

# **Mutual Funds Fees Around the World**

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## Mutual Fund Fees Around the World\*

Using a new database, we study fees charged by 46,799 mutual funds offered for sale in 18 countries, which together account for about 86% of the world fund industry. We examine management fees, total expense ratios and estimated total shareholding costs (which include load charges). Fees vary substantially from country to country. To explain these differences, we consider fund, sponsor and national characteristics. We generally find that larger funds and fund complexes charge lower fees, as do funds selling cross-nationally, while fees are higher for funds distributed in more countries and funds from so-called offshore locations. Substantial cross-country differences persist even after controlling for these variables. These remaining differences can be partly explained by a variety of factors, the most robust of which is that countries with stronger investor protection charge lower mutual fund fees.

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## 1. Introduction

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 fund promoters from other countries. However, many other countries open their borders, allowing fund promoters from other nations to offer funds to their residents, such as in Europe, where Undertakings for Collective Investment in Transferable Securities (UCITS) are sold across many countries. Multinational fund management companies like Fidelity sell products worldwide and the global fund industry has spawned a number of international fund centers, such as Luxembourg and Dublin.

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. There is ample evidence that higher fees are associated with lower investment performance<sup>1</sup>, and they drive revenues and profits of fund companies. There is increasing public attention paid to fund fees, at least 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 those charged to institutional investors.<sup>2</sup>

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<sup>1</sup> For example, Carhart (1997).

<sup>2</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.

While our work does not directly address these regulatory or legal debates, it provides an important context for discussions of fund fees. In determining whether fees are too high, it is critical to acknowledge that the fund industry is a worldwide industry. Although products and competitors may be similar worldwide, the fees charged to mutual fund investors differ 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 the levels of fees around the world. The average management fee alone in our sample is 1.03% of assets under management, resulting in total fees of \$63.55 billion per year paid by consumers to financial intermediaries. (In addition, consumers pay for other expenses and there are often sales charges when entering and exiting funds.) Regulators, legislators and courts periodically review fees in the fund industry, both in the U.S. and abroad, and their reviews would be informed by comparisons with fees elsewhere.<sup>3</sup> Also, systematic fee differences from country to country may help explain differences in performance of funds 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. For example, some differences in fees could be related to the type of fund (e.g., equity vs. money market), the clientele to which it is marketed (e.g., small investors vs. large institutional

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<sup>3</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

investors), or the size of the fund complex/family offering the fund. Even after controlling for fund and complex factors, though, we find differences for similar funds in different countries.

Fees represent the prices of fund services and therefore should be set by demand and supply. Our empirical investigation seeks to shed light on factors that affect supply and demand without formally tracing out either schedules.<sup>4</sup>

After controlling for fund and complex characteristics, national differences in fees could arise from a variety of sources, including the following:

**Production Costs:** 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, or alternatively 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 funds in Europe can explain their higher costs.<sup>5</sup> We study the relationship between fees and observable measures of scale (assets under management) at various levels (class, fund, sponsor and country). 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.

**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 objected to the costs of regulation that would require them to

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Investors,” June 2003, available online at <http://www.gao.gov/new.items/d03763.pdf> (last accessed October 31, 2005).

<sup>4</sup> To more formally model supply and demand would require additional time series data, which are unavailable.

<sup>5</sup> For example, Blondeau, De Vinck, and Mansfeld (2005).

disclose their proxy votes or make other changes in operations.<sup>6</sup> Others counter that regulation, in particular investor protection provisions, may hold fees down.<sup>7</sup> 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 exogenous barriers to entry including whether the country has more open borders or whether they have laws that restrict competition.

While economists generally believe that competition holds down costs and fees, some practitioners have argued to us that competition, measured by the number of products and sponsors, might actually 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) leading to higher costs.

**Specifically, 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 market 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 that these offshore funds may be used by investors to conceal income from taxation, they may be

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<sup>6</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 Sponsored Enterprises May 10, 2005

<sup>7</sup> For example, Fink (1998).

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 certain nation's potential investors would be irrelevant to fund fees. But, the possibility of segmented products (i.e., U.S. investors cannot buy offshore 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 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 this subject. There is little academic research on the expenses charged for fund management, especially outside of the United States. Moreover, most studies focus on individual countries or small subsets of countries [see, for example, Otten and Bams (2002)]. 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 high as in the U.S. and four times as high as in France. 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, but we are not aware of similar research across countries. While country-specific studies are very useful, there is little opportunity for cross-sectional analyses of fee differences in this type of research. Luo (2002) develops a theory model to examine how mutual funds set fees charged to investors within a non-competitive market structure. He also examines the

implications of his theory using actual fund data, but this empirical analysis is confined to the U.S., so as in previous work, no country variables are studied.

In our study, we are able to explain a substantial amount of the variation in fund fees around the globe with a few simple factors. By analyzing costs for 46,799 funds offered for sale in 18 countries, we generally find that larger funds and fund complexes charge lower fees, as do funds selling cross-nationally. However, fees are higher for funds distributed in more countries and funds from so-called offshore locations. Substantial cross-country differences persist after controlling for these variables. The remaining differences can be partly explained by 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, and that management fees are lower in wealthier countries with a more educated population, where there is 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 costs in the fund industry, and provide descriptive statistics by investment type and country. In Section 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 results.

## 2. Data and description of fees around the world

Khorana, et al. (2005) provide a background on the mutual fund industry worldwide. Briefly, mutual funds with similar structure (open end pooled investment vehicles, which invest in transferable securities, and are bought or 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 investment products, including hedge funds, closed-end funds or trusts, and exchange traded funds which lack the features of open-end mutual funds.<sup>8, 9</sup>

Our data on the fund industry come from three sources. For U.S. funds, we collect data from Morningstar and, for money market funds, from the Financial Research Corporation (FRC). For funds elsewhere, we obtain data from Morningstar as well as Fitzrovia. 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 data 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.

Before describing each data source in more detail, it is also important to define the unit of observation for our study. 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

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<sup>8</sup> A recent paper by Johan (2005) examines international fee differences for private equity managers.

<sup>9</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, come with a death benefit guarantee and estate planning benefits.

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. These funds often have the same expense ratios in the different countries, but this is not always the case. In addition, in order to study the importance of foreign competition, it is 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. Information on the fraction of a fund's assets sold in a specific country is not reported. We can therefore not measure the relationship between scale and fees at the fund class / country level, only at the fund class level.

Fitzrovia gathers the data from the funds' annual reports rather than relying on the funds' self-reporting. The firm collects data on management fees and expense ratios for funds domiciled in Austria, Belgium, France, Germany, Italy, 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, et al. (2005)), as well as a variety of other locations that are generally literally offshore, such as Bermuda, the Cayman Islands, Guernsey, the Isle of Man, and Jersey.<sup>10</sup> For each fund, 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, 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.

