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THE DETERMINANTS OF MUTUAL FUND SIZE:
A CROSS-COUNTRY ANALYSIS

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Abstract

This paper examines the relation between mutual fund size, fund attributes and country characteristics. Data on mutual funds is drawn from Lipper Hindsight, a database that covers mutual funds around the world. The sample includes 42,699 open-end funds from 18 countries in 2004. Individual fund size is measured in two different ways: using the relative weight of the industry and of the asset class. The results show that money market and real estate funds are usually larger while equity funds seem to be negatively related to size. There is strong evidence that primary funds, those complying UCITS rules and older funds are larger. Among the set of strategies adopted by a fund, results show that mutual funds investing in other funds (funds of funds external and internal) are smaller. Funds that invest in government bonds tend to be larger in the whole industry. Strikingly, we do not find statistical evidence that funds investing domestically are larger than those investing abroad. High annual and redemption charges impact mutual fund size negatively. The results on annual charges are stronger for the U.S. and equity mutual funds. Results on fixed effect factors enhance the importance of the country specificities explaining mutual fund size. Funds tend to be smaller in countries that are more economically developed (measured by GDPpc) and with more investor protection and better accounting standards. In order to test the robustness of the results we also split the sample into sub-samples: U.S. funds *vs.* non-U.S. funds and Equity Funds *vs.* Bond Funds.

JEL classification: G15, G23.

Keywords: Mutual funds, Fund size, Fund attributes, Country characteristics.

Abstract

Esta tese analisa a relação entre a dimensão dos fundos de investimento (medida pelo valor líquido global do fundo) os respectivos atributos individuais e as características dos países onde estão domiciliados. A amostra utilizada inclui 42.699 fundos abertos de 18 países relativos a 2004. Os resultados mostram que os fundos de tesouraria e os fundos imobiliários são maiores comparativamente com os fundos de acções. Os fundos primários e que cumprem com o quadro normativo da UE para este tipo de produto (UCITS) apresentam um valor líquido global maior o mesmo sucedendo com os fundos mais antigos. No que respeita ao tipo de estratégia adoptada os resultados mostram que os fundos que investem noutros fundos são geralmente menores. Por seu turno os fundos que investem em obrigações de dívida pública tendem a ser maiores. Surpreendentemente, não foi encontrada evidência estatística de que os fundos que investem domesticamente sejam maiores do que aqueles que investem nos mercados internacionais. Quanto maior é a comissão de gestão e a comissão de resgate do fundo menor tende a ser o seu tamanho. Os resultados obtidos para a variável comissão de gestão são mais robustos para os fundos americanos e para os fundos de acções. Por outro lado, os resultados obtidos com a introdução de *country dummies* realçam a importância das especificidades de cada país na explicação da dimensão alcançada pelos fundos. No que respeita às variáveis macro os fundos tendem a ser menores em países mais desenvolvidos (medido pelo PIBpc), com maior grau de protecção do investidor e com melhores práticas contabilísticas. De forma a testarmos a robustez dos resultados a amostra é dividida em sub amostras: fundos dos EUA vs. fundos de outros mercados e fundos de acções vs. fundos de obrigações.

Classificação JEL: G15, G23.

Palavras-chave: Fundos de Investimento, Dimensão dos Fundos, Atributos dos Fundos, Características dos Países.

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1. Introduction

Over the past few decades there has been a significant growth in the mutual fund industry. The growing importance of this industry all around the globe has motivated various academic studies to answer some of the many challenging questions: What drives the performance of mutual funds? What are the reasons behind the growth of this industry in some regions? Is there a direct relation between the size of a fund and its performance?

