# **Mutual Funds Fees Around the World**

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#### 1. Introduction

From the perspective of investors, mutual fund fees are the price paid for investment management, distribution and other services. From the perspective of financial service firms, these fees represent revenues. For both, fees are important. Higher fees are associated with lower investment performance (for example, Carhart (1997)), and they drive revenues and profits of fund companies. There is increasing public attention paid to fund fees, especially in the U.S. Recent settlements in the fund industry have been accompanied by fee reductions, and a spate of ongoing lawsuits allege that fund managers and fund trustees breached fiduciary duties by approving fees to retail investors that are "too high" relative to other U.S. investments. However, to assess whether fees are too high, it may be useful to appreciate that the fund industry is a worldwide industry, and fees that fund investors pay globally provide another useful benchmark for comparison.

Indeed, mutual funds are sold to investors in most developed countries; worldwide, the mutual fund industry held over \$11 trillion in assets in 2001. While the form of funds differs slightly from country to country, the open-end mutual fund structure is a common organizational form around the globe. Some countries, like the United States, effectively close their borders to funds domiciled in other countries. In contrast, European nations have open borders, allowing many foreign fund promoters to offer Undertakings for Collective Investment in Transferable Securities (UCITS). Working across these different regulatory regimes, multinational fund management companies like Fidelity sell products worldwide. Furthermore, the global fund

<sup>&</sup>lt;sup>1</sup> Freeman and Brown (2001) argue that fund management companies pass few of the savings accruing from economies of scale to their clients. For news coverage of fee reductions and litigation over fees, see Sean Murphy, 2005, "Mutual Funds Under Scrutiny: An Overview of Recent Litigation," Securities Litigation & Regulation Reporter 10 (21); Andrew Caffrey, "Lawsuits Challenge Unequal Fund Fees; Fidelity, Putnam among Defendants," The Boston Globe, August 18, 2004.

industry has spawned a number of international fund centers, such as Luxembourg and Dublin which domicile funds sold throughout Europe.

Although the fund industry is global, and while products and competitors are similar worldwide, fund fees differ considerably from country to country. For example, total expenses for the average equity fund offered for sale in the United States are 1.71% (excluding loads), but they are 1.99% in Spain, and 2.87% in Canada. In this paper, we report on the costs borne by mutual fund investors in 2002 in 18 countries, for 46,799 mutual funds with assets in excess of \$10 trillion. Our research objectives are two-fold. First, given the dearth of studies of worldwide fund markets, we seek to describe fees around the world. For example, the average management fee in our sample is 1.03% of assets under management, with investors paying \$63.46 billion per year on a value-weighted basis, for investment management services alone (excluding other annual fees and distribution charges.) The corresponding figure for total expenses (excluding loads) is 1.59%. Regulatory, legislative and judicial reviews of fees would be informed by knowledge of fees elsewhere. From an academic perspective, systematic fee differences from country to country may help explain differences in fund performance around the globe.

In addition to describing fees around the world, we seek to shed light on the determinants of fund fees globally by examining differences at the fund, complex, and national levels. Some differences in fees could be related to the type of fund (e.g., equity vs. money market; index fund versus actively managed fund), or the clientele to which it is marketed (e.g., small investors vs. large institutional investors). Some fee differences could relate to characteristics of the fund

<sup>&</sup>lt;sup>2</sup> For example, see Subcommittee on Capital Markets, Insurance and Government Sponsored Enterprises, Hearing entitled, "Mutual Funds: Who's Looking Out for Investors," Tuesday November 4 - 6, 2003, available online at http://financialservices.house.gov/hearings.asp?formmode= detail&hearing=268 (last accessed October 31, 2005). Also U.S. Government Accountability Office, "Mutual Funds: Greater Transparency Needed in Disclosures to

sponsor, e.g., the scale of its operations. Finally, even after controlling for fund and complex factors, there could be differences for similar funds in different countries. As economists, we typically hold that prices are set by supply and demand, and therefore a portion of our empirical investigation examines factors that might affect national supply and demand. The fund, complex and national factors that we study include the following:

**Production Costs:** Some fund-level and complex-level fee variation should be related to differences in product offerings and costs. For example, as noted above, some types of funds might be more costly to produce than others. We are able to differentiate between 122 different fund objectives, and in particular whether a fund is an index fund, a fund of funds, or a guaranteed fund (that uses derivates to guarantee a minimum performance level), each of which might influence the cost of producing a fund. In addition, costs (and presumably fees) are different for funds based on their method of distribution (e.g., sales to small vs. larger accounts). We examine whether the choice of investor clientele systematically relates to fees.

Economies of scale (or scope) may affect the unobservable production costs of funds (e.g., investment management or distribution costs), which in turn could affect supply and fees. These economies might operate at the fund or complex level, measured within a country or globally. Furthermore, *national* economies of scale may also exist, i.e., countries with larger fund industries overall may enjoy lower costs, perhaps because of network effects. European fund associations have sometimes argued that the smaller scale of fund markets in Europe can explain their higher costs.<sup>3</sup> We study the relationship between fees and observable measures of scale (assets under management) at various levels (fund class, fund, sponsor and country).

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Investors," June 2003, available online at Hhttp://www.gao.gov/new.items/d03763.pdfH (last accessed October 31, 2005).

<sup>&</sup>lt;sup>3</sup> For example, Blondeau, De Vinck, and Mansfeld (2005).

**Regulatory Costs:** Some business executives argue that the presence of extensive regulation increases the cost of doing business and increases the costs paid by investors. For example, in the U.S., fund industry executives have objected to the costs of regulation that would require them to disclose their proxy votes or make other changes in operations.<sup>4</sup> Others counter that regulation, in particular investor protection provisions, may hold fees down [see, for example, Fink (1998)]. We study the relationship between the extent of fund-specific regulation and the levels of fees.

**Barriers to Competition:** Generally, greater competition should be associated with lower fees. Exogenous factors that decrease competition should increase fees. We capture various barriers to entry including the time and cost to set up a fund.

While economists generally believe that competition holds down costs and fees, some practitioners have argued to us that competition might increase fees, as competition increases the costs to acquire customers. Also, competition can drive up the cost of industry-specific inputs (such as investment manager salaries).

The Offshore Market: The offshore fund industry, based in Luxembourg, Dublin, the Channel Islands, Bermuda, and other international fund centers, is a substantial, but understudied, element of the financial services world. In terms of assets under management, Luxembourg is the second largest mutual fund domicile in the world, after the United States [see Khorana, Servaes, and Tufano (2005)]. Operating centrally, but distributing across many countries, offshore funds may enjoy economies of scale and be in a position to drive down fund fees. In addition, offshore funds may have other cost advantages in that they received incentives (such as substantial tax breaks in Dublin) that can reduce some operating costs. However, given

<sup>&</sup>lt;sup>4</sup> For an example, see "Mutual Fund Regulation" Statement of Paul Schott Stevens, President, Investment Company Institute Committee on House Financial Services Subcommittee on Capital Markets, Insurance and Government

that these offshore funds may be used by investors to conceal income from taxation, they may be able to charge higher fees to consumers, and consequently provide less price pressure on domestic industries.

**Demand Side Factors:** If national borders were all open and if investors displayed no home bias, the demographic characteristics of a nation's potential investors would be irrelevant to its fund fees. But, the possibility of segmented products (i.e., U.S. investors cannot easily buy offshore-registered funds) and home bias means that local demand, and hence local characteristics, may matter. The demographics of the national investor base, in terms of education, wealth, and income, could have conflicting effects on fees. Higher levels of income and wealth could increase levels of investing and decrease the cost of reaching these customers. In addition, increased investor sophistication and awareness of fee levels might put downward pressure on fees. However, meeting more sophisticated customers' needs might lead to more costly and higher priced financial products.

Our work on mutual fund fees builds on a relatively small literature on the expenses charged for fund management, especially outside of the United States.<sup>5</sup> Extant studies tend to focus on one or a few countries. Baumol, Goldfeld, Gordon, and Koehn (1980) document economies of scale in the U.S. mutual fund industry, and Dermine and Röller (1992) study economies of scale for French funds. Otten and Bams (2002) examine the influence of fees on European mutual fund performance in five countries (i.e., France, Italy, Germany, Netherlands, and the U.K.). Franks, Schaefer, and Staunton (1998) compare the direct regulatory costs for the investment management industry across three countries. They find that the costs in the U.K. are twice as

Sponsored Enterprises May 10, 2005.

<sup>&</sup>lt;sup>5</sup> A number of practitioner articles contain descriptive statistics on fund expenses in various countries. See, for example, Moulton and Moisson (2001) for statistics on fund fees across a number of European countries, and Lipper (2005) for a comparison of mutual fund expenses in the U.S., the U.K., and other European countries.

high as in the U.S. and four times as high as in France, but we are not aware of similar research across countries. While these studies are very useful, they do not allow for a detailed cross-sectional national analysis of fees.

In contrast, our research methodology is designed to study these cross-sectional differences. We analyze fees for 46,799 funds offered for sale in 18 countries in 2002. We are able to explain a substantial amount of the variation in fund fees around the globe with a few simple Not surprisingly, we find that funds with different investment objectives charge different fees. Larger funds and fund complexes charge lower fees, as do index funds, funds of funds, older funds and certain funds selling cross-nationally. Fees are higher for funds distributed in more countries and funds domiciled in offshore locations. Substantial crosscountry differences persist after controlling for these variables. The remaining differences are associated with a variety of factors, the most robust of which is that stronger investor protection is associated with lower mutual fund fees. However, we also find evidence that all types of fees (i.e., management fees, total expense ratios, and total shareholder costs which include expenses plus loads) are lower when funds are domiciled in countries with an older fund industry. Moreover, management fees are lower in wealthier countries with a more educated population, where there is either little concentration in the banking industry or where banks are prohibited from entering the securities business.

The remainder of this paper is divided into four sections. In Section 2, we briefly describe the mutual fund industry around the world, describe our data on fees in the fund industry, and provide descriptive statistics by investment type and country. In Sections 3 and 4, we discuss various hypotheses for why costs might differ from country to country. This analysis is broken into two parts. First, we report multivariate analyses of fees as a function of various fund and sponsor level characteristics, in effect, treating country differences merely as fixed effects.

Second, we analyze these national fixed effects as a function of various characteristics. We conclude in Section 5, summarizing the implications of our research.

# 2. Data and description of fees around the world

Khorana, Servaes, and Tufano (2005) provide a background of the mutual fund industry worldwide. Briefly, mutual funds with similar structure (open-end pooled investment vehicles, that invest in transferable securities, and that are bought and redeemed at the fund's Net Asset Value (NAV)) are available throughout the globe. U.S. open-end funds and European Undertakings for Collective Investments in Transferable Securities (UCITS) are the two major forms of these contracts. We will use the term "mutual fund" to describe these products. Our sample excludes a variety of other investment products, including hedge funds, closed-end funds or trusts, and exchange traded funds which lack certain features of open-end mutual funds.<sup>6</sup>

Many funds have different fund classes, where each class may have a different management fee, expense ratio, or load. For example, in the U.S., classes may differ based on the mix of upfront, on-going, and back-end distribution charges. In Europe, classes may differ based on whether dividends are reinvested or not, as well as the mix of fund charges. In addition, in Europe it is common for funds to be distributed in different countries. To study foreign competition, it is therefore important to characterize the expenses of funds domiciled in one country and sold in another. Our unit of observation is therefore a fund class sold in a particular country.

Our data on the fund industry come from multiple sources. For funds from Australia, Canada, Japan, and the U.S., we collect data from Morningstar. For funds elsewhere, we obtain

data from Morningstar as well as Lipper Fitzrovia. Lipper Fitzrovia is a leading purveyor of European Total Expense Ratio (TER) data. We prefer to use these global data vendors rather than collect data separately from each country in order to leverage their consistency in reporting data across countries. We have hand-checked certain data items to address possible errors and to harmonize the data between the various databases. Because much of these data are not available for more than one or two years, our focus is on the cross-sectional differences in fund fees charged during 2002 or as close to the end of 2002 as possible.

Lipper Fitzrovia gathers the data from the funds' annual reports. The firm collects data on management fees and expense ratios for funds domiciled in Austria, Belgium, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Spain, Sweden, Switzerland, the United Kingdom, as well as the offshore market. The offshore market consists of funds domiciled in Luxembourg and Dublin, both of which are hubs for fund distribution across Europe (see Khorana, Servaes, and Tufano (2005)), as well as a variety of other 'island offshore' locations, such as Bermuda, the Cayman Islands, Guernsey, the Isle of Man, and Jersey. For each fund, Lipper Fitzrovia also gathers data on the countries where the fund is registered for sale. This allows us to create a separate observation for each fund-country pair. Unfortunately, Lipper Fitzrovia does not gather data on initial entry charges (front-end load) and exit charges (back-end loads) paid by the investors because such charges are not listed in the fund's annual report. They often do not accrue to the fund management company because they are paid to third-party distributors of the fund.