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<sup>10</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 Fitzrovia data are supplemented by two Morningstar databases. Morningstar Research Plus contains fee and performance 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 beyond the Fitzrovia data. We again focus on data as close to year-end 2002 as possible. There is substantial overlap between the countries covered by Fitzrovia and Morningstar and in cases of overlap we are able to add data on initial and back-end loads to the Fitzrovia data. When the fee data differ across the two sources (which happens in less than 1% of the observations), we use the Fitzrovia data.

The second Morningstar database we employ contains data available on a number of the local Morningstar websites, which are not part of Research Plus. This allows us to include funds from the Australia, Canada, Japan, and the United States.

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 77,769 fund-class/country pairs. While each fund class sold in a particular country is our unit of observation, it is also important to aggregate the classes into fund level observations for two reasons. First, the observations of different classes that belong to the same fund are not independent and the regression models we estimate need to take this lack of independence into account. Second, a relationship between scale and fees may be present at the class or 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. In case where we are not certain, we go to the website of the fund provider to ascertain whether certain groups of funds simply represent different fund classes or not. The fund classes in our sample belong to 58,280 funds. The median number of classes is therefore 1, and the average is 1.33.

To assess sponsor-level economies of scale that might translate into fees, we must group the funds into fund complexes. While our database provides the name of the fund management group, some complexes market funds under different names across the world. Fortunately, 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 under management.

In addition, we assign the funds to investment objectives. Investment objectives are reported in the databases, but they are not always consistent across countries, and often not in English. 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 other funds.

In addition to fund size, complex size, and the investment objective, as described above, 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 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 19 countries, including Dublin and Luxembourg, and 9 offshore locations, which are offered for sale in 18 countries.

Table 1 shows that our sample contains 77,769 fund class-country observations (and 46,799 unique funds, as shown in Table 2, panel A). The bolded on-diagonal elements in Table 1, which account for 55% of the observations in our sample, are funds 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 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 the miscellaneous offshore group) and sold elsewhere account for 42% of our observations. Cross-border offerings from on-shore domiciles account for just 3% of our observations.<sup>11</sup>

The core of our paper examines the differences in the fees funds charge investors. We examine three types of fees.<sup>12</sup> *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 other elements, such as some administration and servicing. A broader 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 certain classes of non-annual 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). 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 back-end load, because these loads often decline as the holding period

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<sup>11</sup> Note that we only have a small number of Danish funds in our sample. This is the case because the fee information on a large fraction of Danish funds is missing.

<sup>12</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.

increases. To do this, we study, for each fund, the schedule of loads and obtain the load paid by an investor with a five-year holding period. Thus, we define total shareholder cost (TSC) as:

$$\text{Total Shareholder Cost} = \text{TER} + \text{initial load}/5 + \text{back-end load at five years}/5 \quad (1)$$

We have fewer observations on the TSC because these data 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. We also acknowledge that our information does not include any non-load charges levied by the distribution channel.

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 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 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).

As we can see, costs vary quite extensively from country to country. For example, using any of the three fee measures, funds domiciled and sold in Canada have considerably higher costs than those sold in its North American neighbor, the U.S. For example, mean management (TER) fees for equity funds are 79 (171) basis points in the U.S. versus 211 (287) basis points in Canada.<sup>13</sup> Similar fee differences are observed for the other investment objectives. Looking at equities, the average management fee in the domicile with the highest fees (Canada) is 2.7 times higher than in the domicile with the lowest average fee (U.S.). The comparable ratio is 3.7 for TERs and 4.3 for TSCs. These results indicate that there are meaningful differences in fees across countries.

In the 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) TER fees 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 and type of clientele, which could explain some of the differences. For example, as noted earlier, the European fund industry has sometimes pointed to the smaller average size of European offerings (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 level data<sup>14</sup>:

$$\begin{aligned}
 Fee_{i,j,k} = f(\text{Fund Size, Complex Size, Minimum Investment, Age, Foreign fund dummy,} \\
 \text{Number of countries, Assets in Objective in country of sale,} \\
 \text{Country of sale dummies, Country of domicile dummies,} \\
 \text{Investment objective dummies}) \quad (2)
 \end{aligned}$$

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

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<sup>13</sup> Morningstar has little data on the loads charged by Canadian funds, so TSCs may not be representative.

<sup>14</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 distribution methods in the country (e.g., bank dominated, through brokers, direct), the level of marketing efforts,

*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. Both of these measure potential economies of scale that could affect fees.<sup>15</sup> *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. *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). We employ a log specification for these variables because we expect their marginal effects to decline as the variables increase. This specification is also consistent with the previous literature [see, for example, Baumol et al. (1980)].

*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. Offshore funds will be examined in a separate model.

*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. We include dummies for each domicile and each country of sale, with the U.S. being the base case. In the second phase of our analysis, we will explain the magnitude of these dummies. We also include a dummy for each narrow objective defined in the sample (122 objectives).

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and the cost of inputs (specifically investment management professionals). For this reason, our description of fee differences across countries is as important as our explanations of these differences, given the available data.

We expect fees to be lower for larger funds and complexes, reflecting economies of scale or due to stronger demand for lower cost funds. We would expect that costs and fees would 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, consistent with prior studies we would expect that fees would be greatest for equities, followed by balanced, bond and money market funds respectively.<sup>16</sup> Moreover, we would expect fees to be lower for funds with a higher initial minimum investment and older funds, which are likely to have lower search and administrative costs. The domicile and country sale 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.

Table 3 reports simple univariate statistics on these explanatory variables by country of domicile (panel A) and by country of sale (panel B). While our sample consists entirely of developed countries, nevertheless, there is considerable variation across these variables from country to country, sufficient to support our cross-sectional analysis. 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 \$17 million (\$3 million). Fund families that established funds 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 respectively. Interestingly, the size of the median family domiciled in Dublin is larger than the

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<sup>15</sup> Another scale measure, number of accounts, is not publicly reported and thus cannot be included in our analysis.

<sup>16</sup> For example, see Tufano and Sevick (1997).

U.S. (\$44 billion versus \$43 billion).<sup>17</sup> Funds domiciled in Switzerland are the oldest, followed by those domicile 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.

Note that the models have substantial explanatory power; even the simplest of our specifications (model (i)), which only contains 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 report the individual domicile and country of sale effects, 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 from each other for all sets of fees. 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 A, increasing the log size of the fund class from its 25<sup>th</sup> percentile (corresponding to \$5.0 million) to its 75<sup>th</sup> percentile (\$99.1 million) leads to a reduction in management fees of only 2.1 basis points; increasing the size of the fund complex from its 25<sup>th</sup> percentile (\$4.8 billion) to its 75<sup>th</sup> percentile (\$108.1 billion) leads to a reduction in management fees of only 1.7 basis points.