The study of Khorana, Servaes and Tufano (2005) (hereafter KST) reports evidence that the fund industry has grown in some countries due to the presence of some specific conditions that favoured that growth; on the other hand, there are other countries where this industry remained under developed or almost nonexistent because those conditions were lacking. In fact, they found consistence with related findings from the law and economics literature that the mutual fund industry is larger in countries with a better legal environment and where the mutual fund investor rights are better protected. The fund industry is larger in wealthy countries where the population is more educated and where the industry itself is older. This study confirms that the industry is smaller in countries where barriers to entry are higher, measured by the effort required to set up a new fund. These conclusions result from an analysis of the mutual fund industry in 56 countries and it is an important contribution to understanding the behaviour of the growth shown by this industry across countries in the last decades. In fact most of the studies on this issue are focused on the U.S. market or in some European countries, individually, which does not give us a global picture over this theme. In fact, U.S. domiciled funds accounted for only 15% of the number of funds available globally and 60% of the world's fund assets. In this regard there is a wide scope to learn from other studies including more data and countries.

U.S. "mutual funds" are management companies that (1) invest in diversified portfolios of assets, (2) are "open-end" in that they will redeem their shares at Net Asset Value (hereafter NAV) at any time upon shareholder request[1]. In other countries different names and definitions are used for similar businesses. In an attempt to create a harmonized fund industry, the European Union has adopted a common definition of "Undertakings for Collective Investment in Transferable Securities" or UCITS. Most of the funds established under the UCITS I regulations in the EU member states, including Germany, France, Luxembourg, Ireland and the UK will need to comply with the new regulations under UCITS III.

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[1] http://www.ici.org/aboutfunds/organization_operation.html

This study tries to understand the circumstances under which the mutual funds differentiate in size. Our analysis takes the fund as a unit of observation. This paper identifies funds' 'nationalities' by their legal domicile in order to analyse the importance of the environment in the growth of funds' size.

This work distinguishes from previous studies by making some important contributions starting from the size of the sample that includes 42,699 open-end funds from 18 countries around the world that were "alive" in 2004. Secondly, we use a wide range of fund characteristics, including quantitative and non-quantitative data, together with macroeconomic variables, as a potential determinant of the cross-sectional differences of the individual size of a fund. These variables have been selected from a large list of attributes and country characteristics. This large cross-section of international mutual funds allows us to understand which variables among the fund attributes and the country specificities are determinant to explain the size achieved by a fund. In addition, and to test the robustness of the results, we standardize the dependent variable adopting two different methods. Finally, in order to analyse if there are significant changes in the results we split the sample into sub-samples: U.S. funds *vs.* non-U.S. funds and Equity Funds *vs.* Bond Funds.

This paper is organized in the following sections: the introductory sections give us a picture of the mutual fund industry around the world and describes some concepts and vocabulary used in this business. The second section presents the source of the data utilized in this study and the descriptive statistics of our sample. In the third section we analyse the variables that we will use as potential determinants of the mutual fund size. The fourth section reports and analyses the factors that might explain the differences of size in each fund and compare them with the theory and the recent findings. The fifth section of this paper tests the robustness of our results while the sixth and last part presents the conclusions and final remarks. Throughout this paper we will make references to the state-of-art of the literature and recent findings in mutual funds.

2. Data and Methodology

2.1. Sample Description

Data on mutual funds is drawn from Lipper Hindsight database that covers a large sample of countries worldwide as well as their characteristics. The sample is restricted to open-end funds and excludes all funds where the respective size is missing. This leads us to a sample of 42,699 funds from 18 countries (Austria, Belgium, China, France, Germany, India, Italy, Japan, South Korea, Malaysia, Portugal, Singapore, Spain, Switzerland, Taiwan, Thailand, U.S. and UK) referring to the second half of 2004.

Table 1 reports the number of mutual funds included in this study, the total size by country and the respective average size as of the second half of 2004. The U.S. market represents around 42% of the whole sample in terms of the number of mutual funds and it is the country with by far the largest fund industry. The country data shows us that on average Italy and U.S. funds are the biggest. Besides these two countries, Germany and China also have an average fund size of over 200 million of euros. In the case of China, this might be explained by the limited number of funds since the industry was launched in 2001. In contrast, on average Thailand has the smallest fund size, followed by other Asian countries, like, Malaysia, Singapore, South Korea and India. The European country with the smallest fund size is Austria. Aggregating all the data by regions we find that on average the European funds represent less than half of the average size of the U.S. funds. This finding is consistent with previous studies [Otten and Bams (2002), Otten and Schweitzer (2002), Ramos (2006) and Ferreira, Miguel and Ramos (2006)] that report that the average size of European funds (as well as other non-U.S.) is much smaller than the average size of the U.S. funds.