<sup>&</sup>lt;sup>6</sup> For example, we exclude segregated or seg-funds in Canada, which are funds sold with an added benefit that protects the holder against certain levels of decline in the value of the fund, and come with a death benefit guarantee and estate planning benefits.

<sup>&</sup>lt;sup>7</sup> Lipper Fitzrovia has limited coverage for funds domiciled in Denmark, Finland, the Netherlands, and Norway.

<sup>&</sup>lt;sup>8</sup> While we have information on funds domiciled in Dublin, these funds are not registered for sale in Ireland. We do not have fee information on funds that are registered for sale in Ireland.

The Lipper Fitzrovia data are supplemented by the Morningstar Research Plus database. This database contains management fees and sales loads (but not annual expense ratios), along with other data for over 57,000 funds domiciled and sold in Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom, as well as funds domiciled offshore. This expanded roster of countries allows us to broaden our study of management fees beyond the Lipper Fitzrovia data. (When the fee data differ across the two sources, which is the case in less than 1% of the observations, we use the Lipper Fitzrovia data.) Where there is overlap between the countries covered by Lipper Fitzrovia and Morningstar, we use the Morningstar load information to augment the Lipper Fitzrovia data to calculate total shareholder costs.

The final database we employ is from Financial Research Corporation (FRC) which tracks U.S. money market funds. These funds are not available on Morningstar's U.S. database. Money market funds are included, however, in the Morningstar databases for all the other countries. FRC assembles data from a variety of other data vendors, supplementing it with proprietary information.

After combining these four databases, we have 77,720 fund-class/country pairs. While each fund class sold in a particular country is our unit of observation, it is important to aggregate the classes into fund level observations for two reasons. First, different classes of the same fund are not independent observations, and our regression models need to account for this lack of independence. Second, scale and fees may be related at either the class or the fund level. For the U.S., we have data available on which classes belong to which funds, but that is not the case for other countries. In those cases, we match fund classes by studying the names of the funds and the names of the individual fund managers. When we are not certain, we go to the website of the fund provider to ascertain whether certain groups of funds represent different fund classes.

To assess potential sponsor-level economies of scale that could affect costs and indirectly influence fees fees, we group the funds into fund complexes. While our database provides the name of the fund management group, some complexes sell funds under different names across the world. Fortunately, Lipper Fitzrovia identifies pan-European complexes, and we augment this information in other countries by conducting web-based searches for each fund complex to identify unique complex names. We are unable to do this for Japanese funds and simply use the fund management group name available in the database for aggregating assets at the complex level. Thus, our measures of sponsor-level economics likely underestimate the amount of fund assets managed; they also exclude all non-fund assets (e.g., pension accounts, hedge funds) under management.

In addition, we assign the funds to investment objectives. Investment objectives are reported in the databases, but not always consistently across countries. We therefore develop our own classification scheme. We first divide funds into 10 broad categories: Alternative Investments, Balanced, Bonds & Cash, Bonds, Convertible Bonds, Equities, Mortgage Backed Securities, Money Market, Real Estate and Other/Not classified. Equities form the largest category with 40,817 country/fund-class observations, followed by Bonds with 17,097 observations, and Balanced with 9,593. Each broad category is then further divided along two dimensions: (a) region of investment and (b) a more detailed investment objective. The region could be country specific (e.g., Danish Equities) or regional (e.g., Eurozone Bonds) or global. The more detailed objective focuses on the types of securities held (e.g., small cap stocks or high-yield bonds). Using the narrowest objective classification, we have 122 different investment objectives in the sample. Unfortunately, for Japanese funds, we can only identify equity funds as Morningstar does not contain objective information for non-equity funds. In addition, we identify three

particular investing styles that overlay these objectives: index funds, funds of funds, and guaranteed funds.

Furthermore, we collect information on the minimum initial investment required, the age of the fund, and the nationality of the fund. A fund's minimum investment in each share class provides information about the likely clientele for the fund, with larger minimums aimed at large retail or institutional customers. A fund's age may be a determinant of costs (and fees) to the extent that a fund enjoys experience effects (and passes them along in fees charged.)

With respect to nationality, funds are domiciled in a single country, but may be offered for sale in many different countries. A fund's domicile represents the country in which the fund was originally established. In a closed fund economy, such as the United States or Canada, the only funds registered for sale are those that are domiciled in the country. However, in Europe, it is quite common for a fund to be domiciled in say, France, but then offered for sale in a few other countries as well. In the extreme, many funds are domiciled in offshore fund markets, but then may be offered for sale in six or seven countries. For example, the GAM Star Fund–USD Bond Fund is domiciled in Dublin, and registered for sale in Austria, France, Germany, the Netherlands, Sweden, and Switzerland. In total, we cover funds domiciled in 18 countries (including Luxembourg), plus Dublin and nine island offshore locations; and which are offered for sale in 18 countries.

Table 1 shows that our sample contains 77,720 fund-class/country observations (and 46,799 unique fund classes, as shown in Table 2, panel A). The bolded on-diagonal elements in Table 1, which account for 55% of the fund classes in our sample by number, are those registered for sale in the countries in which the fund is domiciled. While this is the norm for the U.S. and a few other countries, 45% of the world's funds by number are domiciled in one country and sold in another. The off-diagonal elements in Table 1 reflect cross-country fund sales. Funds domiciled

in offshore jurisdictions (Dublin, Luxembourg, and island offshore locations) and sold elsewhere account for almost all (42%) of this activity. Cross-border offerings from on-shore domiciles account for just 3% of our observations.

The core of our paper examines the fees funds charge investors. We examine three types of fees. Management fees represent the charges levied each year by funds for management services. These always include investment management services, but in some cases may also include payment for other services, such as some administration and servicing. A more expansive definition of fees is a fund's expense ratio (in the U.S.) or total expense ratio or TER (in Europe). This category of fees is broader than just management fees, and includes all annual expenses levied by a fund on its investors, covering investment management, administration, servicing, transfer agency, audit, legal, etc. TERs exclude non-annual distribution fees, such as front-end or back-end loads, as well as annual fees charged by distributors that are separate from the fund charges (e.g., fees for participation in a wrap program). Our measure of total shareholder charges (TSC) includes the expense ratio plus annualized loads. Because loads are paid when entering and exiting the fund, it is necessary to divide these loads over the investor's holding period. We assume a five-year holding period in our analysis. This also allows us to compute the appropriate back-end load, if any. We define total shareholder cost (TSC) as:

Total Shareholder Cost = TER + initial load/5 + back-end load at five years/5 (1)

We have fewer observations on the TSC because data on loads are only available from Morningstar. Our five-year holding period estimate is admittedly *ad hoc*, as we do not have data on actual holding periods by fund. Our information does not include any non-load charges

<sup>&</sup>lt;sup>9</sup> There may be other implicit fees in the form of higher transaction costs incurred by investment managers or underperformance, but these would be captured in a fund's gross return and not in any traditional measure of fees or costs.

levied by the distribution channel, such as wrap fees. In addition, investors may not pay stated load charges because distributors may offer rebates or break points.

Table 2 reports the levels of these three types of fees by country for four broad categories of funds (equity, balanced, bond and money market) as well for as all funds. Panel A shows fees by domicile and Panel B shows fees by country of sale. When we report fees by domicile, each fund class, even if sold in multiple countries, counts as one observation. However, when we present fees by country of sale, data on a fund class are included for each country in which it is offered for sale. The number of observations refers to the management fees; we have fewer datapoints for expenses (TERs) and total shareholder costs (TSCs).

Fees vary extensively from country to country. For example, using any of the three fee measures, funds domiciled and sold in Canada cost considerably more than those sold in the U.S. Mean management fees for equity funds are 79 basis points in the U.S. versus 211 basis points in Canada; corresponding mean TERs are 171 and 287 basis points respectively. Generally, the most expensive countries have fees three to four times higher than the least expensive countries.

In Europe, where there are significant cross-border sales of funds, the univariate results in Panels A (fees by country of domicile) and B (fees by country of sale) suggest that fees are generally higher for funds offered for sale in a particular country than for funds domiciled in the same country. For example, mean (median) TERs for equity funds domiciled in Germany are 141 (134) basis points versus 188 (179) basis points for funds offered for sale in Germany. We will explore this finding in more detail in subsequent sections of the paper.

The national comparisons reported in Table 2 do not control for fund size, complex size, type of clientele or other factors. For example, as noted earlier, the European fund industry has

<sup>&</sup>lt;sup>10</sup> Morningstar has little data on the loads charged by Canadian funds, so TSCs may not be representative, given that they are computed for only a small number of funds.

sometimes pointed to the smaller average size of European offerings and European markets (vs. the U.S.) in explaining their fees. Our approach attempts to first tease out the national fee differences after controlling for obvious fund and complex characteristics, and to subsequently explain these national differences.

#### 3. Phase One: Fund level differences in Fees

Our analysis proceeds in two stages. In the first stage, we estimate the following cross-sectional regression using fund-class data<sup>11</sup>:

Fee<sub>i,j,k</sub> = f(Investment objective dummies, Index fund dummy, Fund of funds dummy,
Guaranteed fund dummy, Fund size, Complex size, Minimum investment, Age,
Foreign fund dummy, Number of countries, Assets in objective in country of sale,
Country of sale dummies, Country of domicile dummies) (2)

We conduct three sets of analyses, one for each of the three fee levels described above. The unit of observation is a fund class i domiciled in country j and offered for sale in country k.

To capture differences in fees across various fund types, we include dummies for each narrow objective defined in the sample (122 objectives). We expect costs and fees to be higher for some types of investment objectives than others, because more complicated asset classes require greater effort and expenses to produce, explain and sell. For instance, we expect fees to be highest for equities, followed by balanced, bond and money market funds respectively [see, for example, Tufano and Sevick (1997)]. In addition, we expect lower fees for index funds and funds of funds, but higher fees for guaranteed funds. Guaranteed funds use derivatives to guarantee a certain level of performance in a fund over a certain period. These strategies require

<sup>&</sup>lt;sup>11</sup> We acknowledge that there are a number of factors that may affect fee levels, but for which we cannot reliably collect data across our entire sample. These include the method of distribution used by the fund, the mix of

more effort to implement and this is likely to translate in higher fees for investors. Funds of funds already have to pay the fees of the funds in which they invest – we therefore expect them to charge a lower fee for selecting the funds in which to invest. Unfortunately, we do not have data on fund type (index fund, fund of funds, guaranteed fund) for all funds in the sample. In cases where these data are unavailable, we set the respective fund type dummy equal to zero.

Fund size is the log of the total assets of the fund class (or fund) (measured in millions of dollars). Complex size is the log of total net assets of the complex offering the fund. We expect fees to be lower for larger funds and complexes, reflecting economies of scale and/or stronger demand for lower cost funds.

Minimum investment is the log of the minimum initial investment (in dollars) required by the fund. We use this variable to capture the difference between retail offerings, which have low or no minimum initial requirements, and offerings for high net worth individuals or institutions, where minimum initial investment requirements are high. Age is the log of the number of years since the founding of the fund (in any country in which it has been sold) and captures experience effects.

Foreign fund dummy is set equal to one if the fund is being sold outside of its domicile country and is not an offshore fund. This allows us to investigate whether cross-national fund sales have systematically different fees. Fee differences for offshore funds will be examined separately.

*Number of countries* is the number of countries in which the fund is registered for sale, and captures whether having a broader national footprint is associated with higher or lower fees.

distribution methods in the country (e.g., bank dominated, through brokers, direct), the level of marketing efforts, and the cost of inputs (specifically investment management professionals).

Assets in objective in country of sale is the log of the total assets of all funds offered for sale in the country in the investment category in which the fund operates. Larger markets may be more competitive and may put more pressure on fees (or may be more costly in which to compete and have higher fees). 12

We include dummies for each domicile and each country of sale, with the U.S. being the base case. These dummies capture the nationalities of the funds. Were the fund markets to be fully globally integrated, these terms would be collectively insignificantly different from zero. In the second phase of our analysis, we will explain the magnitude of these national fixed effects.

We employ a log specification for all measures of size because we expect their marginal effects to decline as the variables increase. This specification is consistent with the previous literature analyzing fees [see, for example, Baumol et al. (1980)].