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<sup>17</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

For expense ratios and total shareholder costs, on the other hand, the economic significance is larger. For example, increasing fund class assets from its 25<sup>th</sup> to its 75<sup>th</sup> percentile is associated with a decline in the expense ratio of 18 basis points, while the same increase in complex size leads to a decline in the expense ratio of over 9 basis points. This is likely due to the fact that a number of fixed expenses can be allocated to a larger asset base.

In model (iv) we study the effect of the minimum initial investment and the age of the 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. However, this result is insignificant for total shareholder costs.

In model (v) we examine various aspects of national competition.<sup>18</sup> For all three types of fees, foreign funds, i.e., those imported into a country have fees 4-7 basis points lower than domestic funds. Note that we only measure the effect of on-shore foreign funds. However, this benefit disappears for funds as they are registered in more countries. For management fees and TSC, 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

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are more consistent with what one would expect.

<sup>18</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.

selling the same fund in multiple countries may lead to increases that more than offset these benefits.

We also include the size 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 actually 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 for 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 magnitude across regressions, and the additional explanatory power of the other variables combined is less than 8% (comparing models (i) and (v)).<sup>19</sup> 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:

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<sup>19</sup> It is, of course, possible that the country of sale and domicile dummies are correlated with the economies of scale 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 economies of scale 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 17% for the management fee regression, 11% for the TER regression, and 17% for the TSC regression. When we add the country and domicile dummies (but not the objective dummies) to this regression, the

$$\begin{aligned} \text{Country Effect}_{j,k} = & \text{Intercept} + \text{Domicile Coefficient}_j + \\ & \text{Country of Sale Coefficient}_k + \text{Foreign Coefficient} \end{aligned} \quad (3)$$

For example, the combined fixed effect for the US would simply be the intercept. However, for French-domiciled funds sold in Belgium, it would be 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 back 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 have also computed 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. In particular, looking at Table 5, a few countries stand out.

*A tale of two North American neighbors.* The U.S. and Canada are alike in many ways; in the fund industry, both are ‘closed’ fund industries that do not easily permit foreign domiciled funds from selling funds in their countries. However 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 cost countries (by fund registration) in our sample, and Canada is the single highest fee country by far. The U.S. fixed effect is 79 basis points, but the Canadian fixed effect is 200 basis points, which is 153% higher. On a more concrete level, we can compare similar funds offered in both countries. Fidelity sells Fidelity Japan Funds to

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adjusted r-squared increases to 39% for the management fee model, 22% for the TER model, and 24% for the TSC model. This suggests that the additional explanatory power of the country and domicile effects is substantial.

investors in the United States and in Canada.<sup>20</sup> The U.S. fund charges a management fee of 0.69%, an expense ratio of 1.02% and does not charge any load.<sup>21</sup> The Canadian fund charges a management fee of 2.00%, an expense ratio of 2.69% and a 'low sales charge.'<sup>22</sup> The management fees and expense ratios are 189% 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 top-5 banks is 84% in Canada, but only 20% in the U.S. (Cetorelli and Gambera (2001)). The U.S.-Canada fee differentials would lend themselves to an interesting clinical 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, domiciled in the fund hubs of Dublin, Luxembourg, and in island locations, 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.

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<sup>20</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.

<sup>21</sup> <http://quicktake.morningstar.com/Fund/Snapshot.asp?Country=USA&Symbol=FJPNX&fdtab=snapshot> (visited 2/3/2005).

<sup>22</sup> [http://www.morningstar.ca/globalhome/QuickTakes/Fund\\_Details.asp?fundid=72391](http://www.morningstar.ca/globalhome/QuickTakes/Fund_Details.asp?fundid=72391) (visited 2/3/2006).

As an example, Vanguard's 500 Index Fund Admiral Class shares (\$100,000 or more) are charged an expense ratio of 9 basis points per year.<sup>23</sup> Its Dublin-based 500 Index Fund (\$100,000 minimum investment) charges an expense ratio of 38 basis points.<sup>24</sup> Since it is believed that 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 other offshore funds. However, 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 remove countries where funds from these three domiciles are not sold: Australia, Canada, Japan, and the U.S.

For foreign funds, other than offshore funds, management fees are 15 basis points lower than for funds domiciled and registered in the country. The effect is somewhat larger for TERs and TSCs. Luxembourg funds also have lower management fees, but the fee differential is only 8.5 basis points. There is no significant price differential for funds domiciled in Dublin, while offshore funds actually charge 28 basis points more. When we study TERs and TSCs in Panels B and C, all the offshore effects become positive and very large. For example, TSCs for offshore funds are 62 basis points higher, after controlling for fund characteristics. Perhaps this reflects that investors may be willing to pay a high price for the benefits of buying an offshore fund, namely less transparency in reporting ownership to tax authorities.

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<sup>23</sup> <http://flagship4.vanguard.com/VGApp/hnw/FundsFeesMinimums?FundId=0540&FundIntExt=INT>(visited 2/3/2006)

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

In the second phase of our analysis, we explain the different national effects reported above. As discussed above, Table 5 reports a matrix of country fixed effects, which we relate to national characteristics of the countries of registration and domicile.

Why might fees be lower in some countries (of domicile and sale) than others? From our first phase analysis, we know that class, fund and complex size are related to fees, as are fund age, whether the fund is directed at larger accounts, and the funds' objective. In addition, we know that cross-country sales are related to lower fees, but there is an offsetting effect for funds registered for sale in many countries. To explain the remaining country differences, we appeal to a variety of fundamental country factors. These variables are defined in the appendix, and their mean and median values are reported in Table 6.

**Regulation.** Khorana et al. (2005) find that nations whose laws protect fund investors have larger industries. Some might argue that more regulation could lead to increased fees, due to costly regulatory compliance. However, nations with greater investor protections might have a business, legal and regulatory climate that would tend to moderate fees, all other things held equal. To test which of these hypotheses is supported, we separately analyze the domicile and registration country's laws and regulations.

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.

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<sup>24</sup> <http://www.vanguard.com/international/common/pdf/SPUS500StockEN.pdf> (visited 2/3/2006)

To measure fund-specific investor protection, we create dummies if the following conditions are met: (1) regulatory approval is required to start a fund, (2) regulatory approval is required before issuing a mutual fund prospectus, and (3) custodians are required to be independent from the mutual fund family. We aggregate (1) and (2) into a single *approval* variable.

In addition, we determine what procedures 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 conflicts of interest, and our variables capture fund-specific mechanisms to address these conflicts.<sup>25</sup> Three dummy variables are used to capture the presence/absence of these procedures: (1) Are funds allowed to have a significant participation in companies in which they invest?<sup>26</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 into a single *conflicts of interest* measure.

