	**-0.118**	**-0.062**	**-0.067**
	(-4.737)	(-5.001)	(-4.563)	(-4.804)	(-4.725)	(-4.917)	(-2.653)	(-2.929)
$GDPC$ (log)	-0.109		-0.104		-0.031		0.046	
	(-1.758)		(-1.636)		(-0.408)		(0.662)	
$MCAP$ (log)	**0.287**		**0.176**		**0.250**		-0.036	
	(8.342)		(5.054)		(6.896)		(-1.043)	
$TURN$ (log)	**0.471**		**0.482**		**0.339**		**0.375**	
	(13.452)		(13.716)		(8.811)		(9.462)	
$TCOST$ (log)	**-0.760**		**-0.720**		**-0.440**		**-0.609**	
	(-12.538)		(-11.628)		(-6.4)		(-7.918)	
$LANG$	0.297		-0.016		-0.320		**0.621**	
	(1.338)		(-0.067)		(-1.29)		(2.551)	
$DIST$ (log)	**-1.173**		**-1.148**		**-1.123**		**-1.049**	
	(-12.897)		(-12.732)		(-11.567)		(-10.352)	
$DISCLO$	0.043		**0.211**		0.137		-0.125	
	(0.499)		(2.417)		(1.525)		(-1.49)	
$COMMON$	**0.594**		**0.697**		**0.401**		**0.368**	
	(9.463)		(11.045)		(6.017)		(5.737)	
$IAGE$ (log)	**-0.354**		**-0.444**		**-0.346**		-0.115	
	(-4.739)		(-5.884)		(-4.388)		(-1.452)	
$CORR$	**-2.029**		**-1.904**		**-1.575**		**-1.206**	
	(-9.627)		(-8.772)		(-6.661)		(-5.087)	
Country dummies	No	Yes	No	Yes	No	Yes	No	Yes
Adjusted R^2	0.090	0.111	0.094	0.112	0.029	0.049	0.029	0.073
N	8,399	8,618	8,399	8,618	8,399	8,618	8,399	8,618

Table 7: **Multivariate Regressions of Domestic Mutual Fund Performance**

The table reports multivariate OLS regressions explaining the performance of domestic mutual fund industry across countries. The dependent variable is alpha, calculated according to four different models: domestic market model, international market model, the four-factor model, also known as Cahart model, and the international Cahart model. Explanatory variables are categorized in: fund-level variables, including, fund size, expressed as total net asset value in millions of U.S. dollars ($SIZE$); and fund age, in years ($FAGE$); and country-level variables, classified in five categories: (1) Economic development variables, that include GDP per capita in U.S. dollars ($GDPC$); (2) Financial development variables, including market capitalization of listed companies expressed as a percentage of GDP ($MCAP$), turnover ratio in percentage ($TURN$), and trading costs in basis points ($TCOST$); (3) Familiarity variables, that include common language dummy variable ($LANG$), and distance between countries in kilometers ($DIST$); (4) Investor protection variables, including disclosure, a measure of transparency ($DISCLO$); and legal system dummy variable that equals one if the origin type of the country's legal system is English common law and zero otherwise ($COMMON$); and (5) Other variables, that include industry age variable, in years ($IAGE$), and average return correlation ($CORR$).