Table 3 reports simple univariate statistics on a number of these explanatory variables by country of domicile (panel A) and by country of sale (panel B). While our sample consists entirely of developed countries, there is considerable variation from country to country. For example, the average (median) fund in the U.S. has a size of \$1.03 billion (\$165 million) followed by Italy with assets of \$352 million (\$80 million). At the other end of the spectrum is Norway with mean (median) fund assets of \$14 million (\$3 million). Fund families in the U.S. are the largest, with \$105 billion under management, on average, closely followed by Dublin and Luxembourg, two of the offshore markets, with family assets of \$90 billion and \$75 billion

effects. Our results remain unchanged, however, if we do not include this variable in the models.

This variable is the only non-fund-specific size variable included in the first stage estimation. We include it here because it is not constant for all funds in a specific country and therefore cannot be included in models of country

respectively. 13 Funds domiciled in Switzerland are the oldest, followed by those domiciled in the U.K.

Table 4 reports our multivariate analysis of the three sets of fees: management fees (Panel A), TERs (Panel B) and TSCs (Panel C). For each fee measure, we report results of six different models with slightly different specifications. In addition to the reported results, to test robustness, we have re-estimated our models using the smaller set of broad objective category dummies (10 dummies versus 122 dummies), as well as for equities alone. These results produce the same or stronger results than the ones reported in the paper, and are available from the authors.

Note that the models have substantial explanatory power; even the simplest of our specifications (model (i)), which only contains fund objective, country of domicile, and country of sale dummies, explains 49% of the variance in management fees, 30% of the variation in TERs and 38% of the variation in TSCs. While we do not include the individual domicile and country of sale effects in the table, we do report on tests of their significance levels. Confirming the effects reported in table 2, we find that the national fixed effect terms are significantly different from zero and not all equal to each other. In model (ii) we control for the size of the fund complex and the size of the fund class, while in model (iii) we control for complex size and the size of the fund. We find evidence that fees of all three types are lower for fund classes, funds and complexes with greater assets, consistent with economies of scale or investor preferences for lower fee products.

The economic significance of the results depends on the type of fees being studied. For management fees, the economic significance is small. For example, based on model (ii) in Panel

<sup>&</sup>lt;sup>13</sup> The average minimum initial investment appears to be very high. This is due to the presence of a few funds targeted at institutional investors, requiring initial investments of 10 million dollars or euros. The median figures

A, a fund-class with log size in the 25<sup>th</sup> percentile (corresponding to \$5.0 million) has management fees of 2.1 basis points more than a fund in the 75<sup>th</sup> percentile (\$99.1 million); a fund complex with assets in the 25<sup>th</sup> percentile (\$4.8 billion) has management fees 1.7 basis points more than a complex with assets in the 75<sup>th</sup> percentile (\$108.1 billion). For expense ratios and total shareholder costs, on the other hand, the economic significance associated with these differences is larger. For example, funds in the 25<sup>th</sup> percentile of the size distribution have expenses of 18 basis points more than funds in the 75<sup>th</sup> percentile. The same comparison for complex size yields a difference of 9 basis points.

In model (iv) we study the effect of the minimum initial investment, the age of the fund, and the type of fund. Fees are lower for funds demanding a higher minimum initial investment, consistent with the notion that fees (and unobservable costs) are driven by average account size. Fees are generally lower for older funds (independent of fund size), which could reflect higher costs of young funds (e.g., amortization of setup costs) or lower costs of older funds due to greater experience or negotiating ability with third party service providers. Index funds charge management fees that are 45 basis points below those of actively managed funds. The difference becomes even larger for TERs (62 basis points) and TSCs (71 basis points). Funds of funds are between 23 and 30 basis points cheaper than other funds. Guaranteed funds are only more expensive than other funds when we consider TSCs. This is somewhat surprising, because we expected the cost of providing the guarantees to be mainly reflected in management fees, not in distribution costs.

are more consistent with what one would expect.

In model (v) we examine various aspects of national competition. Foreign funds charge fees 3-6 basis points lower than domestic funds. (Note that in model (v) we only measure the effect of on-shore foreign funds as we have already included separate domicile dummies for offshore locations). However, this benefit disappears for funds as they are registered in more countries. For management fees and TSCs, for each country in which a fund is registered, fees rise by 1.2 to 1.7 basis points, suggesting that the benefits of buying a foreign fund disappear when a fund is registered in more than three countries. The lower fees for imported funds could either reflect lower costs due to access to larger markets, or a business strategy by which funds seeking to sell in multiple countries do so by reducing their fees. However, beyond a point, the costs of registering and selling the same fund in multiple countries may more than offset these benefits.

We also include the size of the entire fund market in the broad objective in which the fund invests in the country where the fund is sold. Larger markets may support greater competition and thus put pressure on fees. This is indeed the case when we focus on TERs. However, the effect is insignificant for management fees and is significantly positive for total shareholder costs. We do not have a satisfactory explanation for this finding, except to note that TSCs include sales charges to compensate advisors for selling funds. Perhaps in larger markets, firms must expend more effort to sell funds, leading to the positive relationship between market size and TSCs.

National considerations persist after controlling for scale and measures of competition in models (ii) through (v): the domicile and sale country dummies continue to be significantly different from zero and from each other. In addition, the coefficients do not change much in

<sup>&</sup>lt;sup>14</sup> We drop the minimum initial investment from this specification because these data are missing for a large number of observations, including all Australian funds. Our results are very similar if we include this variable.

magnitude across regressions, and the additional explanatory power of the other variables combined is less than 9% (comparing models (i) and (v)). Substantial cross-country differences are therefore left unexplained. Table 5 contains a matrix of these cross-country differences for management fees, based on the regression in model (v) of Panel A of Table 4.

The national effects documented in Table 5 consist of three parts: domicile, country of sale and foreign effects. These effects are all measured relative to the U.S., which is the base case. Therefore, in order to determine the effect of each domicile/country of sale pair on fees, we add the three pieces to the regression intercept. That is:

Country 
$$Effect_{j,k} = Intercept + Domicile Coefficient_j +$$

$$Country of Sale Coefficient_k + Foreign Coefficient$$
 (3)

For example, the combined fixed effect for the US is simply the intercept. However, for French-domiciled funds sold in Belgium, it is the sum of the intercept, the France domicile coefficient, the Belgium country of sale coefficient and the Foreign coefficient. Note that we need to add the coefficient on the foreign dummy because we want to capture the total cost associated with investing a fund, after controlling for scale, the investment objective, and the effect of competition within an investment objective. We list the country effects for each pair of countries with at least 1 observation in Table 1. This yields 119 domicile/country of sale observations.

In the next section, we analyze the determinants of the effects documented in Table 5. We also compute these effects for TERs and TSCs and study those in the next section as well. Before turning to this analysis, it is useful to discuss a number of interesting cases.

add the country and domicile dummies (but not the objective dummies) to this regression, the adjusted r-squared

<sup>&</sup>lt;sup>15</sup> It is possible that the country of sale and domicile dummies are correlated with other explanatory variables, or that a lot of the cross-sectional variation in fees is captured by the objective dummies. As a result, the argument that the other independent variables add little to the explanatory power of model (i) is perhaps not entirely fair. We therefore re-estimate model (v) without country of sale, domicile, and objective dummies. The adjusted r-squared is 18% for the management fee regression, 12% for the TER regression, and 18% for the TSC regression. When we

A tale of two North American neighbors. The U.S. and Canada are alike in many ways. They are largely English speaking, share a similar common law heritage, and have 'closed' fund industries that do not easily permit the sale of foreign domiciled funds. Nevertheless their mutual fund fees differ dramatically. From Table 5 we can see that, after controlling for fund type, fund size, complex size and other variables, the U.S. is among the lowest fee countries (by fund registration) in our sample, and Canada is the single highest fee country by far. The U.S. fixed effect is 85 basis points, but the Canadian fixed effect is 208 basis points, which is 145% higher. We can observe this difference when we compare similar funds offered in both countries. Fidelity sells Fidelity Japan Funds to investors in the United States and in Canada. 16 The U.S. fund charges a management fee of 0.69%, an expense ratio of 1.02% and does not charge any load. 17 The Canadian fund charges a management fee of 2.00%, an expense ratio of 2.69% and an unreported 'low sales charge.' The management fees (expense ratios) are 190% (164%) higher in Canada than the U.S. While these funds are not clones, their cost differential is striking for similar funds by subsidiaries of the same parent (FMR Corp.) both investing in a foreign market. In private discussions with practitioners, various explanations have been advanced for these differences: Canada's fund industry is small, and is dominated by bank distribution in a relatively concentrated banking sector. The percentage of banking assets controlled by the five largest banks is 84% in Canada, but only 20% in the U.S. (Cetorelli and Gambera (2001)). U.S.-Canada fee differentials would lend themselves to an interesting clinical

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increases to 40% for the management fee model, 23% for the TER model, and 25% for the TSC model. This suggests that the additional explanatory power of the country and domicile effects is substantial.

<sup>&</sup>lt;sup>16</sup> These are not identical funds, in that they have different fund managers, but they have the same general investment objective, name, and comparable portfolios.

http://quicktake.morningstar.com/Fund/Snapshot.asp?Country=USA&Symbol=FJPNX&fdtab=snapshot (visited 2/3/2006).

http://www.morningstar.ca/globalhome/QuickTakes/Fund\_Details.asp?fundid=72391 (visited 2/3/2006).

study, but in the remainder of our paper, we look at the broader sample and test if market size and banking sector concentration is related to fee levels more generally.

Offshore funds. Offshore funds may be cheaper because they are located in areas that specialize in fund management. As such, attracting personnel and setting up a fund management company may well be less expensive. On the other hand, investors in offshore funds may be able to avoid the attention of domestic tax authorities, and they may therefore be willing to pay a higher fee for this benefit. Costs in offshore locations may also be higher, as these funds must organize in one domicile and register in another. This could affect distribution costs, in particular. Whether fees are higher or lower for offshore funds is ultimately an empirical question.

As an example, Vanguard's US domiciled 500 Index Fund Admiral Class shares (for investments of \$100,000 or more) levy expense ratios of 9 basis points per year. <sup>19</sup> Its Dublin-based 500 Index Fund (\$100,000 minimum investment) charges an annual expense ratio of 38 basis points. <sup>20</sup> As Vanguard is known for charging fees that approximate its costs, these differences presumably reflect varying costs of doing business.

More generally, we investigate the different levels of fees between offshore and onshore funds in model (vi) of Table 4. To do this, we remove the domicile dummies from the analysis, and include dummies for just three domiciles: Luxembourg funds, Dublin funds, and the island offshore funds. (We set the Luxembourg dummy equal to zero for funds domiciled and sold in Luxembourg because we want to capture the effect of offshore funds sold abroad.) We continue to include the foreign dummy in this specification. This dummy is set equal to one for funds domiciled in one country and sold in another, but not if the country of domicile is offshore. We

<sup>&</sup>lt;sup>19</sup> http://flagship4.vanguard.com/VGApp/hnw/FundsFeesMinimums?FundId=0540&FundIntExt=INT (visited 2/3/2006)

remove countries where funds from these three domiciles are not sold: Australia, Canada, Japan, and the U.S.

We find strong evidence that funds domiciled outside of their country of sale have fees that differ from their domestic counterparts. For foreign funds, other than offshore funds, management fees are 15 basis points lower than for funds domiciled and registered in the same country. The effect is somewhat larger for TERs and TSCs. Luxembourg-domiciled funds have management fees 7.1 basis points lower than do domestic funds. Management fees for funds domiciled in Dublin are not significantly different from those for domestic funds. Island offshore funds charge 14 basis points more. When we study TERs and TSCs in Panels B and C, all the offshore effects (including Luxembourg, Dublin and the island locations) become positive and very large. For example, TSCs for island offshore funds are 45.7 basis points higher, after controlling for fund characteristics. Perhaps this reflects the fact that investors are willing to pay a high price for one of the benefits of buying an offshore fund, namely less transparency in reporting ownership to tax authorities.

Spain. The previous analysis assumes that there is no regulatory limit on the fees that can be charged. As far as we can ascertain, this is the case for all countries in our study, except for Spain, where the management fee is limited to 1% for money market funds and 2.25% for other funds. We first investigate whether this limit is binding in that funds charge the maximum fee. We find that this limit is binding for 330 funds (105 out of 174 money market funds and 225 out of 2213 other funds). We then re-estimate our models after excluding these funds; our findings are essentially unchanged.