**Competition.** Economists generally believe that competition leads to lower prices as supply is increased. Alternatively, markets with lower levels of profitability would tend to attract fewer entrants. While competition is endogenous, various barriers to entry may be less so. To measure the degree of competition in a country, we use variables that capture the barriers to entry in the country of sale. In particular, we measure (1) the time it takes to set up a fund; (2) the cost to set up a fund; (3) restrictions on banks entering the securities businesses; (4) concentration in the banking sector, measured by the percentage of banking assets held by the top 5 banks; (5) concentration in the fund sector, measured by the percentage of industry assets accounted for by

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<sup>25</sup> In a recent paper, Djankow 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 French civil law countries.

the top 5 fund complexes. Concentration in the banking sector is likely to be less relevant 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.

**Experience effects.** In a similar fashion, 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 capture this 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). Wealth, education, and the savings rate all increase the demand for funds. And if it takes time for supply to catch up, it may lead to increased prices. On the other hand, these variables also proxy for investor sophistication. Sophistication of investors could lead to lower fee for two reasons. First, more sophisticated investors may be more aware of fees and, therefore, 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 reflect compensation for providing advice, this should also lead to lower fees. If the

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<sup>26</sup> We obtain this information from a survey conducted by IOSCO for OECD countries. The term “significant participation” is not defined in the survey.

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 similarly affected.

**Results.** We report our 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. The explanatory variables are not available for all countries in our sample, which reduces the degrees of freedom in the regression models.<sup>27</sup> To address this problem, we set explanatory variables equal to zero when they are 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>28</sup> All standard error are adjusted for heteroscedasticity.

In different countries, costs might be assigned differently. In the U.S. the management fee would primarily (although not exclusively) be composed of the investment management services provided by the complex. The expense ratio (TER) would include other services (transfer agency, custody, audit, legal, board fees) and in the presence of 12b-1 charges, some marketing expenses. The TSC incrementally adds more distribution costs to the fee schedule. Given differences in practices around the world, we are cautious at using US-centric interpretations of the three fee types, and show all three levels of fees.

In all three panels, model (i) shows that there is a strong inverse relationship between the quality of the legal system (*Judicial*) in general, and investor protection in the fund industry (*Approval*) in particular, and fund fees. This effect applies to both the country where the fund is

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<sup>27</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>28</sup> Our results are very similar when we re-estimate the models for those countries for which all the explanatory variables are available.

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 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 29 basis points.

While we can document the above relationship, we cannot trace out the link between legal rules and fees. One possibility is that in countries with stronger pro-investor rules, fund sponsors face greater constraints (potential lawsuits, regulatory jawboning or 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.

To further explore the link between fees and regulation, we add additional regulatory variables in model (ii). We find that fees are lower when the domicile country requires custodians to be independent.<sup>29</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 such an inference. In unreported models, we also include measures of the cost and the amount of time it takes to set up a fund. These measures are never significant at conventional levels.

In models (iii) - (v), we add measures to capture the impact of scale at the industry level: total assets in the country of domicile and the country of sale.<sup>30</sup> We were motivated to do this by

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<sup>29</sup> For a detailed study on custody in the European asset management industry, see Oxera (2002).

<sup>30</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 market size.

the assertion that smaller national markets might enjoy lower economies of scale and hence charge higher fees. There seems to be little support for this assertion. 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 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 statistically significantly negative relationship between TSCs and the log of industry assets in the country of sale in three specifications. Since TSC incrementally adds distribution fees to costs, this implies that selling into larger markets is less costly than into smaller markets. This would be 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. These characteristics include the per capita GDP of the country, the level of education and savings rate. As far as management fees are concerned, we find that both the overall national well being (GDP per capita) and the education level in a country are related to lower fees. This is consistent with the view that more 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>31</sup> We find that all three levels of fees are lower when the countries in which the funds are domiciled, the fund industry is older,

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<sup>31</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.

consistent with the view that cumulative experience leads to lower costs and lower fees in a competitive environment.

Finally, we study concentration in the fund sector and in the banking sector in model (v). Note that concentration in the banking sector is set equal to zero when banks cannot enter the industry. We find that management fees are higher when the banking sector is more concentrated, but this result loses statistical significance for TERs or TSCs. One possible explanation is that distribution costs are lower for banks, so that they can charge higher fees to customers, without increasing the total costs to investors.

We also 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 are being passed on to investors.<sup>32</sup>

## **5. Conclusion**

This paper is a preliminary exploration of fund fees in a range of developed countries. In the first part of our study, we examine data at the fund level. Several key findings emerge. First, while the fund product is similar around the world, the prices charged by funds are very different from place to place. Even neighbors, like the U.S. and Canada, can have remarkably different fees. Second, these differences persist after controlling for various fund characteristics aimed to measure differences in production costs. In fact, we find little evidence of economies of scale manifested in management fees, but larger effects in total expense ratios and total shareholder costs. 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, as with any strong statement, this one 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 stripes are higher, with the exception of management fees from funds domiciled in Luxembourg.

In the second part of the study, we explain the cross-country differences. We find relationships between fees and some national characteristics, such as the quality of a country's judicial system, whether the country requires an independent custodian, or the extent to which a fund must pass through certain approvals. We also find lower fees in countries with higher per capita GDP, a more educated population, and where the banking sector is not concentrated or where banks are not allowed to enter the securities business. 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 need to establish certain baseline facts, our goal for this work.

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<sup>32</sup> We are grateful to Ben Phillips of Putnam Lovell NBF for suggesting this interpretation.

## Appendix: Definitions and sources of potential explanatory variables

(Names of variables used in the regression models have been italicized)

<b>Determinant</b>	<b>Variable</b>	<b>Source</b>
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)  Summed up value of above variables <i>(Judicial quality)</i>	LLSV ( 1998)
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 <i>(Approval)</i>  Do custodians need to be independent? (=1 if Yes) <i>(Custodians independent)</i>	KPMG ( <a href="http://www.kpmg.ie/industries/fs/funds2002/index.htm">http://www.kpmg.ie/industries/fs/funds2002/index.htm</a> ), Thompson and Choi (2001), IOSCO (2002)
Potential conflicts of interest between the fund and fund investors	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 <i>(Conflicts of interest)</i>	Thompson and Choi (2001)
Concentration of banking sector	Percentage of total banking assets held by top 5 banks <i>(Bank concentration)</i>	Cetorelli and Gambera (2001)
Ease of entry into the fund industry	<i>Cost of setting up a new fund</i> <i>Time required to set up a new fund</i>	KPMG

**Appendix (continued)**

<b>Determinant</b>	<b>Variable</b>	<b>Source</b>
Measures of economic development	<i>GDP per capita</i>	World Bank (2003)
Education	Total years of education averaged for men and women (includes part time education) <i>(Education)</i>	World Bank (2003)
Industry age	Age of the industry as of 2001 (in years) <i>(Industry age)</i>	KPMG, Ernst & Young, Cadogan, Lexis-Nexis, Factiva, Country fund industry websites
Fund family concentration	The percentage of industry assets accounted for by the top 5 fund complexes <i>(Fund family concentration)</i>	Morningstar, Fitzrovia, Financial Research Corporation

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**Table 1**  
**Number of Mutual Funds around the World**

This table reports a cross-tabulation of the number of mutual funds domiciled in a particular country, with the number of fund available for sale to prospective investors in a country. Fund share classes are used as the unit of observation for this analysis. The number of fund share classes is computed as of the end of 2002. The number of funds registered for sale in the countries in which they are domiciled (i.e., the on-diagonal elements) are boldfaced.