	Domestic Market Model		International Market Model		Cahart Model		International Cahart Model	
Constant	2.321		2.020		0.204		2.500	
	(0.924)		(0.808)		(0.085)		(0.809)	
$SIZE$ (log)	**0.043**	**0.045**	**0.047**	**0.050**	**0.039**	**0.042**	**0.057**	**0.059**
	(4.738)	(5.130)	(4.941)	(5.315)	(3.845)	(4.254)	(4.179)	(4.485)
$FAGE$ (log)	-0.041	-0.033	-0.046	-0.036	-0.063	-0.057	-0.010	-0.009
	(-0.967)	(-0.804)	(-1.052)	(-0.838)	(-1.089)	(-1.016)	(-0.148)	(-0.135)
$GDPC$ (log)	**0.227**		**0.233**		**0.234**		0.171	
	(3.089)		(3.097)		(2.783)		(1.866)	
$MCAP$ (log)	-0.197		-0.200		-0.136		**-0.290**	
	(-1.871)		(-1.905)		(-1.286)		(-2.639)	
$TURN$ (log)	**0.355**		**0.345**		**0.184**		**0.414**	
	(5.903)		(5.713)		(3.014)		(5.251)	
$TCOST$ (log)	**-0.674**		**-0.674**		**-0.332**		**-0.546**	
	(-6.715)		(-6.595)		(-3.097)		(-4.183)	
$LANG$	0.482		0.407		0.492		0.420	
	(1.182)		(1.018)		(1.151)		(0.938)	
$DIST$ (log)	-0.187		-0.146		-0.093		-0.285	
	(-0.706)		(-0.556)		(-0.378)		(-0.848)	
$DISCLO$	**-0.371**		**-0.338**		**-0.242**		-0.183	
	(-3.356)		(-3.072)		(-2.189)		(-1.45)	
$COMMON$	**0.627**		**0.649**		**0.357**		**0.525**	
	(5.899)		(6.262)		(3.213)		(4.485)	
$IAGE$ (log)	**0.182**		0.111		0.052		0.028	
	(2.23)		(1.341)		(0.596)		(0.272)	
$CORR$	-0.217		-0.132		0.723		-0.242	
	(-0.478)		(-0.29)		(1.576)		(-0.416)	
Country dummies	No	Yes	No	Yes	No	Yes	No	Yes
Adjusted R^2	0.101	0.152	0.093	0.139	0.052	0.088	0.067	0.130
N	2,054	2,222	2,054	2,222	2,054	2,222	2,054	2,222

Table 8: **Multivariate Regressions of Foreign Mutual Fund Performance**

The table reports multivariate OLS regressions explaining the performance of foreign mutual fund industry across countries. The dependent variable is alpha, calculated according to four different models: domestic market model, international market model, the four-factor model, also known as Cahart model, and the international Cahart model. Explanatory variables are categorized in: fund-level variables, including, fund size, expressed as total net asset value in millions of U.S. dollars ($SIZE$); and fund age, in years ($FAGE$); and country-level variables, classified in five categories: (1) Economic development variables, that include GDP per capita in U.S. dollars ($GDPC$); (2) Financial development variables, including market capitalization of listed companies expressed as a percentage of GDP ($MCAP$), turnover ratio in percentage ($TURN$), and trading costs in basis points ($TCOST$); (3) Familiarity variables, that include common language dummy variable ($LANG$), and distance between countries in kilometers ($DIST$); (4) Investor protection variables, including disclosure, a measure of transparency ($DISCLO$); and legal system dummy variable that equals one if the origin type of the country's legal system is English common law and zero otherwise ($COMMON$); and (5) Other variables, that include industry age variable, in years ($IAGE$), and average return correlation ($CORR$).

	Domestic Market Model		International Market Model		Cahart Model		International Cahart Model	
Constant	**38.327**		**38.366**		**43.253**		**51.541**	
	(8.541)		(8.503)		(8.412)		(10.306)	
$SIZE$ (log)	**0.065**	**0.065**	**0.061**	**0.061**	**0.052**	**0.053**	**0.033**	**0.035**
	(6.725)	(6.771)	(6.284)	(6.306)	(4.576)	(4.678)	(2.789)	(2.941)
$FAGE$ (log)	**-0.142**	**-0.143**	**-0.139**	**-0.140**	**-0.133**	**-0.135**	**-0.078**	**-0.081**
	(-4.555)	(-4.609)	(-4.455)	(-4.500)	(-4.215)	(-4.285)	(-3.285)	(-3.437)
$GDPC$ (log)	**-2.235**		**-2.164**		**-2.474**		**-3.010**	
	(-8.162)		(-8.049)		(-7.736)		(-8.913)	
$MCAP$ (log)	0.111		-0.005		**0.137**		**-0.193**	
	(1.711)		(-0.078)		(1.989)		(-2.982)	
$TURN$ (log)	**1.108**		**1.139**		**0.857**		**0.923**	
	(5.365)		(5.449)		(3.791)		(4.232)	
$TCOST$ (log)	**-0.860**		**-0.894**		**-1.028**		**-1.565**	
	(-3.212)		(-3.252)		(-3.362)		(-5.385)	
$LANG$	**2.238**		**2.200**		0.956		**2.028**	
	(2.921)		(2.811)		(1.119)		(2.468)	
$DIST$ (log)	**-1.875**		**-1.985**		**-1.995**		**-2.042**	
	(-8.919)		(-9.26)		(-9.027)		(-9.952)	
$DISCLO$	**1.475**		**1.657**		**1.211**		**1.138**	
	(4.272)		(4.688)		(3.209)		(2.871)	
$COMMON$	**0.741**		**0.859**		**0.941**		**0.973**	
	(3.064)		(3.443)		(3.366)		(3.567)	
$IAGE$ (log)	**-1.894**		**-2.045**		**-1.498**		**-1.448**	
	(-4.854)		(-5.148)		(-3.458)		(-3.191)	
$CORR$	**-5.128**		**-4.875**		**-4.704**		**-4.025**	
	(-5.417)		(-5.049)		(-4.543)		(-4.032)	
Country dummies	No	Yes	No	Yes	No	Yes	No	Yes
Adjusted R^2	0.070	0.073	0.075	0.078	0.032	0.037	0.026	0.042
N	4,151	4,179	4,151	4,179	4,151	4,179	4,151	4,179