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 $<sup>^{20}\</sup> http://www.vanguard.com/international/common/pdf/SPUS500StockEN.pdf\ (visited\ 2/3/2006)$ 

### 4. Phase Two: National Differences in Fees

While looking at individual countries or pairs is illustrative, in the second phase of our analysis, we seek to explain the different national effects more systematically. As discussed above, Table 5 reports a matrix of country fixed effects (after controlling for the fund and complex factors in Table 4), which we now relate to national characteristics of the countries of registration and domicile. To explain these country-specific differences, we appeal to a variety of fundamental country factors. These variables are defined in the Appendix, with mean and median values reported in Table 6.

In these analyses, we estimate the following multivariate regression model:

Country Effect<sub>j,k</sub> = 
$$f(Regulation measures, Competition measures, National economies of scale, Experience effects, Buyer characteristics) (4)$$

**Regulation.** Khorana, Servaes, and Tufano (2005) find that nations whose laws protect fund investors better, have larger industries. Some managers argue that more regulation may increase fees, due to costly regulatory compliance. However, nations with greater investor protections might have business, legal and regulatory climates that would tend to moderate fees, all other things held equal. To test which of these hypotheses is supported by data, we separately analyze the laws and regulations of the country where the fund is domiciled and where it is registered for sale.

In particular, we include a measure of the quality of the legal system, adapted from La Porta, Lopez-de-Silanes, Shleifer, and Vishny (LLSV) (1998), who measure (1) efficiency of the judicial system, (2) rule of law, (3) corruption, (4) risk of expropriation, and (5) risk of contract repudiation. These variables are constructed such that higher values imply a higher quality legal system. Our *judicial quality* variable sums these five measures.

To measure fund-specific investor protection, using data from KPMG, we create dummies if: (1) regulatory approval is required to start a fund, and (2) regulatory approval is required before issuing a mutual fund prospectus. We aggregate (1) and (2) into a single *approvals* variable.

In addition, we determine the procedures that are in place to prevent conflicts of interest between the fund management company and fund investors. Recent studies have shown that countries differ markedly with respect to the extent to which their laws protect investors from conflicts of interest, and our variables capture fund-specific mechanisms to address these conflicts.<sup>21</sup> First, we create a dummy variable to capture whether custodians are required to be independent from the mutual fund family. Custodians are the parties that hold the securities of the fund, and their independence insures that the fund's assets are not expropriated. Second, we construct three dummy variables to capture mechanisms in place to deal with or avoid conflicts:

(1) Are funds allowed to have a significant participation in companies in which they invest?<sup>22</sup> (2) Is disclosure employed to deal with conflicts of interest? (3) Are there regulatory requirements or industry best practice standards regarding internal control? We combine these three into a single *conflicts of interest* measure, which ranges from zero to three.

Competition. Economists generally believe that competition leads to lower prices, but less profitable markets would attract fewer entrants. While competition is endogenous, various barriers to entry may be less so. To measure barriers to entry and competition, we measure (1) concentration in the banking sector, measured by the percentage of banking assets held by the top five banks; (2) concentration in the fund sector, measured by the percentage of industry assets accounted for by the top five fund complexes; (3) the time it takes to set up a fund; (4) the

<sup>&</sup>lt;sup>21</sup> In a recent paper, Djankov et al. (2005) document a positive and statistically significant relation between various measures of stock market development, and measures of shareholder protection of minority shareholders against self-dealing transactions by controlling shareholders. They also find that the "anti-self-dealing index" is higher in common law countries than civil law countries.

cost to set up a fund. Concentration in the banking sector is likely to be irrelevant when banks are not allowed into the fund industry; we therefore interact bank concentration with a dummy set equal to one if banks are allowed to enter the security business.

National economies of scale. While economies of scale are normally conceived to be internal to a firm, external economies may also exist. For example, having many securities firms in Manhattan can lead to lower costs for all rivals, who can share common services (e.g., printers) or hire workers without having to pay relocation expenses. In our context, larger national industries may be associated with lower fees. As before, a relationship between fees and scale could also reflect investor preferences.

**Experience effects.** Strategy scholars have long identified experience effects, whereby cumulative experience leads to lower costs and lower fees in a competitive environment (see Porter (1980) pp. 11-13). We find evidence of these effects at the fund level, but it may also manifest itself at the country level. We capture this potential effect through industry age, which is the number of years since funds were first offered in a country.

Buyer characteristics. We include three characteristics of the potential buyers in each country: (1) GDP per capita (in dollars as of the end of 2001); (2) Education, measured by the average number of years of full and part-time education (end of 2001), and (3) the average national savings rate (end of 2001). We hypothesize that wealth, education, and the savings rate all increase the demand for funds, and holding supply constant, may be associated with increased In addition, these factors may also be associated with increased demand for more sophisticated products, for which fund complexes can charge higher fees. On the other hand, increased investor sophistication could also depress fees. First, more sophisticated investors may

<sup>&</sup>lt;sup>22</sup> We obtain this information from a survey conducted by IOSCO for OECD countries. The term "significant participation" is not defined in the survey.

be more aware of fees and exert downward pressure on them. Second, more sophisticated investors may need less help in making investment choices. To the extent that part of the fees reflects compensation for providing advice, this should also lead to lower fees. If the latter effect is at work, it should be most pronounced when we focus on TSCs because these costs include charges for distribution. If it is the former effect, all sets of fees should be negatively related to investor sophistication.

**Results.** We report our key results in Table 7, with the three separate panels reporting on the national variables for management fees in Panel A, TERs in Panel B and TSCs in Panel C. In each instance, we explain the national fixed effects (from equation 3, as reported for management fees in Table 5), as a function of a variety of national factors. The explanatory variables are not available for all countries in our sample, which reduces the degrees of freedom in the regression models.<sup>23</sup> To address this problem, we set each explanatory variables equal to zero when it is missing. We then construct a separate indicator variable for each explanatory variable, which is set equal to one if the explanatory variable is missing, and zero otherwise. The coefficients on these dummies are not reported in the table.<sup>24</sup> All standard errors are adjusted for heteroscedasticity.

In all three panels, model (i) shows that there is a strong inverse relationship between fund fees, the quality of the legal system (*Judicial*) in general, and investor protection in the fund industry (*Approvals*) in particular. These effects apply to both the country where the fund is domiciled and the country where the fund is offered for sale. The magnitude of the effect is similar for domicile and country of sale when we consider management fees, but the variables

<sup>&</sup>lt;sup>23</sup> In addition, because we combine all offshore locations, with the exception of Dublin and Luxembourg, we cannot include country data for funds domiciled in these locations.

<sup>&</sup>lt;sup>24</sup> Our results are very similar when we re-estimate the models for those countries for which all the explanatory variables are available.

measured in the country of domicile become more important when we focus on TERs and TSCs. The economic significance of the effect is also substantial. For example, an increase in judicial quality in the country of domicile from its 25<sup>th</sup> percentile to its 75<sup>th</sup> percentile is associated with a decline in management fees of 32 basis points.

To further explore the link between fees and regulation, we include additional regulatory variables in model (ii). We find that fees are lower when the domicile country requires custodians to be independent.<sup>25</sup> We also test whether procedures in place to manage conflicts of interest between the fund investors and the management company affect fees, but find little or no evidence to support this inference.

While we observe an association between certain pro-investor rules and fees, we cannot trace out the link between the two. One possibility is that in countries with stronger pro-investor rules, fund sponsors face greater constraints (potential lawsuits, regulatory jawboning, administrative actions, or adverse media attention) and hence moderate fee levels. Elsewhere, where *caveat emptor* rules, fees are freer to rise. Alternatively, clearer legal rules may permit fund companies to reduce certain costs, such as extensive advertising or direct sales that could signal quality.

In models (iii) through (v), we add measures to capture the impact of scale at the national industry level, i.e., total assets in the country of domicile and the country of sale.<sup>26</sup> We do this to investigate whether smaller national markets enjoy lower economies of scale and hence charge higher fees. There seems to be little support for this conjecture. If anything, for all three types of fees, larger nationally-domiciled markets are associated with higher fees than are nations with smaller domiciled industries. This result holds *despite* the fact that the U.S. is included in the

<sup>25</sup> For a detailed study on custody in the European asset management industry, see Oxera (2002).

<sup>&</sup>lt;sup>26</sup> We lose 10 observations in models that include industry size measures. This is because all offshore markets, except for Luxembourg and Dublin, are combined into one country observation in these models. However, it would be inappropriate to use this country definition to compute industry size.

sample and has the largest industry and nearly the lowest fees. One possibility is that there is more competition for critical resources, such as high quality fund managers, in larger markets, which leads to increased costs.

We do note that there is a significantly negative relationship between TSCs and the log of industry assets in the country of sale in all three specifications. Since TSCs add distribution fees to costs, this implies that selling into larger markets is less costly than into smaller markets. This is consistent with having to bear fixed costs to set up and operate distribution in smaller countries.

In model (iv), we also include characteristics of the investors in the country in which the fund is sold, as well as the age of the industry in the country where the fund is domiciled. The investor characteristics include the per capita GDP of the country, the level of education and the savings rate. As far as management fees are concerned, we find that both the overall national wealth (GDP per capita) and the education level in a country are inversely related to fees. This result is consistent with the notion that better educated investors in wealthier countries are more aware of fees and thereby put pressure on fund management companies to keep fees at reasonable levels. The fact that the significance of these findings weakens when we study TERs and TSCs suggests that it is not caused by the fact that less sophisticated investors are willing to pay more for advice.<sup>27</sup>

With respect to experience effects, we find that all three levels of fees are lower when the fund industry in the domicile country is older. This is consistent with the view that cumulative experience leads to lower costs or greater investor sophistication, and therefore lower fees in a competitive environment.

<sup>&</sup>lt;sup>27</sup> There is a high correlation between measures of investor sophistication and judicial quality. This explains why judicial quality in the country of sale becomes insignificant or even significantly positive in some specifications.

Finally, in model (v), we study concentration in the fund sector and in the banking sector. We find that management fees are higher when the banking sector is more concentrated, but this result loses statistical significance for TERs and TSCs. One possible explanation is that distribution costs are lower for banks, so that they can charge higher management fees without increasing TSCs to investors.

We find that concentration in the fund management industry, as measured by the fraction of fund assets in a country managed by the five largest complexes, is associated with lower fees. This result may appear counterintuitive. Discussions with industry practitioners suggest that this may be the case because fund concentration is often the result of industry consolidation, and the cost savings from consolidation may be passed onto consumers.<sup>28</sup>

In unreported models, we also include the cost and the amount of time it takes to set up a fund, as measures of barriers to entry. Neither is significant at conventional levels, suggesting that fund level barriers to entry are not relevant for fees. Ideally, we would like to measure barriers to accessing distribution channels, but this information is not available in a systematic fashion for the countries in our sample.

**Robustness.** We conduct two sets of robustness tests. First, we re-estimate the models in Table 7, allowing for the lack of independence of observations from the same domicile. This procedure increases the standard errors of our estimates, but all key findings remain significant at conventional levels. Second, we re-estimate the model using weighted least squares, where the weight is inversely related to the number of times a country's domicile fixed effect is included in the construction of the dependent variable in Table 7. Our findings persist.

#### 5. Conclusion

This paper examines fund fees in developed countries. Several key findings emerge. First, while the fund product is similar around the world, the prices charged by funds are very different from one country to another. Second, these differences persist after controlling for various fund characteristics aimed to measure differences in production costs. We find some relationship between fund scale and management fees, but larger effects between fund scale and either total expense ratios or total shareholder costs. In addition, we find fund-level differences in fees due to investment objective, type of fund (index, fund of funds, guaranteed funds), investor clientele (minimum size of account) and fund age. Third, one cannot ignore cross-border fund sales. In general, foreign competition is associated with lower fund fees. Whether we focus on management fees, total expense ratios, or total shareholder charges (which include loads), fees are lower when a fund is sold across borders. However, this conclusion needs two material qualifications: (1) the more countries in which a fund is registered, the more expensive it is, and this effect begins to swamp the cross-border discount when funds are sold in more than three countries; (2) this cross-country effect does not seem to characterize much of the offshore market, where we find that fees of all types are higher, with the exception of management fees for funds domiciled in Luxembourg.