Domicile	Country of sale																			Total
	Austral.	Austria	Belgium	Canada	Denm.	Finland	France	Germ.	Italy	Japan	Lux	Netherl.	Norway	Spain	Sweden	Switz.	UK	US		
Australia	<b>3,156</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,156
Austria	0	<b>234</b>	0	0	0	0	8	177	26	0	1	0	0	0	0	2	0	0	0	448
Belgium	0	0	<b>772</b>	0	0	0	81	12	56	0	137	137	0	0	0	9	0	0	0	1,204
Canada	0	0	0	<b>3,674</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,674
Denmark	0	0	0	0	<b>11</b>	0	0	12	0	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	0	4,038
Finland	0	0	0	0	0	<b>111</b>	0	0	0	0	0	0	6	0	55	0	14	0	0	186
France	0	1	23	0	0	0	<b>1,856</b>	49	15	0	0	16	0	20	0	14	1	0	0	1,995
Germany	0	182	38	0	0	0	23	<b>1,102</b>	7	0	73	11	0	9	2	139	37	0	0	1,623
Italy	0	0	0	0	0	0	0	0	<b>1,239</b>	0	0	0	0	0	0	0	0	0	0	1,239
Japan	0	0	0	0	0	0	0	0	0	<b>1,923</b>	0	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	<b>5,014</b>	2,143	991	3,699	1,353	2,619	1,265	0	0	33,302
Netherlands	0	0	18	0	0	0	6	7	0	0	2	<b>302</b>	0	0	0	5	0	0	0	340
Norway	0	0	0	0	3	8	0	0	0	0	0	0	<b>334</b>	0	35	0	3	0	0	383
Offshore	0	25	1	0	0	5	0	118	8	0	0	7	8	0	45	179	93	0	0	489
Spain	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>2,387</b>	0	0	0	0	0	2,387
Sweden	0	0	0	0	0	31	0	0	0	0	0	0	86	0	<b>481</b>	0	1	0	0	599
Switzerland	0	34	0	0	0	0	1	199	8	0	31	0	0	2	0	<b>366</b>	2	0	0	643
United Kingdom	0	96	42	0	20	0	96	169	101	0	2	41	33	37	61	36	<b>2,440</b>	0	0	3,174
United States	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>16,943</b>	16,943
<b>Total</b>	<b>3,156</b>	<b>2,692</b>	<b>3,668</b>	<b>3,674</b>	<b>85</b>	<b>971</b>	<b>5,525</b>	<b>6,954</b>	<b>5,634</b>	<b>1,923</b>	<b>5,388</b>	<b>2,891</b>	<b>1,580</b>	<b>6,592</b>	<b>2,185</b>	<b>3,684</b>	<b>4,224</b>	<b>16,943</b>	<b>16,943</b>	<b>77,769</b>

**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. N refers to the number of observations for management fees; we have fewer datapoints for TERs and TSCs. Panel A (B) reports descriptive statistics by country of domicile (country of sale).

Panel A – Statistics by domicile

Domicile-Mean	Balanced					Bonds					Equity					Money market					Full sample				
	MGT	TER	TSC	assets	N	MGT	TER	TSC	assets	N	MGT	TER	TSC	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	1.02	1.23	1.73	125	30	0.59	0.73	1.27	260	88	1.45	1.65	2.46	64	117	0.39	0.50	0.54	134	9	1.05	1.21	1.88	145	248
Belgium	0.63	0.86	1.42	339	72	0.38	0.59	1.01	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	4.10	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	-	-	-	-	-	0.71	0.85	1.39	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	1.25	2.02	2.77	52	29	0.93	1.32	2.16	123	255	1.33	1.96	2.81	72	845	0.44	0.65	1.61	477	125	1.17	1.72	2.66	122	1279
Finland	1.09	1.17	1.53	33	24	0.61	1.01	1.28	52	20	1.41	1.45	1.84	37	85	0.36	0.33	0.37	174	11	1.16	1.25	1.60	49	144
France	1.09	1.20	1.79	145	263	0.75	0.86	1.23	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	1.34	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
Italy	1.20	1.35	1.71	334	187	1.05	1.23	1.52	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	2.64	128	777	0.76	1.25	1.94	136	1784	1.31	2.09	2.85	72	4099	0.46	0.79	1.14	380	462	1.08	1.75	2.47	110	7746
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	0.61	6	53	1.52	1.80	2.44	16	204	0.36	0.80	0.80	18	49	1.18	1.59	2.14	14	332
Offshore	1.34	1.70	2.73	43	26	0.97	1.35	1.94	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
Spain	1.36	1.60	1.77	47	546	1.09	1.29	1.40	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	0.57	0.64	96	43	1.21	1.37	1.64	99	337	0.49	0.51	0.56	146	31	1.07	1.20	1.45	108	483
Switzerland	1.08	1.24	1.73	332	57	0.77	0.92	1.40	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	1.09	1.35	2.35	119	207	0.80	0.97	1.86	140	346	1.15	1.39	2.43	143	1824	0.56	0.74	0.89	65	51	1.09	1.32	2.32	136	2527
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	0.94	1.55	1.85	251	7454	0.79	1.28	1.52	189	10357	1.24	1.87	2.26	142	21545	0.43	0.71	0.82	923	3058	1.03	1.59	1.92	216	46799

Table 2, Panel A (continued)