Table 9: **Multivariate Regressions of Global Mutual Fund Performance**

The table reports multivariate OLS regressions explaining global mutual fund performance of the mutual fund industry across countries. The dependent variable is alpha, calculated according to four different models: domestic market model, international market model, the four-factor model, also known as Cahart model, and the international Cahart model. Explanatory variables are, categorized in: fund-level variables, including, fund size, expressed as total net asset value in millions of U.S. dollars ($SIZE$); and fund age, in years ($FAGE$); and country-level variables, classified in five categories: (1) Economic development variables, that include GDP per capita in U.S. dollars ($GDPC$); (2) Financial development variables, including market capitalization of listed companies expressed as a percentage of GDP ($MCAP$), turnover ratio in percentage ($TURN$), and trading costs in basis points ($TCOST$); (3) Familiarity variables, that include common language dummy variable ($LANG$), and distance between countries in kilometers ($DIST$); (4) Investor protection variables, including disclosure, a measure of transparency ($DISCLO$); and legal system dummy variable that equals one if the origin type of the country's legal system is English common law and zero otherwise ($COMMON$); and (5) Other variables, that include industry age variable, in years ($IAGE$), and average return correlation ($CORR$).

	Domestic Market Model		International Market Model		Cahart Model		International Cahart Model	
Constant	**18.931**		**19.839**		**18.830**		**27.254**	
	(2.763)		(2.651)		(3.061)		(2.874)	
$SIZE$ (log)	**0.074**	**0.081**	**0.073**	**0.079**	**0.062**	**0.070**	**0.032**	**0.042**
	(7.679)	(8.468)	(7.374)	(8.048)	(5.828)	(6.717)	(3.190)	(4.310)
$FAGE$ (log)	**-0.220**	**-0.225**	**-0.197**	**-0.201**	**-0.218**	**-0.221**	-0.066	-0.062
	(-6.972)	(-7.357)	(-6.124)	(-6.447)	(-5.894)	(-6.207)	(-1.852)	(-1.807)
$GDPC$ (log)	-0.417		-0.450		-0.207		-1.074	
	(-0.885)		(-0.873)		(-0.499)		(-1.599)	
$MCAP$ (log)	**0.200**		0.040		**0.257**		-0.080	
	(2.894)		(0.537)		(3.687)		(-0.931)	
$TURN$ (log)	0.203		0.264		-0.068		0.365	
	(0.911)		(1.153)		(-0.278)		(1.448)	
$TCOST$ (log)	**-1.339**		**-1.374**		**-1.272**		**-1.127**	
	(-4.038)		(-3.950)		(-3.777)		(-3.017)	
$LANG$	-0.546		-0.371		**-3.178**		0.672	
	(-0.597)		(-0.382)		(-3.209)		(0.666)	
$DIST$ (log)	**-1.069**		**-1.174**		**-1.236**		**-1.325**	
	(-4.371)		(-4.648)		(-4.856)		(-5.061)	
$DISCLO$	-0.084		0.101		-0.334		-0.142	
	(-0.204)		(0.245)		(-0.758)		(-0.317)	
$COMMON$	**1.172**		**1.292**		**1.390**		**0.740**	
	(4.058)		(4.24)		(4.565)		(2.524)	
$IAGE$ (log)	-0.322		-0.459		0.195		-0.156	
	(-0.667)		(-0.94)		(0.377)		(-0.29)	
$CORR$	0.050		0.214		-0.067		-1.495	
	(0.051)		(0.214)		(-0.062)		(-1.384)	
Country dummies	No	Yes	No	Yes	No	Yes	No	Yes
Adjusted R^2	0.221	0.238	0.213	0.230	0.090	0.108	0.048	0.110
N	1,860	1,883	1,860	1,883	1,860	1,883	1,860	1,883