In the second part of the study, we explain cross-country differences in fees. We find a negative relationship between fees and some national characteristics, such as the quality of a country's judicial system, whether the country requires an independent custodian, and the extent to which a fund must obtain certain approvals. We also find lower management fees in countries with higher per capita GDP, a more educated population, a longer history of fund experience, a smaller domiciled industry, and a less concentrated banking sector (or one where banks are not

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<sup>&</sup>lt;sup>28</sup> We are grateful to Ben Phillips of Putnam Lovell NBF for suggesting this interpretation.

allowed to enter the securities business.) The positive relationship between fees and the size of the domiciled industry and the negative relationship between fees and industry age also hold for expense ratios and total shareholder costs. Some of these findings fit well with normal intuition (e.g., older industries offer lower fees), but others are more challenging to explain (e.g., why countries with smaller domiciled industries charge lower fees.)

There is a substantial interest in understanding the relationship between laws and economic development. While our evidence supports the idea that greater investor protection is related to lower fees, it is more difficult to trace out how this relationship works. For example, do the protections affect which firms choose to do business in a country? Do they change how firms actually set prices in those countries? Do they go hand-in-hand with actual or threatened legal actions against funds charging high fees? Do both investor protections and low fees jointly reflect social and business norms? We feel that there is much additional work needed to try to untangle some of these issues, but to get to this deeper understanding we first need to establish certain baseline facts, our goal for this work.

# **Appendix: Definitions and sources of potential explanatory variables** (Names of variables used in the regression models have been italicized)

Determinant	Variable	Source
General Investor Protection	Efficiency of judicial system Rule of law Corruption Risk of expropriation Risk of contract repudiation (all these variables are scaled between 1 and 10, a higher number representing a better judicial system, less corruption, and lower risk of expropriation and repudiation)	La Porta, Lopez-de- Silanes, Shleifer, and Vishny (1998)
	Summed up value of above variables ( <i>Judicial quality</i> )	
Mutual Fund Investor Protection	Does fund startup require regulatory approval? (=1 if Yes) Does the prospectus require regulatory approval? (=1 if Yes)  Summed up value of above variables (Approval)	KPMG (http://www.kpmg.ie/in dustries/fs/funds2002/i ndex.htm), Thompson and Choi (2001), IOSCO (2002)
Potential conflicts of interest between the fund and fund investors	Do custodians need to be independent? (=1 if Yes) (Custodians independent)  Are there regulatory requirements or industry best practice standards on internal control? (=1 if Yes)  The fund cannot have a significant participation in the company in which it invests? (=1 if Yes)  Can the fund use disclosure to deal with potential conflicts? (=1 if Yes)  Summed up value of the above variables (Conflicts of interest)	KPMG (http://www.kpmg.ie/i ndustries/fs/funds2002 /index.htm), Thompson and Choi (2001)
National economies of scale	The size of a country's mutual fund industry (Industry assets) (in \$ mil)	Lipper Fitzrovia, Morningstar, Financial Research Corporation
Economic development	GDP per capita (in \$ 000)	World Bank (2003)
Education	Total years of education averaged for men and women (includes part time education) (Education)	World Bank (2003)
Savings rate	Household savings as a percent of disposable income (Savings rate)	EIU (2003)

## Appendix (continued)

Determinant	Variable	Source
Industry age	Age of the industry as of 2001 (in years)	KPMG, Ernst &
	(Industry age)	Young, Cadogan,
		Lexis-Nexis, Factiva,
		Country fund industry websites
Fund family	The percentage of industry assets accounted for by the	Morningstar, Lipper
concentration	top 5 fund complexes	Fitzrovia, Financial
	(Fund family concentration)	Research Corporation
Concentration of	Percentage of total banking assets held by top 5 banks	Cetorelli and Gambera
banking sector	(Bank concentration)	(2001)
Ease of entry into	Cost of setting up a new fund	KPMG
the fund industry	Time required to set up a new fund	

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Table 1
Number of Funds in Sample by Country of Domicile and Country of Sale

This table reports a cross-tabulation of the number of mutual funds domiciled in a particular country and the number of funds available for sale to prospective investors in a country. The number of funds registered for sale in the countries in which they are domiciled (i.e., the on-diagonal elements) are boldfaced. Island offshore refers to funds that are domiciled in locations such as Bermuda, the Cayman Islands, Guernsey, the Isle of Man, and Jersey. All data are year-end 2002 or as close to year-end 2002 as possible.

							Cou	intry of	sale										
Domicile	Austral.	Austria I	Belgium	Canada	Denm.	Finland	France	Germ.	Italy	Japan	Lux	Netherl.	Norway	Spain	Sweden	Switz.	UK	US	Total
Australia	3,156	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,156
Austria	0	234	0	0	0	0	8	177	26	0	1	0	0	0	0	2	0	0	448
Belgium	0	0	772	0	0	0	81	12	56	0	137	137	0	0	0	9	0	0	1,204
Canada	0	0	0	3,674	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,674
Denmark	0	0	0	0	11	0	0	12	0	0	0	0	0	0	0	0	0	0	23
Dublin	0	316	180	0	7	48	448	797	484	0	128	234	122	438	153	315	368	0	4,038
Finland	0	0	0	0	0	111	0	0	0	0	0	0	6	0	55	0	14	0	186
France	0	1	23	0	0	0	1,856	49	15	0	0	16	0	20	0	14	1	0	1,995
Germany	0	182	38	0	0	0	23	1,102	7	0	73	11	0	9	2	139	37	0	1,623
Island offshore	0	25	1	0	0	5	0	118	8	0	0	7	8	0	45	179	93	0	489
Italy	0	0	0	0	0	0	0	0	1,239	0	0	0	0	0	0	0	0	0	1,239
Japan	0	0	0	0	0	0	0	0	0	1,923	0	0	0	0	0	0	0	0	1,923
Luxembourg	0	1,804	2,594	0	44	768	3,006	4,312	3,690	0	5,014	2,143	991	3,699	1,353	2,619	1,265	0	33,302
Netherlands	0	0	18	0	0	0	6	7	0	0	2	302	0	0	0	5	0	0	340
Norway	0	0	0	0	3	8	0	0	0	0	0	0	334	0	35	0	3	0	383
Spain	0	0	0	0	0	0	0	0	0	0	0	0	0	2,387	0	0	0	0	2,387
Sweden	0	0	0	0	0	31	0	0	0	0	0	0	86	0	481	0	1	0	599
Switzerland	0	34	0	0	0	0	1	199	8	0	31	0	0	2	0	366	2	0	643
United Kingdom	0	96	42	0	20	0	96	169	101	0	2	41	33	37	61	36	2,440	0	3,174
United States	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,894	16,894
Total	3,156	2,692	3,668	3,674	85	971	5,525	6,954	5,634	1,923	5,388	2,891	1,580	6,592	2,185	3,684	4,224	16,894	77,720

Table 2
Descriptive Statistics on Fee Variables

This table provides descriptive statistics on the various fee variables expressed in percent. Management fees (MGT) represent the charges levied each year by funds for "management" services. Expenses (referred to as TERs – total expense ratios) include all annual expenses levied by a fund on its investors, covering investment management, administration, servicing, transfer agency, audit, legal, etc. TERs exclude certain classes of distribution fees, such as front-end or back-end loads, as well as fees charged by distributors that are separate from the fund charges (e.g., fees for participation in a wrap program). The measure of "total shareholder charges" (TSC) includes the expense ratio plus an annuitized form of loads. Assuming a five-year holding period, we define total shareholder cost (TSC) as follows: Total Shareholder Cost = TER + initial load / 5 + back-end load at five years/ 5. Assets are measured in \$ millions. Panel A (B) reports descriptive statistics by country of domicile (country of sale). When we report fees by domicile, each fund class counts as one observation. When we present fees by country of sale, data on a fund class are included for each country in which it is offered for sale. N refers to the management fees; we have fewer datapoints for expenses (TERs) and total shareholder costs (TSCs). As a result, it is possible that average TERs or TSCs are smaller than average management fees as they are computed for different samples. Island offshore refers to funds that are domiciled in locations such as Bermuda, the Cayman Islands, Guernsey, the Isle of Man, and Jersey.

Panel A – Statistics by domicile

Domicile-Mean	Balanced		Во	nds			Equi	ty			Mo	ney ma	arket			Full s	ample	
	MGT TER TSC assets	N	MGT TER TS	C assets	N	MGT	TER TSC		N	MGT	TER	TSC	assets	N	MGT	TER TSC	assets	N
Australia	1.51 1.67 2.11 61	875	1.18 1.25 1.6	64 45	372	1.50	1.70 2.16	42	1617	0.98	1.14	1.38	122	160	1.43	1.60 2.04	54	3156
Austria	1.02 1.23 1.73 125	30	0.59 0.73 1.2	263	88	1.45	1.64 2.45	64	117	0.39	0.50	0.54	134	9	1.05	1.20 1.87	147	248
Belgium	0.63 0.86 1.42 339	72	0.38 0.59 1.0	137	54	0.86	1.20 1.71	72	247	0.28	0.43	0.49	135	11	0.75	0.99 1.65	86	788
Canada	2.02 2.93 5.53 49	225	1.72 2.25 4.1	0 114	1198	2.11	2.87 4.93	61	2094	1.29	1.64	-	53	28	1.97	2.68 4.66	78	3674
Denmark		-	0.71 0.85 1.3	39 45	5	0.79	1.27 2.08	15	17	0.62	0.62	1.20	15	1	0.77	1.15 1.89	21	23
Dublin	1.26 2.06 2.81 52	29	0.94 1.35 2.1	8 107	255	1.34	1.96 2.80	67	845	0.42	0.62	1.72	602	125	1.18	1.72 2.67	127	1279
Finland	1.09 1.17 1.53 33	24	0.61 1.09 1.3	53	20	1.41	1.48 1.92	37	85	0.36	0.33	0.37	174	11	1.16	1.28 1.65	49	144
France	1.09 1.20 1.79 145	263	0.75 0.86 1.2	23 143	335	1.26	1.45 2.12	115	840	0.44	0.52	0.72	614	269	1.00	1.13 1.67	194	1859
Germany	0.92 1.26 2.04 87	215	0.64 0.82 1.3	34 285	230	1.06	1.41 2.22	165	544	0.46	0.57	0.64	950	44	0.90	1.22 1.93	270	1104
Island offshore	1.34 1.70 2.73 43	26	0.97 1.35 1.9	220	83	1.55	1.93 2.79	89	123	0.72	0.89	1.04	111	45	1.26	1.62 2.37	144	317
Italy	1.20 1.35 1.71 334	187	1.05 1.23 1.5	383	324	1.76	1.96 2.43	157	576	0.59	0.69	0.90	1978	69	1.40	1.60 2.00	340	1239
Japan		-		-	-	1.53		34	362	-	-	-	-	-	1.21		70	1923
Luxembourg	1.09 1.90 2.63 145	779	0.77 1.26 1.9	141	1784	1.31	2.09 2.87	70	4099	0.46	0.79	1.16	470	462	1.08	1.75 2.48	117	7748
Netherlands	0.75 229	38	0.72	329	42	1.04	0.79 1.16	193	201	0.45	-	-	273	2	0.94	0.79 1.16	210	304
Norway	1.55 3	24	0.43 0.55 0.6	61	53	1.52	1.84 2.47	12	202	0.36	0.80	0.80	18	49	1.17	1.62 2.19	12	330
Spain	1.36 1.60 1.77 47	546	1.09 1.29 1.4	0 103	434	1.71	1.99 2.20	29	554	0.86	1.02	1.03	341	174	1.30	1.52 2.00	79	2387
Sweden	0.91 0.98 1.47 167	54	0.57 0.58 0.6	64 95	43	1.21	1.37 1.63	99	337	0.49	0.51	0.56	146	31	1.07	1.20 1.44	108	483
Switzerland	1.08 1.24 1.73 332	57	0.77 0.92 1.4	0 228	78	1.30	1.48 2.16	177	165	0.35	0.45	1.00	482	17	1.09	1.42 1.96	225	372
United Kingdom	1.08 1.35 2.35 119	207	0.80 0.96 1.8	36 141	346	1.15	1.39 2.43	144	1824	0.56	0.74	0.89	65	51	1.09	1.32 2.32	137	2527
United States	0.63 1.43 1.70 386	3805	0.51 1.15 1.4	1 241	4613	0.79	1.71 1.99	268	6694	0.28	0.62	0.64	1423	1500	0.63	1.42 1.68	387	16894
Mean	0.94 1.55 1.85 252	7456	0.80 1.28 1.5	2 189	10357	1.24	1.87 2.26	141	21543	0.43	0.71	0.83	941	3058	1.03	1.59 1.92	217	46799

Table 2, Panel A (continued)