Domicile-Median	Balanced					Bonds					Equity					Money market					Full sample				
	MGT	TER	TSC	assets	N	MGT	TER	TSC	assets	N	MGT	TER	TSC	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	2.50	2	1617	1.05	1.14	1.26	10	160	1.50	1.75	2.31	4	3156
Austria	1.00	1.20	1.80	45	30	0.60	0.67	1.34	121	88	1.50	1.67	2.57	26	117	0.36	0.42	0.57	58	9	1.00	1.21	1.86	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	40	247	0.40	0.55	0.56	131	11	0.75	0.96	1.72	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	4.67	9	3674
Denmark	-	-	-	-	-	0.86	0.86	1.46	36	5	1.16	1.17	2.31	10	17	0.62	0.62	1.20	15	1	0.88	1.01	1.60	12	23
Dublin	1.20	2.22	3.01	23	29	1.00	1.28	2.24	45	255	1.50	1.90	2.87	17	845	0.40	0.45	1.59	103	125	1.25	1.75	2.70	25	1279
Finland	1.05	1.00	1.22	11	24	0.58	0.62	0.82	40	20	1.50	1.61	2.00	17	85	0.40	0.33	0.37	186	11	1.20	1.60	1.92	20	144
France	1.00	1.20	1.75	40	263	0.75	0.89	1.24	50	335	1.25	1.46	2.12	26	840	0.40	0.43	0.56	188	269	1.00	1.14	1.65	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	1.92	39	1104
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	1.98	80	1239
Japan	-	-	-	-	-	-	-	-	-	-	1.55	-	-	8	362	-	-	-	-	-	1.26	-	-	11	1923
Luxembourg	1.10	1.71	2.51	17	777	0.75	1.11	1.90	30	1784	1.45	1.96	2.85	13	4099	0.50	0.72	0.99	53	462	1.02	1.63	2.47	19	7746
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	1.00	46	304
Norway	1.50	-	-	1	24	0.45	0.55	0.61	3	53	1.60	1.95	2.54	2	204	0.35	0.80	0.80	12	49	1.20	1.68	2.45	3	332
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	2.45	38	317
Spain	1.50	1.68	1.79	13	546	1.10	1.34	1.47	26	434	1.85	2.10	2.33	9	554	1.00	1.11	1.12	113	174	1.32	1.52	1.96	21	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	1.50	23	483
Switzerland	1.08	1.20	1.55	93	57	0.80	0.90	1.32	83	78	1.32	1.50	2.17	56	165	0.20	0.25	1.00	366	17	1.00	1.30	1.98	65	372
United Kingdom	1.25	1.37	2.37	36	207	0.80	1.00	1.90	37	346	1.25	1.45	2.54	32	1824	0.50	0.64	0.64	15	51	1.25	1.34	2.44	32	2527
United States	0.70	1.35	1.71	35	3805	0.50	1.04	1.56	44	4613	0.75	1.65	2.08	26	6694	0.27	0.59	0.59	283	1500	0.63	1.35	1.69	39	16894
Median	0.80	1.48	1.91	24	7454	0.60	1.13	1.58	37	10357	1.20	1.80	2.32	17	21545	0.40	0.63	0.69	138	3058	0.90	1.50	1.92	25	46799

Table 2, Panel B– Statistics by country of sale

Cty of sale-Mean	Balanced					Bonds					Equity					Money market					Full sample				
	MGT	TER	TSC	assets	N	MGT	TER	TSC	assets	N	MGT	TER	TSC	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	1395	1549	0.63	1.42	1.67	388	16943
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	0.94	753	4798	1.07	1.64	2.15	189	77769

Table 2, Panel B (continued)

Cty of sale-Median	Balanced					Bonds					Equity					Money market					Full sample				
	MGT	TER	TSC	assets	N	MGT	TER	TSC	assets	N	MGT	TER	TSC	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	2.50	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	2.64	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	2.65	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	4.76	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	2.75	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	2.86	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	2.62	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	2.65	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	2.79	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	2.79	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	2.84	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	2.86	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	2.74	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	2.70	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	2.79	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	2.75	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	2.08	26	6694	0.28	0.59	0.59	277	1549	0.62	1.35	1.69	39	16943
Median	0.90	1.50	2.05	25	9593	0.70	1.13	1.72	37	17097	1.25	1.87	2.60	18	40817	0.40	0.67	0.80	101	4798	1.00	1.58	2.16	25	77769

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

This table provides descriptive statistics on the various explanatory variables used to explain individual fund level fees. Fund class size 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. Panel A (B) reports descriptive statistics by country of domicile (country of sale).

Panel A: Statistics by country of domicile

<b>A1: Means</b>								<b>A2: Medians</b>						
<b>domicile</b>	fund class assets	fund size	family size	minimum investment	# of cts. fund is		assets in the fund category	fund class assets	fund size	family size	minimum investment	# of cts. fund is		assets in the fund category
					fund age	avail. for sale						fund age	avail. for sale	
Australia	54	54	35239	49464	5.7	1.0	52920	4	4	3281	2825	3.6	1.0	68558
Austria	145	159	6514	158	7.2	1.8	209452	54	56	3213	1	4.8	2.0	191074
Belgium	86	88	33541	10772	5.5	1.5	89518	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	122	292	90360	456551	5.7	3.2	262066	28	66	43814	2500	4.2	3.0	267197
Finland	49	65	2070	15825	5.1	1.3	100011	20	24	482	1048	4.3	1.0	104514
France	194	196	27956	158039	9.4	1.1	227669	42	42	9480	1	7.8	1.0	267197
Germany	270	271	52144	1640	9.4	1.5	270935	39	39	4843	524	6.3	1.0	289934
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	110	183	74998	430138	6.0	4.3	202594	18	36	36798	1234	4.6	3.0	194530
Netherlands	210	210	24001	884	8.4	1.1	153986	46	46	20813	26	5.8	1.0	193857
Norway	14	17	1336	869077	6.9	1.2	87882	3	3	463	3595	5.7	1.0	118875
Offshore	144	153	20005	7850	9.9	1.5	198260	38	44	4407	2097	8.1	1.0	166091
Spain	79	79	21028	37663	6.7	1.0	111658	21	21	3881	629	6.0	1.0	65203
Sweden	108	115	6655	22627	8.2	1.2	124760	23	23	2839	23	6.0	1.0	169608
Switzerland	225	236	53694	45404	13.3	1.7	198526	65	74	11209	88	10.2	2.0	191074
United Kingdom	136	163	48145	19861	11.8	1.3	314880	32	48	9091	1604	8.9	1.0	420788
United States	387	1027	104878	777278	8.4	1.0	1533439	39	165	42838	1000	6.4	1.0	1467405
	216	466	66519	384873	7.6	1.7	664457	25	48	16010	1000	5.6	1.0	276128

Table 3 (continued)