Table 10: **Multivariate Regressions of Non-U.S. Mutual Fund Performance**

The table reports multivariate OLS regressions explaining the performance of the mutual fund industry across countries, excluding U.S. The dependent variable is alpha, calculated according to four different models: domestic market model, international market model, the four-factor model, also known as Cahart model, and the international Cahart model. Explanatory variables are categorized in: fund-level variables, including, fund size, expressed as total net asset value in millions of U.S. dollars ($SIZE$); and fund age, in years ($FAGE$); and country-level variables, classified in five categories: (1) Economic development variables, that include GDP per capita in U.S. dollars ($GDPC$); (2) Financial development variables, including market capitalization of listed companies expressed as a percentage of GDP ($MCAP$), turnover ratio in percentage ($TURN$), and trading costs in basis points ($TCOST$); (3) Familiarity variables, that include common language dummy variable ($LANG$), and distance between countries in kilometers ($DIST$); (4) Investor protection variables, including disclosure, a measure of transparency ($DISCLO$); and legal system dummy variable that equals one if the origin type of the country's legal system is English common law and zero otherwise ($COMMON$); and (5) Other variables, that include industry age variable, in years ($IAGE$), and average return correlation ($CORR$).

	Domestic Market Model		International Market Model		Cahart Model		International Cahart Model	
Constant	2.802		**3.579**		-0.201		**-4.191**	
	(1.701)		(2.140)		(-0.104)		(-2.404)	
$SIZE$ (log)	**0.054**	**0.050**	**0.055**	**0.052**	**0.042**	**0.041**	**0.032**	**0.028**
	(6.324)	(5.984)	(6.343)	(6.027)	(4.126)	(4.021)	(2.88)	(2.557)
$FAGE$ (log)	-0.050	-0.056	-0.041	-0.047	**-0.094**	**-0.097**	-0.015	-0.023
	(-1.508)	(-1.729)	(-1.232)	(-1.439)	(-2.449)	(-2.586)	(-0.403)	(-0.644)
$GDPC$ (log)	-0.043		-0.048		0.038		0.132	
	(-0.684)		(-0.738)		(0.488)		(1.907)	
$MCAP$ (log)	0.057		-0.017		-0.006		**-0.382**	
	(1.289)		(-0.38)		(-0.131)		(-8.585)	
$TURN$ (log)	**0.483**		**0.490**		**0.355**		**0.394**	
	(14.101)		(14.15)		(9.477)		(10.271)	
$TCOST$ (log)	**-0.901**		**-0.837**		**-0.597**		**-0.803**	
	(-13.908)		(-12.552)		(-7.996)		(-9.428)	
$LANG$	**0.519**		0.180		-0.091		**0.948**	
	(2.374)		(0.789)		(-0.374)		(3.911)	
$DIST$ (log)	-0.105		-0.247		0.064		**0.578**	
	(-0.689)		(-1.605)		(0.377)		(3.97)	
$DISCLO$	0.074		**0.233**		**0.187**		-0.050	
	(0.853)		(2.613)		(2.073)		(-0.581)	
$COMMON$	**0.766**		**0.837**		**0.600**		**0.614**	
	(11.515)		(12.286)		(8.531)		(9.03)	
$IAGE$ (log)	**-0.299**		**-0.394**		**-0.294**		-0.050	
	(-3.947)		(-5.154)		(-3.712)		(-0.631)	
$CORR$	**-0.534**		**-0.648**		0.086		**1.023**	
	(-2.021)		(-2.401)		(0.301)		(3.935)	
Country dummies	No	Yes	No	Yes	No	Yes	No	Yes
Adjusted R^2	0.070	0.090	0.061	0.082	0.031	0.043	0.045	0.075
N	5,531	5,750	5,531	5,750	5,531	5,750	5,531	5,750

Table 11: **Multivariate Regressions of Mutual Fund Performance with Fees**

This table reports multivariate OLS regressions explaining the performance of the mutual fund industry across countries. The dependent variable is alpha, calculated according to four different models: domestic market model, international market model, the four-factor model also known as Cahart model, and the international Cahart model. Explanatory variables are fund level-variables, including: fund size, expressed as total net asset value in millions of U.S. dollars ($SIZE$); fund age, in years ($FAGE$); and charges, in percentage, subdivided in: annual charges ($ACHARGE$), initial charges ($ICHARGE$), and redemption charges ($RCHARGE$).