Domicile-Median	Balance	i		Bonds			Equi	ity			Mo	ney ma	arket			Full s	ample	
	MGT TER TSC	assets N	MGT TER	TSC assets	N	MGT	TER TSC	assets	N	MGT	TER	TSC	assets	N	MGT	TER TSO	assets	N
Australia	1.70 1.85 2.50	8 875	1.30 1.40	1.86 4	372	1.58	3 1.87 2.50	2	1617	1.05	1.14	1.26	10	160	1.50	1.75 2.3	1 4	3156
Austria	1.00 1.20 1.80	45 30	0.60 0.67	1.34 124	88	1.50	1.67 2.60	26	117	0.36	0.42	0.57	58	9	1.00	1.20 1.8	5 54	248
Belgium	0.70 0.88 1.39	58 72	0.30 0.59	1.03 75	54	0.99	1.24 1.83	41	247	0.40	0.55	0.56	131	11	0.75	0.96 1.7	2 36	788
Canada	2.15 2.90 5.53	6 225	1.90 2.36	4.26 16	1198	2.00	2.81 4.76	7	2094	1.00	1.20	-	16	28	2.00	2.70 4.6	7 9	3674
Denmark			0.86 0.86	1.46 36	5	1.16	5 1.17 2.31	10	17	0.62	0.62	1.20	15	1	0.88	1.01 1.6	) 12	23
Dublin	1.25 2.19 2.84	37 29	1.00 1.30	2.21 44	255	1.50	1.90 2.84	17	845	0.40	0.44	1.67	103	125	1.25	1.73 2.6	8 25	1279
Finland	1.05 1.00 1.22	11 24	0.58 0.62	0.82 41	20	1.50	1.60 2.00	17	85	0.40	0.33	0.37	186	11	1.20	1.60 1.9	1 19	144
France	1.00 1.20 1.75	40 263	0.75 0.89	1.24 50	335	1.25	5 1.46 2.12	26	840	0.40	0.43	0.56	188	269	1.00	1.14 1.6	5 42	1859
Germany	0.96 1.24 2.01	25 215	0.60 0.77	1.35 75	230	1.05	1.34 2.15	28	544	0.50	0.58	0.64	104	44	0.90	1.15 1.93	2 39	1104
Island offshore	1.25 1.72 2.67	21 26	1.00 1.16	1.98 32	83	1.50	1.90 2.66	35	123	0.75	0.82	0.82	55	45	1.25	1.62 2.4	5 38	317
Italy	1.22 1.39 1.80	86 187	1.00 1.21	1.42 123	324	1.80	1.95 2.48	52	576	0.60	0.71	0.81	537	69	1.50	1.66 1.9	8 80	1239
Japan					-	1.55	;	8	362	-	-	-	-	-	1.26		11	1923
Luxembourg	1.10 1.69 2.47	17 779	0.75 1.12	1.91 29	1784	1.45	1.96 2.86	14	4099	0.50	0.72	1.01	41	462	1.03	1.64 2.4	8 18	7748
Netherlands	0.73	65 38	0.63 -	- 100	42	1.00	0.66 1.00	42	201	0.45	-	-	273	2	0.96	0.66 1.0	) 46	304
Norway	1.50	1 24	0.45 0.55	0.61 3	53	1.60	1.95 2.46	2	202	0.35	0.80	0.80	12	49	1.20	1.63 2.4	2 3	330
Spain	1.50 1.68 1.79	13 546	1.10 1.34	1.47 26	434	1.85		9	554	1.00	1.11	1.12	113	174	1.32	1.52 1.9		2387
Sweden	0.79 0.93 1.26	8 54	0.60 0.60	0.65 38	43	1.40	1.43 1.61	21	337	0.50	0.50	0.51	44	31	1.20	1.30 1.5	) 22	483
Switzerland	1.08 1.20 1.55	93 57	0.80 0.90	1.32 83	78	1.32	2 1.50 2.17	56	165	0.20	0.25	1.00	366	17	1.00	1.30 1.9	8 65	372
United Kingdom	1.25 1.37 2.37	33 207	0.80 1.00	1.90 39	346	1.25	1.45 2.54	33	1824	0.50	0.64	0.64	15	51	1.25	1.34 2.4	4 32	2527
United States	0.70 1.35 1.71	35 3805	0.50 1.04			0.75	1.65 2.08		6694	0.27				1500		1.35 1.6		
Median	0.80 1.48 1.91	24 7456	0.60 1.14	1.59 37	10357	1.19	1.80 2.33	17	21543	0.40	0.63	0.69	138	3058	0.90	1.50 1.9	2 25	46799

Table 2, Panel B– Statistics by country of sale

Cty of sale-Mean		Ba	lanced	l				Bonds	3				Equity	y			Mo	ney m	arket			F	ull san	aple	
	MGT TI	ER	TSC a	assets	N	MGT	TER	TSC a	assets	N	MGT	TER	TSC a	assets	N	MGT	TER	TSC	assets	N	MGT	TER	TSC	assets	N
Australia	1.51 1.	.67	2.11	61	875	1.18	1.25	1.64	45	372	1.50	1.70	2.16	42	1617	0.98	1.14	1.38	122	160	1.43	1.60	2.04	54	3156
Austria	1.06 1.	.67	2.44	180	210	0.73	1.19	1.69	212	576	1.28	1.87	2.61	107	1632	0.46	0.81	0.96	318	174	1.08	1.66	2.35	149	2692
Belgium	0.96 1.	.45	2.01	177	298	0.69	1.12	1.76	171	687	1.22	1.84	2.56	96	1838	0.46	0.82	1.09	383	185	0.97	1.47	2.14	124	3668
Canada	2.02 2.	.93	5.53	49	225	1.72	2.25	4.10	114	1198	2.11	2.87	4.93	61	2094	1.29	1.64	-	53	28	1.97	2.68	4.66	78	3674
Denmark	0.98 3.	.48	4.61	13	6	0.68	0.92	1.81	181	18	1.16	1.63	2.55	473	61	-	-	-	-	-	1.04	1.61	2.54	379	85
Finland	1.24 1.	.55	2.45	376	76	0.84	1.20	1.98	286	167	1.42	1.86	2.74	157	667	0.48	0.77	1.24	234	39	1.26	1.67	2.51	198	971
France	1.10 1.	.49	2.08	172	518	0.74	1.13	1.63	166	1162	1.27	1.82	2.56	101	3097	0.43	0.64	0.84	530	504	1.05	1.51	2.15	159	5525
Germany	1.04 1.	.63	2.37	149	672	0.75	1.14	1.75	186	1559	1.26	1.88	2.67	100	3947	0.46	0.71	1.03	613	421	1.06	1.60	2.35	166	6954
Italy	1.18 1.	.68	2.21	218	522	0.88	1.29	1.86	207	1354	1.45	2.05	2.77	86	3219	0.49	0.78	1.18	633	316	1.23	1.75	2.42	158	5634
Japan		-	-	-	-	-	-	-	-	-	1.53	-	-	34	362	-	-	-	-	-	1.21	-	-	70	1923
Luxembourg	1.08 1.	.82	2.58	161	478	0.78	1.22	1.87	168	1207	1.32	2.03	2.79	83	2985	0.46	0.74	1.13	547	292	1.09	1.69	2.41	132	5388
Netherlands	1.07 1.	.71	2.50	266	196	0.79	1.30	2.06	203	590	1.28	1.95	2.77	103	1882	0.45	0.82	1.28	463	111	1.11	1.73	2.51	146	2891
Norway	1.44 1.	.79	2.63	217	85	0.77	1.22	2.00	186	285	1.45	1.91	2.75	113	1055	0.44	0.81	1.22	129	99	1.25	1.73	2.53	132	1580
Spain	1.30 1.	.75	1.97	73	897	0.91	1.33	1.77	122	1317	1.41	2.05	2.73	61	3182	0.61	0.92	1.14	361	417	1.21	1.72	2.33	96	6592
Sweden	0.99 1.	.42	2.12	180	155	0.75	1.18	1.76	182	387	1.32	1.81	2.54	116	1458	0.45	0.73	0.97	186	110	1.15	1.61	2.30	137	2185
Switzerland	1.12 1.	.60	2.25	214	293	0.79	1.23	1.87	190	872	1.33	1.91	2.70	120	2106	0.49	0.78	1.14	604	252	1.12	1.64	2.39	178	3684
United Kingdom	1.18 1.	.49	2.53	149	282	0.84	1.16	2.04	184	733	1.26	1.66	2.73	141	2921	0.53	0.80	1.14	184	141	1.15	1.53	2.52	148	4224
United States	0.63 1.	.43	1.70	386	3805	0.51	1.15	1.41	241	4613	0.79	1.71	1.99	268	6694	0.28	0.62	0.64	1423	1500	0.63	1.42	1.68	387	16894
Mean	0.99 1.	.59	1.99	240	9593	0.79	1.27	1.68	189	17097	1.28	1.92	2.52	124	40817	0.44	0.75	0.95	756	4749	1.07	1.64	2.15	189	77720

Table 2, Panel B (continued)

Cty of sale-Median		В	alance	d				Bonds	S			I	Equity	y			Mo	ney m	arket			Ft	ull san	nple	
	MGT	TER	TSC	assets	N	MGT	TER	TSC	assets	N	MGT	TER T	SC a	assets	N	MGT	TER	TSC	assets	N	MGT	TER '	TSC :	assets	N
Australia	1.70	1.85	2.50	8	875	1.30	1.40	1.86	4	372	1.58	1.87 2	2.50	2	1617	1.05	1.14	1.26	10	160	1.50	1.75	2.31	4	3156
Austria	1.16	1.48	2.31	24	210	0.75	1.02	1.65	44	576	1.33	1.79 2	2.64	21	1632	0.50	0.66	0.89	33	174	1.15	1.59	2.34	26	2692
Belgium	1.00	1.40	2.07	30	298	0.75	1.03	1.77	39	687	1.25	1.81 2	2.65	19	1838	0.50	0.73	0.89	57	185	1.00	1.35	2.07	25	3668
Canada	2.15	2.90	5.53	6	225	1.90	2.36	4.26	16	1198	2.00	2.81 4	1.76	7	2094	1.00	1.20	-	16	28	2.00	2.70	4.67	9	3674
Denmark	0.80	1.72	2.92	13	6	0.68	0.93	1.58	152	18	1.50	1.73 2	2.75	112	61	-	-	-	-	-	1.07	1.65	2.46	109	85
Finland	1.26	1.55	2.45	39	76	0.80	1.14	2.01	67	167	1.50	1.90 2	2.86	43	667	0.50	0.76	1.22	140	39	1.35	1.71	2.61	50	971
France	1.10	1.43	2.09	32	518	0.75	1.01	1.56	37	1162	1.30	1.78 2	2.62	20	3097	0.40	0.55	0.70	111	504	1.00	1.47	2.13	28	5525
Germany	1.10	1.40	2.19	30	672	0.75	1.01	1.67	43	1559	1.25	1.79 2	2.65	19	3947	0.50	0.64	0.86	73	421	1.00	1.50	2.30	27	6954
Italy	1.25	1.60	2.24	33	522	0.90	1.22	1.89	37	1354	1.50	2.01 2	2.79	15	3219	0.50	0.74	1.09	87	316	1.25	1.74	2.49	23	5634
Japan	-	-	-	-	-	-	-	-	-	-	1.55	-	-	8	362	-	-	-	-	-	1.26	-	-	11	1923
Luxembourg	1.11	1.55	2.41	34	478	0.75	1.11	1.84	37	1207	1.35	1.92 2	2.79	17	2985	0.50	0.70	0.98	66	292	1.00	1.57	2.35	24	5388
Netherlands	1.02	1.50	2.45	48	196	0.75	1.17	2.04	45	590	1.25	1.91 2	2.84	25	1882	0.45	0.71	1.22	57	111	1.14	1.67	2.57	31	2891
Norway	1.45	1.74	2.73	12	85	0.75	1.17	2.02	37	285	1.50	1.90 2	2.86	20	1055	0.40	0.74	1.12	28	99	1.30	1.75	2.65	22	1580
Spain	1.35	1.73	1.99	10	897	0.90	1.25	1.76	24	1317	1.50	2.02 2	2.74	10	3182	0.52	0.94	1.14	54	417	1.25	1.66	2.33	16	6592
Sweden	1.00	1.43	2.32	18	155	0.75	1.09	1.93	39	387	1.50	1.81 2	2.70	25	1458	0.50	0.67	0.84	41	110	1.25	1.62	2.36	28	2185
Switzerland	1.20	1.47	2.30	33	293	0.80	1.09	1.89	36	872	1.50	1.87 2	2.79	22	2106	0.50	0.70	0.98	67	252	1.20	1.60	2.39	28	3684
United Kingdom	1.25	1.54	2.56	35	282	0.85	1.13	2.06	43	733	1.44	1.66 2	2.75	34	2921	0.50	0.71	0.90	41	141	1.25	1.56	2.62	35	4224
United States	0.70	1.35	1.71	35	3805	0.50	1.04	1.56	44	4613	0.75	1.65 2	2.08	26	6694	0.27	0.59	0.59	283	1500	0.63	1.35	1.69	39	16894
Median	0.90	1.50	2.05	25	9593	0.70	1.13	1.72	37	17097	1.25	1.87 2	2.60	18	40817	0.40	0.67	0.80	101	4749	1.00	1.58	2.16	25	77720

Table 3
Descriptive Statistics on Explanatory Variables in the Fund Level Regressions

This table provides descriptive statistics on the variables used to explain individual fund level fees. Fund-class assets is total assets in the fund class (in \$ millions). Fund size is measured (in \$ millions) by aggregating the dollar value of assets across all share classes of a fund. Family size is total net assets (in \$ millions) of the family/fund complex offering the fund. Minimum investment is the initial investment in dollars required to initiate a position in the fund. Fund age is the life of the fund measured as the number of years the fund has been in existence. Number of countries a fund is available for sale is the number of countries in which a fund share class is sold. Assets in the fund category is the dollar value of the assets (in \$ millions) in a given investment objective in a country. Foreign funds measures the proportion of funds sold in a country which are domiciled abroad. Island offshore refers to funds that are domiciled in locations such as Bermuda, the Cayman Islands, Guernsey, the Isle of Man, and Jersey. Panel A (B) reports descriptive statistics by country of domicile (country of sale).