## Panel B: Statistics by country of sale

<b>B1: Means</b>									<b>B2: Medians</b>							
<b>country</b> <b>sale</b>	fund class assets	fund size	family size	minimum investment	# of cts. fund is		assets in the fund category	Foreign funds	fund class assets	fund size	family size	minimum investment	# of cts. fund is		assets in the fund category	Foreign funds
					fund age	avail. for sale							fund age	avail. for sale		
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	388	1028	104720	777278	8.4	1.0	1535179	0.00	39	166	42838	1000	6.4	1.0	1467405	0.00
	189	378	82855	375541	7.4	3.7	486391	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 class size is log of total assets in the fund class (in \$ millions). Fund size is the log of the aggregated dollar value of assets across all share classes of a fund (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 sum of 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. Foreign dummy is set equal to one if 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. Offshore dummy is set equal to one if the fund is domicile in an offshore location and zero otherwise. We also 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

	Model (i)		Model (ii)		Model (iii)		Model (iv)		Model (v)		Model (vi)	
	coeff.	p-value	coeff.	p-value	coeff.	p-value	coeff.	p-value	coeff.	p-value	coeff.	p-value
Log Family size			-0.005	0.00	-0.006	0.00	-0.002	0.16	-0.005	0.00	0.001	0.78
Log Fund size					-0.003	0.07	-0.007	0.00	-0.011	0.00	-0.006	0.04
Log Fund class size			-0.007	0.00								
Log Min investment							-0.019	0.00				
Log Fund age							-0.006	0.08	-0.003	0.33	-0.001	0.81
# of cts. fund is sold									0.012	0.00	0.010	0.00
Log Assets in obj.									0.004	0.58	-0.020	0.00
Foreign dummy									-0.039	0.00	-0.150	0.00
Offshore dummy											0.277	0.00
Dublin dummy											0.011	0.65
Luxembourg dummy											-0.085	0.00
country effects	Y		Y		Y		Y		Y		Y	
domicile effects	Y		Y		Y		Y		Y		Y	N
objective effects	Y		Y		Y		Y		Y		Y	
significance test:												
dom. dummy = 0	0.00		0.00		0.00		0.00		0.00		0.00	-
dom. dum equality	0.00		0.00		0.00		0.00		0.00		0.00	-
cty. dummy = 0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
cty. dum equality	0.00		0.00		0.00		0.00		0.00		0.00	0.00
N	77498		77498		77498		61194		63957		38459	
Adjusted R-squared	0.49		0.49		0.49		0.53		0.54		0.37	

Table 4 (continued)

Panel B: TER

	Model (i)	Model (ii)	Model (iii)	Model (iv)	Model (v)	Model (vi)
	coeff. p-value	coeff. p-value	coeff. p-value	coeff. p-value	coeff. p-value	coeff. p-value
Log Family size		-0.030 0.00	-0.024 0.00	-0.019 0.00	-0.019 0.00	-0.020 0.00
Log Fund size			-0.056 0.00	-0.055 0.00	-0.058 0.00	-0.083 0.00
Log Fund class size		-0.062 0.00				
Log Min investment				-0.021 0.00		
Log Fund age				-0.035 0.00	-0.030 0.00	-0.033 0.00
# of cts. fund is sold					0.002 0.46	0.007 0.00
Log Assets in obj.					-0.029 0.01	-0.013 0.34
Foreign dummy					-0.074 0.00	-0.195 0.00
Offshore dummy						0.419 0.00
Dublin dummy						0.337 0.00
Luxembourg dummy						0.302 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	0.00	0.00	0.00	0.00	0.00	-
dom. dum equality	0.00	0.00	0.00	0.00	0.00	-
cty. dummy = 0	0.00	0.00	0.00	0.00	0.00	0.00
cty. dum equality	0.00	0.00	0.00	0.00	0.00	0.00
N	70682	70682	70682	55128	57227	35630
Adjusted R-squared	0.30	0.34	0.33	0.37	0.38	0.36

Table 4 (continued)

	Model (i)		Model (ii)		Model (iii)		Model (iv)		Model (v)		Model (vi)	
	coeff.	p-value	coeff.	p-value	coeff.	p-value	coeff.	p-value	coeff.	p-value	coeff.	p-value
Log Family size			-0.022	0.00	-0.013	0.00	-0.013	0.00	-0.017	0.00	-0.024	0.00
Log Fund size					-0.062	0.00	-0.058	0.00	-0.064	0.00	-0.083	0.00
Log Fund class size			-0.053	0.00								
Log Min investment							-0.030	0.00				
Log Fund age							-0.009	0.36	-0.005	0.59	0.000	1.00
# of cts. fund is sold									0.018	0.00	0.024	0.00
Log Assets in obj.									0.090	0.00	0.115	0.00
Foreign dummy									-0.064	0.00	-0.172	0.00
Offshore dummy											0.618	0.00
Dublin dummy											0.532	0.00
Luxembourg dummy											0.470	0.00
country effects	Y		Y		Y		Y		Y		Y	
domicile effects	Y		Y		Y		Y		Y		Y	N
objective effects	Y		Y		Y		Y		Y		Y	
significance test:												
dom. dummy = 0	0.00		0.00		0.00		0.00		0.00		0.00	-
dom. dum equality	0.00		0.00		0.00		0.00		0.00		0.00	-
cty. dummy = 0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
cty. dum equality	0.00		0.00		0.00		0.00		0.00		0.00	0.00
N	53872		53872		53872		51951		53872		35484	
Adjusted R-squared	0.38		0.40		0.40		0.38		0.40		0.38	

**Table 5**  
**Cross-country Differences in Fees after Controlling for Economies of Scale and Measures of Competition**

This table reports the matrix of cross-country differences in 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 measured relative to the US which is the base case and are measured in percent.