	Domestic Market Model			International Market Model			Cahart Model			International Cahart Model		
$SIZE$ (log)	**0.073**	**0.047**	**0.048**	**0.072**	**0.046**	**0.050**	**0.061**	**0.048**	**0.039**	**0.040**	0.023	**0.028**
	(15.446)	(4.214)	(5.427)	(14.925)	(4.122)	(5.554)	(13.487)	(3.494)	(3.615)	(8.188)	(1.489)	(2.330)
$FAGE$ (log)	**-0.153**	-0.057	-0.055	**-0.152**	-0.041	-0.048	**-0.156**	**-0.112**	**-0.099**	**-0.080**	-0.037	-0.031
	(-10.767)	(-1.459)	(-1.635)	(-10.394)	(-1.045)	(-1.419)	(-11.279)	(-2.769)	(-2.531)	(-6.016)	(-1.191)	(-0.817)
$ACHARGE$	**0.082**			**0.096**			0.027			**0.054**		
	(3.399)			(3.999)			(1.117)			(2.030)		
$ICHARGE$		**0.035**			0.019			**0.046**			0.026	
		(2.138)			(1.243)			(2.096)			(1.109)	
$RCHARGE$			0.025			0.024			0.027			0.021
			(0.866)			(0.784)			(0.863)			(0.706)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.191	0.113	0.094	0.189	0.103	0.084	0.107	0.059	0.048	0.115	0.058	0.079
N	6,949	3,260	5,055	6,949	3,260	5,055	6,949	3,260	5,055	6,949	3,260	5,055

Table 12: **Multivariate Regressions of Mutual Fund Performance with Fees**

The table reports multivariate OLS regressions explaining the performance of the mutual fund industry across countries. The dependent variable is alpha, calculated according to four different models: domestic market model, international market model, the four-factors model, also known as Cahart model, and the international Cahart model. Explanatory variables are categorized in: fund-level variables, including, fund size, expressed as total net asset value in millions of U.S. dollars ($SIZE$); fund age, in years ($FAGE$); and charges, in percentage, subdivided in: annual charges ($ACHARGE$), initial charges ($ICHARGE$), and redemption charges ($RCHARGE$); and country-level variables, classified in five categories: (1) Economic development variables, that include GDP per capita in U.S. dollars ($GDPC$); (2) Financial development variables, including market capitalization of listed companies expressed as a percentage of GDP ($MCAP$), turnover ratio in percentage ($TURN$), and trading costs in basis points ($TCOST$); (3) Familiarity variables, that include common language dummy variable ($LANG$), and distance between countries in kilometers ($DIST$); (4) Investor protection variables, including disclosure, a measure of transparency ($DISCLO$); and legal system dummy variable that equals one if the origin type of the country's legal system is English common law and zero otherwise ($COMMON$); and (5) Other variables, that include industry age variable, in years ($IAGE$), and average return correlation ($CORR$).