Panel A: Statistics by country of domicile

			A1: Mea	ns					1	A2: Med	ians			
						# of cts. fund is							# of cts. fund is	
	fund class	fund	family	minimum		avail. for	assets in the	fund class	fund	family	minimum	fund	avail. for	assets in the
domicile	assets	size	size	investment	fund age	sale	fund category	assets	size	size	investment	age	sale	fund category
Australia	54	54	35239	49464	5.7	1.0	52920	4	4	3281	2825	3.6	1.0	68558
Austria	147	159	6514	153	7.2	1.8	203408	54	56	3213	1	4.8	2.0	191074
Belgium	86	88	33541	10771	5.5	1.5	89885	36	36	35348	1014	4.8	1.0	24024
Canada	78	83	34351	7399	7.0	1.0	119014	9	11	3319	317	4.9	1.0	128565
Denmark	21	21	354	4761	6.5	1.0	201691	12	12	240	2621	5.6	1.0	257910
Dublin	127	292	90360	426680	5.8	3.2	263543	25	66	43814	2500	4.2	3.0	276128
Finland	49	65	2070	15926	5.0	1.3	96925	19	24	482	1048	4.3	1.0	104514
France	194	196	27956	158039	9.4	1.1	227915	42	42	9480	1	7.8	1.0	267197
Germany	270	271	52144	1640	9.4	1.5	269518	39	39	4843	524	6.3	1.0	289934
Island offshore	144	153	20005	7841	9.9	1.5	198579	38	44	4407	2097	8.1	1.0	166091
Italy	340	352	38959	14722	6.9	1.0	230570	80	80	10930	1048	5.5	1.0	276128
Japan	70	70	6246	998	5.6	1.0	102206	11	11	3969	84	4.1	1.0	123083
Luxembourg	117	183	74958	405661	6.0	4.3	202906	18	36	36798	1048	4.6	3.0	194530
Netherlands	210	210	24001	884	8.4	1.1	153418	46	46	20813	26	5.8	1.0	193857
Norway	12	14	1336	880554	6.9	1.2	87466	3	3	463	3595	5.7	1.0	118875
Spain	79	79	21028	37663	6.7	1.0	111658	21	21	3881	629	6.0	1.0	65203
Sweden	108	115	6655	22741	8.2	1.2	124446	22	23	2839	23	6.1	1.0	169608
Switzerland	225	236	53694	45747	13.3	1.7	192963	65	74	11209	75	10.2	2.0	178582
United Kingdom	137	163	48145	20878	11.8	1.3	315645	32	48	9091	1604	8.9	1.0	420788
United States	387	1027	104882	777278	8.4	1.0	1533439	39	165	42838	1000	6.4	1.0	1467405
·	217	466	66517	381369	7.6	1.7	664485	25	48	16010	1000	5.6	1.0	276128

Table 3 (continued)

Panel B: Statistics by country of sale

			B1: Mea	ns						]	B2: Med	ians				
						# of cts. fund is								# of cts. fund is		
	fund class	fund	family	minimum		avail. for	assets in the	Foreign	fund class	fund	family	minimum	fund	avail. for	assets in the	Foreign
countrysale	assets	size	size	investment	fund age	sale	fund category	funds	assets	size	size	investment	age	sale	fund category	funds
Australia	54	54	35239	49464	5.7	1.0	52920	0.00	4	4	3281	2825	3.6	1.0	68558	0.00
Austria	149	201	77454	37341	8.5	5.8	148584	0.13	26	44	42380	282	6.4	6.0	191074	0.00
Belgium	124	181	91310	477375	6.7	5.5	122607	0.03	25	39	42380	1033	5.2	6.0	177237	0.00
Canada	78	83	34351	7399	7.0	1.0	119014	0.00	9	11	3319	317	4.9	1.0	128565	0.00
Denmark	379	410	324009	1379	6.4	5.9	21414	0.27	109	122	61245	160	5.6	3.0	28868	0.00
Finland	198	251	135653	40852	7.5	8.1	82634	0.05	50	72	52600	1500	5.9	9.0	104514	0.00
France	159	229	75260	325436	8.1	4.7	249000	0.04	28	46	35570	168	6.3	5.0	313027	0.00
Germany	166	248	77857	258544	7.4	4.6	328829	0.11	27	46	36798	1048	5.1	4.0	418471	0.00
Italy	158	235	81579	171130	6.1	4.8	247238	0.04	23	52	35071	1048	4.5	5.0	276128	0.00
Japan	70	70	6246	998	5.6	1.0	102206	0.00	11	11	3969	84	4.1	1.0	123083	0.00
Luxembourg	132	215	85744	434369	6.2	4.6	198968	0.05	24	52	42380	1225	4.7	3.0	246756	0.00
Netherlands	146	249	110391	350277	6.8	6.0	156157	0.07	31	68	50519	1500	5.2	6.0	193857	0.00
Norway	132	204	117580	357148	7.1	6.6	90775	0.08	22	44	47754	2500	5.6	6.0	118875	0.00
Spain	96	182	76558	364775	6.2	4.4	148768	0.01	16	37	40000	630	5.2	4.0	160980	0.00
Sweden	137	192	81231	108682	7.6	5.9	128745	0.09	28	45	23677	1000	5.9	5.0	169608	0.00
Switzerland	178	251	89226	219833	8.3	5.8	204921	0.10	28	51	42380	946	6.1	6.0	262473	0.00
United Kingdom	148	193	76367	177880	9.3	3.5	318152	0.04	35	55	21531	1604	6.7	1.0	420788	0.00
United States	387	1027	104882	777278	8.4	1.0	1533439	0.00	39	165	42838	1000	6.4	1.0	1467405	0.00
	189	377	82877	375541	7.4	3.7	485352	0.04	25	52	31103	1000	5.5	2.0	203297	0.00

## Table 4 Explaining Mutual Fund Fees across Countries

This table reports clustered OLS regressions using three sets of dependent variables: (1) fund management fees (MGT) – panel A (2) expense ratio of a fund (TER) – panel B, and (3) the expense ratio plus an annuitized measure of front and back-end loads assuming a 5-year holding period (TSC) – panel C, measured at the end of 2002. Family size is measured as log of total net assets of the family/fund complex offering the fund. Fund size is the log of the aggregated dollar value of assets across all share classes of a fund (in \$ millions). Fund-class size is log of total assets in the fund class (in \$ millions). Minimum investment is the log of the minimum initial investment required (in \$) to initiate a position in the fund. Fund age is the life of the fund measured as the logarithm of the number of years the fund has been in existence (in any country in which it has been sold). Number of countries a fund is sold is the number of countries in which a fund share class is sold. Assets in objective is the log of the total dollar value of assets in a given investment objective in the country where the fund is being sold. The index fund dummy, fund of funds dummy, and guaranteed fund dummy are set equal to one if the fund is an index fund, fund of funds, or a guaranteed fund, respectively, and zero otherwise. Foreign dummy is set equal to one of the fund is being sold outside of its domicile country and is not an offshore fund. Dublin dummy (Luxembourg dummy) is set equal to one if the fund is domiciled in Dublin (Luxembourg) and zero otherwise. The Luxembourg dummy is also set equal to zero for Luxembourg funds offered for sale in Luxembourg. Island offshore dummy is set equal to one if the fund is domiciled in an offshore location other than Dublin or Luxembourg and zero otherwise. The models include 122 objective dummies and dummies for each domicile and each country of sale, with the U.S. being the base case.

Panel A: Management fees

•	Mode	l (i)	Model	(ii)	Model	(iii)	Model	(iv)	Model	(v)	Model	(vi)
	coeff.	p-value										
Log Family size			-0.005	0.00	-0.006	0.00	-0.002	0.10	-0.005	0.00	0.001	0.66
Log Fund size					-0.003	0.07	-0.007	0.00	-0.010	0.00	-0.008	0.00
Log Fund class size			-0.007	0.00								
Log Min investment							-0.019	0.00				
Log Fund age							-0.014	0.00	-0.010	0.00	-0.016	0.00
# of cts. fund is sold									0.012	0.00	0.009	0.00
Log Assets in obj.									0.001	0.94	-0.021	0.00
Index fund dummy							-0.454	0.00	-0.468	0.00	-0.589	0.00
Fund of funds dummy							-0.228	0.00	-0.203	0.00	-0.161	0.00
Guaranteed fund dummy							0.003	0.90	0.000	0.99	0.045	0.05
Foreign dummy									-0.032	0.00	-0.150	0.00
Island offshore dummy											0.139	0.00
Dublin dummy											0.032	0.15
Luxembourg dummy											-0.071	0.00
country effects	Y		Y		Y		Y		Y		Y	
domicile effects	Y		Y		Y		Y		Y		N	
objective effects	Y		Y		Y		Y		Y		Y	
significance test:												
dom. $dummy = 0$	0.0	0	0.00	)	0.0	0	0.00	)	0.00	0	-	
dom. dum equality	0.0	0	0.00	)	0.0	0	0.00	)	0.00	0	-	
cty. $dummy = 0$	0.0	0	0.00	)	0.0	0	0.00	)	0.00	0	0.00	)
cty. dum equality	0.0	0	0.00	)	0.0	0	0.00	)	0.00	0	0.00	)
N	7744	19	7744	9	7744	19	6119	)4	6390	)8	3845	59
Adjusted R-squared	0.4	9	0.49	)	0.49	9	0.55	5	0.53	5	0.39	•

Table 4 (continued)

Panel B: TER

•	Mode	l (i)	Model	(ii)	Model	(iii)	Model	(iv)	Model	l (v)	Model	(vi)
•	coeff.	p-value										
Log Family size			-0.030	0.00	-0.024	0.00	-0.020	0.00	-0.020	0.00	-0.020	0.00
Log Fund size					-0.056	0.00	-0.054	0.00	-0.057	0.00	-0.085	0.00
Log Fund class size			-0.062	0.00								
Log Min investment							-0.020	0.00				
Log Fund age							-0.047	0.00	-0.042	0.00	-0.054	0.00
# of cts. fund is sold									0.001	0.78	0.005	0.02
Log Assets in obj.									-0.042	0.00	-0.016	0.23
Index fund dummy							-0.617	0.00	-0.635	0.00	-0.726	0.00
Fund of funds dummy							-0.261	0.00	-0.260	0.00	-0.248	0.00
Guaranteed fund dummy							0.024	0.44	0.047	0.10	0.060	0.03
Foreign dummy									-0.059	0.00	-0.195	0.00
Island offshore dummy											0.236	0.00
Dublin dummy											0.365	0.00
Luxembourg dummy											0.320	0.00
country effects	Y		Y		Y		Y		Y		Y	
domicile effects	Y		Y		Y		Y		Y		N	
objective effects	Y		Y		Y		Y		Y		Y	
significance test:												
dom. $dummy = 0$	0.0	0	0.00		0.0	0	0.00	)	0.0	0	-	
dom. dum equality	0.0	0	0.00		0.0	0	0.00	)	0.0	0	-	
cty. $dummy = 0$	0.0	0	0.00		0.0	0	0.00	)	0.0	0	0.00	)
cty. dum equality	0.0	0	0.00		0.0	0	0.00	)	0.0	0	0.00	)
N	7064	18	70648	8	7064	48	5512	28	5719	93	3563	80
Adjusted R-squared	0.30	0	0.34		0.3	3	0.38	3	0.3	9	0.38	3