<b>Domicile</b>	<b>Country of sale</b>																			
	Austral.	Austria	Belgium	Canada	Denm.	Finland	France	Germ.	Italy	Japan	Lux.	Netherl.	Norway	Spain	Sweden	Switz.	UK	US	Average	
Australia	1.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.33
Austria	-	1.12	-	-	-	-	1.05	1.04	1.16	-	1.05	-	-	-	-	1.10	-	-	-	1.09
Belgium	-	-	0.76	-	-	-	0.76	0.75	0.87	-	0.76	0.74	-	-	-	0.81	-	-	-	0.78
Canada	-	-	-	2.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.00
Denmark	-	-	-	-	0.69	-	-	0.75	-	-	-	-	-	-	-	-	-	-	-	0.72
Dublin	-	1.17	1.10	-	1.03	1.20	1.15	1.14	1.26	-	1.15	1.13	1.22	1.20	1.17	1.19	1.21	-	-	1.17
Finland	-	-	-	-	-	1.14	-	-	-	-	-	-	1.12	-	1.08	-	1.11	-	-	1.11
France	-	1.05	0.98	-	-	-	1.06	1.01	1.13	-	-	1.00	-	1.07	-	1.07	1.09	-	-	1.05
Germany	-	0.92	0.85	-	-	-	0.90	0.93	1.01	-	0.90	0.88	-	0.95	0.92	0.94	0.96	-	-	0.92
Italy	-	-	-	-	-	-	-	-	1.47	-	-	-	-	-	-	-	-	-	-	1.47
Japan	-	-	-	-	-	-	-	-	-	1.27	-	-	-	-	-	-	-	-	-	1.27
Luxembourg	-	1.08	1.01	-	0.94	1.10	1.05	1.04	1.16	-	1.05	1.04	1.12	1.10	1.08	1.10	1.12	-	-	1.07
Netherlands	-	-	0.77	-	-	-	0.82	0.81	-	-	0.82	0.84	-	-	-	0.86	-	-	-	0.82
Norway	-	-	-	-	1.09	1.25	-	-	-	-	-	-	1.31	-	1.23	-	1.27	-	-	1.23
Offshore	-	1.33	1.26	-	-	1.35	-	1.29	1.41	-	-	1.28	1.37	-	1.33	1.35	1.36	-	-	1.33
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	1.41	-	-	-	-	-	1.41
Sweden	-	-	-	-	-	1.06	-	-	-	-	-	-	1.08	-	1.07	-	1.07	-	-	1.07
Switzerland	-	1.13	-	-	-	-	1.10	1.09	1.21	-	1.10	-	-	1.15	-	1.19	1.17	-	-	1.14
United Kingdom	-	1.17	1.10	-	1.03	-	1.14	1.13	1.25	-	1.14	1.12	1.21	1.19	1.17	1.19	1.25	-	-	1.16
United States	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.79	0.79
Average	1.33	1.12	0.98	2.00	0.96	1.18	1.00	1.00	1.19	1.27	1.00	1.00	1.20	1.15	1.13	1.08	1.16	0.79	-	

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

This table provides descriptive statistics on the various explanatory variables used to explain the country of sale and country of domicile fixed effects after controlling for fund and family/complex level economies of scale and competition 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 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	-0.119	0.00	-0.232	0.00	-0.237	0.00	-0.241	0.00	-0.243	0.00
Judicial country of domicile	-0.021	0.00	-0.031	0.00	-0.014	0.18	0.005	0.75	0.005	0.72
Custodian independent domicile			-0.147	0.00	-0.173	0.00	-0.112	0.03	-0.108	0.01
Conflicts of interest domicile			-0.043	0.15						
Approval country of sale	-0.094	0.02	-0.092	0.02	-0.081	0.01	-0.146	0.02	-0.134	0.00
Judicial country of sale	-0.012	0.01	-0.017	0.00	-0.015	0.00	0.012	0.15	0.040	0.00
Custodian independent country of sale			-0.044	0.15	-0.025	0.43	-0.054	0.07	-0.139	0.00
Conflicts of interest country of sale			-0.014	0.39						
Log industry assets domicile					0.042	0.10	0.081	0.00	0.082	0.00
Log industry assets country of sale					0.007	0.85	0.032	0.19	-0.145	0.00
GDP per capita country of sale							-0.016	0.07	-0.007	0.06
Education country of sale							-0.019	0.01	-0.059	0.00
Savings rate country of sale							0.006	0.18		
Industry age country of domicile							-0.092	0.01	-0.094	0.00
Fund family concentr. country of sale									-1.496	0.00
Bank concentr. country of sale									0.299	0.00
Intercept	2.954	0.00	4.105	0.00	2.515	0.01	0.522	0.57	2.482	0.00
N		119		119		109		109		109
Adjusted R-sq		0.29		0.59		0.55		0.64		0.75

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	-0.303	0.00	-0.421	0.00	-0.418	0.00	-0.438	0.00	-0.441	0.00
Judicial country of domicile	-0.062	0.00	-0.078	0.00	-0.055	0.00	-0.002	0.86	-0.002	0.90
Custodian independent domicile			-0.168	0.05	-0.184	0.02	0.057	0.48	0.035	0.66
Conflicts of interest domicile			-0.097	0.06						
Approval country of sale	-0.071	0.17	-0.084	0.16	-0.095	0.10	-0.030	0.74	-0.081	0.22
Judicial country of sale	-0.017	0.00	-0.023	0.00	-0.018	0.01	-0.013	0.31	0.007	0.74
Custodian independent country of sale			-0.052	0.33	-0.068	0.15	-0.022	0.63	-0.060	0.49
Conflicts of interest country of sale			-0.021	0.57						
Log industry assets domicile					0.050	0.10	0.148	0.00	0.152	0.00
Log industry assets country of sale					0.060	0.12	0.027	0.33	-0.069	0.58
GDP per capita country of sale							0.012	0.28	0.010	0.21
Education country of sale							-0.015	0.16	-0.038	0.13
Savings rate country of sale							-0.011	0.03		
Industry age country of domicile							-0.305	0.00	-0.294	0.00
Fund family concentr. country of sale									-1.007	0.26
Bank concentr. country of sale									0.119	0.58
Intercept	6.360	0.00	8.042	0.00	5.072	0.00	2.736	0.00	3.524	0.05
N		119		119		109		109		109
Adjusted R-sq		0.59		0.66		0.66		0.78		0.79

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	-0.593	0.00	-0.717	0.00	-0.744	0.00	-0.749	0.00	-0.777	0.00
Judicial country of domicile	-0.097	0.00	-0.094	0.00	-0.079	0.00	-0.048	0.02	-0.042	0.05
Custodian independent domicile			-0.274	0.09	-0.335	0.03	-0.194	0.22	-0.221	0.14
Conflicts of interest domicile			0.063	0.43						
Approval country of sale	-0.159	0.06	-0.143	0.17	-0.150	0.11	-0.164	0.37	-0.118	0.37
Judicial country of sale	-0.009	0.16	-0.018	0.03	-0.023	0.02	-0.018	0.43	-0.001	0.99
Custodian independent country of sale			-0.115	0.21	-0.075	0.26	-0.059	0.52	-0.195	0.27
Conflicts of interest country of sale			-0.004	0.93						
Log industry assets domicile					0.097	0.07	0.159	0.01	0.173	0.01
Log industry assets country of sale					-0.076	0.01	-0.089	0.02	-0.307	0.14
GDP per capita country of sale							-0.003	0.88	0.001	0.96
Education country of sale							-0.001	0.95	-0.035	0.44
Savings rate country of sale							-0.004	0.67		
Industry age country of domicile							-0.179	0.00	-0.191	0.01
Fund family concentr. country of sale									-1.780	0.27
Bank concentr. country of sale									0.417	0.29
Intercept	7.315	0.00	7.862	0.00	7.460	0.00	6.015	0.00	8.529	0.00
N		119		119		109		109		109
Adjusted R-sq		0.61		0.67		0.68		0.69		0.72