	Domestic Market Model			International Market Model			Cahart Model			International Cahart Model		
Constant	**14.808**	**5.715**	**4.742**	**14.254**	**6.219**	**5.164**	**12.269**	**3.033**	**2.354**	**12.629**	3.303	-1.115
	(12.807)	(2.304)	(2.836)	(12.171)	(2.457)	(3.055)	(8.753)	(0.971)	(1.232)	(8.978)	(1.091)	(-0.587)
$SIZE$ (log)	**0.069**	**0.052**	**0.048**	**0.069**	**0.052**	**0.050**	**0.056**	**0.049**	**0.037**	**0.034**	0.026	**0.030**
	(14.681)	(4.422)	(5.359)	(14.416)	(4.358)	(5.472)	(12.379)	(3.207)	(3.408)	(6.811)	(1.491)	(2.427)
$FAGE$ (log)	**-0.156**	-0.052	-0.057	**-0.154**	-0.034	-0.051	**-0.163**	**-0.115**	**-0.104**	**-0.079**	-0.033	-0.028
	(-10.538)	(-1.204)	(-1.664)	(-10.113)	(-0.781)	(-1.468)	(-10.988)	(-2.539)	(-2.613)	(-5.690)	(-0.958)	(-0.732)
$ACHARGE$	**0.122**			**0.128**			**0.075**			**0.084**		
	(5.171)			(5.534)			(3.226)			(3.290)		
$ICHARGE$		**0.038**			**0.032**			**0.043**			**0.045**	
		(3.041)			(2.653)			(2.514)			(2.506)	
$RCHARGE$			0.000			-0.001			0.003			-0.008
			(-0.006)			(-0.049)			(0.088)			(-0.251)
$GDPC$ (log)	**-0.425**	0.021	-0.101	**-0.421**	0.041	-0.102	**-0.293**	0.175	-0.041	**-0.355**	-0.065	0.033
	(-5.530)	(0.150)	(-1.563)	(-5.297)	(0.289)	(-1.567)	(-3.211)	(1.011)	(-0.593)	(-4.439)	(-0.414)	(0.537)
$MCAP$ (log)	**0.362**	**0.226**	**0.109**	**0.242**	**0.117**	0.030	**0.313**	0.201	0.044	**0.088**	-0.018	**-0.310**
	(9.038)	(2.455)	(2.407)	(5.883)	(1.246)	(0.659)	(7.296)	(1.833)	(0.911)	(2.256)	(-0.163)	(-6.541)
$TURN$ (log)	**0.307**	**0.555**	**0.510**	**0.324**	**0.593**	**0.517**	**0.209**	**0.465**	**0.373**	**0.153**	**0.365**	**0.389**
	(7.515)	(6.941)	(13.770)	(7.805)	(7.358)	(13.884)	(4.534)	(5.331)	(9.232)	(3.503)	(4.722)	(9.637)
$TCOST$ (log)	**-0.948**	**-0.893**	**-0.894**	**-0.919**	**-0.898**	**-0.824**	**-0.562**	**-0.663**	**-0.606**	**-0.791**	**-0.982**	**-0.804**
	(-13.721)	(-10.508)	(-13.299)	(-13.109)	(-10.310)	(-11.866)	(-7.559)	(-6.417)	(-8.085)	(-9.477)	(-8.919)	(-9.062)
$LANG$	0.378	-0.182	0.288	0.076	-0.373	-0.064	-0.272	**-1.109**	-0.230	**0.709**	0.085	**0.839**
	(1.647)	(-0.532)	(1.263)	(0.319)	(-1.038)	(-0.268)	(-1.048)	(-2.394)	(-0.956)	(2.799)	(0.190)	(3.466)
$DIST$ (log)	**-1.019**	**-0.543**	**-0.307**	**-1.002**	**-0.656**	**-0.414**	**-0.994**	**-0.448**	-0.161	**-0.827**	-0.086	0.321
	(-10.899)	(-3.100)	(-1.970)	(-10.800)	(-3.682)	(-2.664)	(-9.664)	(-2.161)	(-0.915)	(-8.008)	(-0.428)	(1.900)
$DISCLO$	**0.404**	0.028	0.097	**0.563**	0.188	**0.247**	**0.430**	0.138	**0.218**	**0.340**	0.213	-0.001
	(3.903)	(0.174)	(1.011)	(5.259)	(1.152)	(2.525)	(3.855)	(0.834)	(2.203)	(3.468)	(1.540)	(-0.008)
$COMMON$	**0.529**	**0.727**	**0.737**	**0.651**	**0.848**	**0.803**	**0.331**	**0.621**	**0.576**	**0.187**	**0.392**	**0.558**
	(7.271)	(6.623)	(10.615)	(8.842)	(7.495)	(11.166)	(4.239)	(5.194)	(7.770)	(2.589)	(3.506)	(7.572)
$IAGE$ (log)	**-0.709**	-0.275	**-0.268**	**-0.788**	**-0.378**	**-0.346**	**-0.637**	-0.278	**-0.297**	**-0.576**	**-0.377**	-0.085
	(-7.437)	(-1.637)	(-3.152)	(-8.060)	(-2.229)	(-4.037)	(-6.193)	(-1.524)	(-3.322)	(-6.018)	(-2.310)	(-0.951)
$CORR$	**-1.029**	**-1.721**	**-0.762**	**-0.929**	**-1.876**	**-0.807**	**-0.785**	**-1.671**	-0.160	0.153	-0.011	**0.779**
	(-4.327)	(-3.789)	(-2.735)	(-3.760)	(-4.077)	(-2.859)	(-2.943)	(-3.343)	(-0.522)	(0.620)	(-0.025)	(2.685)
Country dummies	No	No	No	No	No	No	No	No	No	No	No	No
Adjusted R^2	0.169	0.094	0.077	0.170	0.082	0.067	0.078	0.050	0.034	0.066	0.044	0.046
N	6,868	3,255	4,845	6,868	3,255	4,845	6,868	3,255	4,845	6,868	3,255	4,845