Table 4 (continued)

Panel C: TSC

•	Mode	l (i)	Model	(ii)	Model	(iii)	Model	(iv)	Model	l (v)	Model	(vi)
•	coeff.	p-value										
Log Family size			-0.023	0.00	-0.013	0.00	-0.014	0.00	-0.018	0.00	-0.024	0.00
Log Fund size					-0.062	0.00	-0.057	0.00	-0.063	0.00	-0.086	0.00
Log Fund class size			-0.053	0.00								
Log Min investment							-0.029	0.00				
Log Fund age							-0.024	0.01	-0.019	0.03	-0.023	0.06
# of cts. fund is sold									0.017	0.00	0.021	0.00
Log Assets in obj.									0.062	0.00	0.102	0.00
Index fund dummy							-0.714	0.00	-0.720	0.00	-0.808	0.00
Fund of funds dummy							-0.298	0.00	-0.280	0.00	-0.273	0.00
Guaranteed fund dummy							0.350	0.00	0.344	0.00	0.317	0.00
Foreign dummy									-0.047	0.00	-0.172	0.00
Island offshore dummy											0.457	0.00
Dublin dummy											0.556	0.00
Luxembourg dummy											0.485	0.00
country effects	Y		Y		Y		Y		Y		Y	
domicile effects	Y		Y		Y		Y		Y		N	
objective effects	Y		Y		Y		Y		Y		Y	
significance test:												
dom. $dummy = 0$	0.0	0	0.00		0.0	0	0.0	0	0.0	0	-	
dom. dum equality	0.0	0	0.00		0.0	0	0.0	0	0.0	0	-	
cty. $dummy = 0$	0.0	0	0.00		0.0	0	0.0	0	0.0	0	0.00	)
cty. dum equality	0.0	0	0.00		0.0	0	0.0	0	0.0	0	0.00	)
N	5383	38	5383	8	5383	38	5195	51	5383	38	3548	34
Adjusted R-squared	0.3	8	0.40		0.4	0	0.39	9	0.4	1	0.40	)

Table 5
Cross-country Levels of Management Fees after Controlling for Economies of Scale and Measures of Competition

This table reports the matrix of cross-country levels of management fees after controlling for economies of scale and measures of competition. Each domicile-country of sale coefficient is computed by adding the domicile coefficient, the country of sale coefficient, and the foreign coefficient to the regression intercept based on the regression in model (v) of Table 4; Panel A. All coefficients are in percent. Island offshore refers to funds that are domiciled in locations such as Bermuda, the Cayman Islands, Guernsey, the Isle of Man, and Jersey.

								Count	ry of s	ale									
Domicile	Austral.	Austria	Belgium	Canada	Denm.	Finland	France	Germ.	Italy	Japan	Lux.	Netherl.	Norway	Spain	Sweden	Switz.	UK	US	Average
Australia	1.37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.37
Austria	-	1.20	-	-	-	-	1.13	1.14	1.24	-	1.14	-	-	-	-	1.18	-	-	1.17
Belgium	-	-	0.84	-	-	-	0.84	0.85	0.96	-	0.86	0.83	-	-	-	0.90	-	-	0.87
Canada	-	-	-	2.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.08
Denmark	-	-	-	-	0.72	-	-	0.81	-	-	-	-	-	-	-	-	-	-	0.76
Dublin	-	1.25	1.17	-	1.10	1.27	1.21	1.22	1.32	-	1.22	1.20	1.28	1.26	1.24	1.26	1.28	-	1.23
Finland	-	-	-	-	-	1.21	-	-	-	-	-	-	1.19	-	1.16	-	1.20	-	1.19
France	-	1.18	1.11	-	-	-	1.18	1.15	1.26	-	-	1.14	-	1.20	-	1.20	1.22	-	1.18
Germany	-	1.00	0.93	-	-	-	0.96	1.00	1.07	-	0.97	0.95	-	1.01	0.99	1.01	1.03	-	0.99
Island offshore	-	1.38	1.31	-	-	1.40	-	1.35	1.45	-	-	1.33	1.41	-	1.37	1.39	1.42	-	1.38
Italy	-	-	-	-	-	-	-	-	1.54	-	-	-	-	-	-	-	-	-	1.54
Japan	-	-	-	-	-	-	-	-	-	1.37	-	-	-	-	-	-	-	-	1.37
Luxembourg	-	1.14	1.07	-	1.00	1.17	1.11	1.11	1.22	-	1.12	1.10	1.18	1.16	1.14	1.16	1.18	-	1.13
Netherlands	-	-	0.84	-	-	-	0.88	0.88	-	-	0.89	0.90	-	-	-	0.93	-	-	0.89
Norway	-	-	-	-	1.19	1.36	-	-	-	-	-	-	1.40	-	1.33	-	1.37	-	1.33
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	1.49	-	-	-	-	1.49
Sweden	-	-	-	-	-	1.12	-	-	-	-	-	-	1.13	-	1.12	-	1.13	-	1.13
Switzerland	-	1.21	-	-	-	-	1.17	1.18	1.28	-	1.18	-	-	1.22	-	1.25	1.24	-	1.22
United Kingdom	-	1.24	1.17	-	1.09	-	1.21	1.21	1.32	-	1.22	1.20	1.28	1.26	1.24	1.26	1.31	-	1.23
United States	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_	-	0.85	0.85
Average	1.37	1.20	1.05	2.08	1.02	1.25	1.08	1.08	1.27	1.37	1.08	1.08	1.27	1.23	1.20	1.16	1.24	0.85	

Table 6
Descriptive Statistics on Explanatory Variables in Explaining National Differences in Fees

This table provides descriptive statistics on the variables used to explain the combined domicile/country of sale fixed effects. A description of the variables along with their data sources is provided in the appendix.

	Mean	Median
Approval	1.56	2
Judicial quality	46.71	47.4
Industry assets	582398	191840
Custodians independent	0.37	0
Conflicts of interest	2.5	3
GDP per capita	26.19	23.59
Savings rate	23.02	22.18
Education	14.39	15.5
Industry Age	40.26	34
Fund family concentration	0.46	0.44
Bank concentration	0.64	0.69

Table 7
Explaining Cross-country Differences in Fees

This table provides OLS regressions of national fee effects. The national effects are computed by summing up the country of sale coefficient, the country of domicile coefficient, the intercept, and the foreign dummy from regression model (v) in Table 4, for each country of sale-domicile pair. Three separate sets of analyses based on management fees, expense ratios (TER), and expense ratios plus loads, i.e. total shareholder costs, (TSC), are reported in panels A, B, and C respectively. A description of the explanatory variables along with their data sources is provided in the appendix.

Panel A: Management fees	Model (i)		Model (ii)		Model (iii)		Model (iv)		Model (v)	
	coeff.	p-val	coeff.	p-val	coeff.	p-val	coeff.	p-val	coeff.	p-val
Approval country of domicile	-0.103	0.00	-0.220	0.00	-0.232	0.00	-0.237	0.00	-0.220	0.00
Judicial country of domicile	-0.023	0.00	-0.031	0.00	-0.016	0.13	0.005	0.73	0.002	0.89
Custodian independent domicile			-0.166	0.00	-0.198	0.00	-0.131	0.01	-0.115	0.01
Conflicts of interest domicile			-0.027	0.36						
Approval country of sale	-0.095	0.02	-0.092	0.02	-0.078	0.01	-0.145	0.02	-0.188	0.00
Judicial country of sale	-0.012	0.01	-0.017	0.00	-0.015	0.00	0.013	0.10	0.047	0.00
Custodian independent country of sale			-0.039	0.20	-0.015	0.66	-0.044	0.14	-0.075	0.02
Conflicts of interest country of sale			-0.012	0.50						
Log industry assets domicile					0.045	0.09	0.087	0.00	0.082	0.00
Log industry assets country of sale					0.006	0.87	0.033	0.19	-0.099	0.02
GDP per capita country of sale							-0.017	0.07	-0.008	0.06
Education country of sale							-0.019	0.01	-0.059	0.00
Savings rate country of sale							0.007	0.18		
Industry age country of domicile							-0.102	0.01	-0.091	0.01
Fund family concentr. country of sale									-1.211	0.00
Bank concentr. country of sale									0.140	0.02
Intercept	3.088	0.00	4.110	0.00	2.614	0.02	0.486	0.60	1.796	0.05
N		119		119		109		109		109
Adjusted R-sq		0.25		0.58		0.56		0.66		0.74

Table 7 (continued)

Panel B: TER	Model (i)		Model (ii)		Model (iii)		Model (iv)		Model (v)	
	coeff.	p-val	coeff.	p-val	coeff.	p-val	coeff.	p-val	coeff.	p-val
Approval country of domicile	-0.274	0.00	-0.404	0.00	-0.406	0.00	-0.426	0.00	-0.427	0.00
Judicial country of domicile	-0.066	0.00	-0.079	0.00	-0.057	0.00	-0.005	0.69	-0.005	0.72
Custodian independent domicile			-0.198	0.02	-0.217	0.01	0.022	0.78	0.002	0.98
Conflicts of interest domicile			-0.076	0.15						
Approval country of sale	-0.066	0.20	-0.081	0.17	-0.089	0.12	-0.032	0.72	-0.086	0.35
Judicial country of sale	-0.018	0.00	-0.022	0.00	-0.018	0.01	-0.010	0.42	0.012	0.59
Custodian independent country of sale			-0.040	0.45	-0.052	0.25	-0.010	0.83	-0.047	0.36
Conflicts of interest country of sale			-0.017	0.63						
Log industry assets domicile					0.058	0.05	0.156	0.00	0.160	0.00
Log industry assets country of sale					0.068	0.07	0.038	0.17	-0.063	0.44
GDP per capita country of sale							0.010	0.35	0.009	0.26
Education country of sale							-0.016	0.12	-0.041	0.07
Savings rate country of sale							-0.010	0.03		
Industry age country of domicile							-0.302	0.00	-0.290	0.00
Fund family concentr. country of sale									-1.060	0.09
Bank concentr. country of sale									0.123	0.23
Intercept	6.754	0.00	8.197	0.00	5.147	0.00	2.724	0.00	3.570	0.01
N		119		119		109		109		109
Adjusted R-sq		0.57		0.65		0.67		0.79		0.80

Table 7 (continued)

Panel C: TSC	Model (i)		Model (ii)		Model (iii)		Model (iv)		Model (v)	
	coeff.	p-val	coeff.	p-val	coeff.	p-val	coeff.	p-val	coeff.	p-val
Approval country of domicile	-0.559	0.00	-0.701	0.00	-0.735	0.00	-0.740	0.00	-0.733	0.00
Judicial country of domicile	-0.101	0.00	-0.095	0.00	-0.081	0.00	-0.050	0.01	-0.052	0.01
Custodian independent domicile			-0.313	0.05	-0.377	0.01	-0.239	0.12	-0.244	0.08
Conflicts of interest domicile			0.084	0.30						
Approval country of sale	-0.147	0.08	-0.133	0.20	-0.138	0.14	-0.155	0.39	-0.211	0.29
Judicial country of sale	-0.010	0.12	-0.017	0.03	-0.022	0.03	-0.016	0.49	0.012	0.78
Custodian independent country of sale			-0.097	0.29	-0.054	0.41	-0.041	0.65	-0.075	0.50
Conflicts of interest country of sale			0.002	0.96						
Log industry assets domicile					0.108	0.04	0.169	0.01	0.169	0.00
Log industry assets country of sale					-0.056	0.07	-0.068	0.08	-0.204	0.10
GDP per capita country of sale							-0.004	0.84	-0.001	0.97
Education country of sale							-0.002	0.91	-0.034	0.42
Savings rate country of sale							-0.003	0.73		
Industry age country of domicile							-0.176	0.00	-0.164	0.01
Fund family concentr. country of sale									-1.262	0.27
Bank concentr. country of sale									0.116	0.55
Intercept	7.892	0.00	8.167	0.00	7.486	0.00	5.997	0.00	7.367	0.00
N		119		119		109		109		109
Adjusted R-sq		0.59		0.66		0.67		0.69		0.70