Table 13: **Multivariate Regressions of Mutual Fund Performance with Management Structure and Tenure**

This table reports multivariate OLS regressions explaining the performance of the mutual fund industry across countries. The dependent variable is alpha, calculated according to four different models: domestic market model, international market model, the four-factor model also known as Cahart model, and the international Cahart model. Explanatory variables are fund-level variables, including: fund size, expressed as total net asset value in millions of U.S. dollars ($SIZE$); fund age, in years ($FAGE$);management structure, dummy variable that equals 1 if the fund is team-managed and zero otherwise ($MSTR$); and management tenure, expressed in years ($MTEN$).

	Domestic Market Model		International Market Model		Cahart Model		International Cahart Model	
$SIZE$ (log)	**0.070**	**0.079**	**0.070**	**0.083**	**0.058**	**0.066**	**0.048**	**0.065**
	(11.293)	(12.064)	(11.056)	(11.916)	(8.398)	(11.367)	(6.306)	(7.962)
$FAGE$ (log)	**-0.117**	**-0.176**	**-0.113**	**-0.190**	**-0.123**	**-0.144**	**-0.078**	**-0.140**
	(-5.156)	(-9.190)	(-4.889)	(-9.272)	(-4.853)	(-8.684)	(-3.224)	(-6.996)
$MSTR$	-0.014		-0.020		-0.009		**-0.040**	
	(-0.821)		(-1.117)		(-0.553)		(-2.420)	
$MTEN$ (log)		**0.074**		**0.070**		**0.038**		**0.042**
		(4.885)		(4.408)		(3.154)		(2.779)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.114	0.172	0.118	0.189	0.050	0.117	0.078	0.135
N	7,921	3,206	7,921	3,206	7,921	3,206	7,921	3,206

Appendix

Table A.1: **Summary Statistics of Benchmark Models**

The table reports summary statistics of benchmark models factors and loadings. Panel A presents mean and standard deviation of factors, including: RM, the excess return on the domestic market; RMF, the excess return on the foreign market; SMB (Small minus Big), the average return on the small capitalization portfolios minus the average return on the large capitalization portfolios; $SMBF$, the foreign size factor; HML (High minus Low), the difference in return between the portfolio with high book-to-market stocks and the portfolio with low book-to-market stocks; $HMLF$, the foreign book-to-market factor; MOM (Momentum), the difference in return between the portfolio with the past-12-month winners and the portfolio with the past-12-month losers; and $MOMF$ is the foreign momentum factor. Panel B presents the mean of the factor loadings.

	Panel A: Summary Statistics of Factors															
	RM		*RMF*		*SMB*		*SMBF*		*HML*		*HMLF*		*MOM*		*MOMF*	
	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev
Austria	1.320	4.428	0.021	4.383	-0.303	3.327	1.168	3.030	-0.057	4.537	0.059	3.005	1.422	5.216	0.610	4.013
Belgium	0.470	5.305	0.020	4.387	0.153	2.268	1.172	3.041	-0.115	3.500	0.060	3.019	0.071	3.917	0.617	4.031
France	0.366	5.668	0.005	4.349	1.768	4.240	1.135	3.113	-0.729	5.842	0.098	3.032	0.810	5.687	0.605	4.126
Germany	0.034	6.442	0.021	4.334	1.625	4.492	1.147	3.108	-0.670	3.468	0.088	3.091	0.556	6.527	0.618	4.095
Hong Kong	0.250	6.033	0.018	4.373	2.879	13.241	1.127	3.014	0.388	7.686	0.043	3.036	-1.050	8.490	0.651	4.091
India	1.102	8.689	0.014	4.376	2.930	7.203	1.149	3.049	0.574	6.687	0.057	3.019	2.808	7.804	0.596	4.027
Italy	0.336	5.786	0.014	4.385	0.325	4.121	1.187	3.083	0.523	3.630	0.046	3.077	0.138	6.508	0.623	4.053
Japan	-0.051	5.697	0.015	4.540	1.631	5.278	1.126	3.366	-1.141	4.561	0.233	3.206	0.140	2.917	0.707	4.500
Malaysia	0.312	5.651	0.023	4.391	-0.261	4.425	1.172	3.044	-0.033	3.141	0.058	3.013	0.310	3.107	0.614	4.026
Netherlands	0.003	5.527	0.024	4.373	1.240	3.645	1.165	3.076	0.536	4.708	0.046	3.050	0.182	6.375	0.624	4.069
Portugal	0.151	5.213	0.024	4.383	3.729	22.979	1.159	3.052	-4.870	34.321	0.070	3.013	0.222	7.897	0.614	4.020
Singapore	0.051	5.993	0.024	4.383	-0.514	6.299	1.175	3.034	0.544	3.049	0.055	3.015	0.327	4.939	0.615	4.028
South Korea	0.637	9.752	0.012	4.357	0.849	12.943	1.158	3.071	1.447	9.885	0.049	3.039	-0.219	8.185	0.623	4.053
Spain	0.404	5.314	0.016	4.378	0.638	2.594	1.174	3.075	0.095	3.688	0.059	3.038	0.570	4.640	0.610	4.051
Sweden	0.310	7.832	0.020	4.358	1.538	5.546	1.160	3.045	-0.577	7.696	0.067	2.995	-0.489	8.431	0.627	4.031
Taiwan	-0.375	8.687	0.026	4.380	1.108	6.150	1.164	3.064	0.333	7.660	0.054	3.034	-0.077	4.379	0.621	4.060
Thailand	0.364	10.041	0.023	4.379	1.855	7.098	1.164	3.032	0.874	5.844	0.056	3.006	0.880	8.107	0.612	4.019
U.K.	0.067	4.250	0.017	4.448	2.240	6.707	1.047	3.110	-1.597	6.327	0.239	2.991	0.322	4.545	0.646	4.284
U.S.	-0.172	4.593	0.209	4.507	0.753	4.812	1.571	2.910	0.754	4.416	-0.675	3.149	0.968	6.758	0.250	3.060
Total	0.294	6.560	0.029	4.366	1.273	8.261	1.175	3.053	-0.196	9.653	0.040	3.030	0.415	6.289	0.604	4.018

Table A.1: continued

	Panel B : Factor Loadings							
	RM	*RMF*	*SMB*	*SMBF*	*HML*	*HMLF*	*MOM*	*MOMF*
Austria	0.578	0.0004	0.093	-0.024	-0.063	-0.674	-0.068	-0.242
Belgium	0.656	-0.0002	0.133	0.143	-0.067	-0.682	0.102	-0.234
France	0.822	0.0000	-0.088	0.206	-0.067	0.031	-0.023	-0.007
Germany	0.727	0.0001	0.010	-0.153	-0.047	-0.384	-0.053	0.025
Hong Kong	0.738	-0.0001	0.027	0.209	-0.046	-0.252	0.045	0.065
India	0.891	-0.0001	0.040	-0.031	0.055	-0.091	0.032	-0.041
Italy	0.628	0.0000	-0.007	0.029	-0.048	-0.238	-0.037	-0.053
Japan	0.856	-0.0001	0.015	0.159	-0.063	-0.075	-0.004	-0.129
Malaysia	0.769	0.0000	-0.002	0.381	0.030	0.135	0.003	-0.158
Netherlands	0.921	0.0000	-0.277	0.697	0.324	-0.819	-0.141	0.048
Portugal	0.808	0.0001	-0.019	0.256	0.013	-0.120	-0.048	-0.137
Singapore	0.648	-0.0002	0.139	0.115	0.033	-0.446	0.120	-0.303
South Korea	0.777	0.0000	-0.023	0.136	-0.011	0.045	-0.017	-0.082
Spain	0.793	-0.0001	-0.089	0.028	-0.078	-0.259	-0.048	-0.066
Sweden	0.683	0.0001	-0.036	0.011	-0.061	-0.075	-0.026	-0.037
Taiwan	0.800	0.0000	0.025	-0.161	0.023	-0.373	-0.163	0.080
Thailand	0.883	0.0002	0.061	0.007	-0.033	0.192	0.035	0.034
U.K.	0.950	0.0000	-0.074	0.297	-0.142	-0.142	-0.010	0.009
U.S.	0.956	0.0002	0.309	0.012	0.106	0.000	-0.007	0.025
Total	0.843	0.0001	0.092	0.081	-0.002	-0.120	-0.015	-0.035