2.2. Mutual Fund Size

As mentioned above, the aim of this work is to study whether some characteristics of funds are determinant to explain its size and how we can assume the importance of the macroeconomic environment as a determinant of the mutual fund size.

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

portfolio, net of fees and expenses in the second half of 2004. Individual funds are aggregated by country of domicile in order to obtain (1) the size of the national mutual fund industry, (2) the size of the national mutual fund industry by type of asset. The fund size variable is then standardized for each country: (1) by dividing the NAV of each individual fund to the total NAV for that country (F_size/total) (2) by dividing the NAV of each fund belonging to a particular class of assets to the total NAV for that class of assets (F_size/assets). Both indicators measure the relative weight of the fund, the first in the domestic industry and the second in the class of assets. The last measure tries to account for cross-country differences of the classes of assets in the domestic mutual fund industries. As we will see, the countries present some differences in the asset structure and this might lead to different results.

3. Determinants of Mutual Fund Size

Our study aims to explain the relationship between mutual fund size, fund attributes, and country characteristics. The selected variables are divided basically into two groups, fund and country-level variables. Fund-level variables include the primary asset type of a fund, the investment area or geographical focus, the strategy adopted, fund age, fees (annual charges, initial charges, and redemption charges) and fund performance. On the other hand, country-level determinants include four sub-groups of potential explanatory variables: legal, regulatory and governance characteristics, supply side characteristics, buyer side characteristics and trading characteristics. For this last group of variables we adopt the same structure as utilized in the KST study on the world size of the mutual fund industry across countries. In the next sections of this paper we will explain the whole range of predetermined variables and analyze the collected data. Appendix A and B lists and describes the explanatory variables employed in this study along with the source of the data.

3.1. Individual Characteristics of the Mutual Funds

In this paper we consider fund-specific attributes as potential determinants of mutual fund size. In the next sections we will define and present descriptive statistics of fund attributes by country.

3.1.1. Fund Attributes (Dummies)

3.1.1.1. Asset Type

Mutual funds are classified by the class of asset. Categories include bond, equity, mixed assets, money market, real estate and other mutual funds. The distribution of asset types varies significantly among the countries included in our study. However, bond and equity funds are the two most prominent classes of assets as we can see in table 2. Globally these two types of funds account for 83% of the NAV of our sample. This percentage increases to 97% for the U.S. market, which does not leave much space for the other categories of funds.

Panel B reports some descriptive statistics like the country average. Bond and equity mutual funds have the same country average weight in our sample (around 28%). The countries with a predominance of bond funds are Taiwan, Japan, India, Italy and Thailand. At the other end of the scale, we have China, Belgium, Singapore and South Korea. In the UK and U.S., equity funds represent more than 60% of the industry assets (70% and 64% respectively), while in South Korea and Portugal they have an average weight of 4% and 6%,

followed very closely by China and Spain (around 8%). Otten and Schweitzer (2002) also report that in the Anglo-Saxon countries equity funds tend to dominate the market, reporting a figure of 50% for the U.S. in 1997. If in the U.S. mutual funds market is dominated by equity-oriented funds, in the European countries of our sample (Austria, Belgium, France, Germany, Italy, Portugal, Spain, Switzerland and UK) bond and equity funds have, on average, the same weight: in 2004, equity funds represented 64% of the NAV for the U.S. in contrast with 26% and 28% of European and Asian countries respectively. In Asia there is a predominance of bond funds but the difference to the second most significant class of funds is smaller in comparison with the U.S. market. Funds that mix several kinds of assets have an average weight of 16%. The countries with the highest predominance of this kind of funds are China and Belgium in contrast to U.S. where the size of this type of fund is insignificant. On average, the share of money market funds is equivalent to mixed funds. It is also important to underline the weight of the money market funds in Europe, especially in France (48%), Portugal (35%) and Spain (32%). There is again a contrast with the U.S, where the weight of this kind of fund is irrelevant. Real estate mutual funds have an average weight of around 3% and they are more predominant in Germany (28%) and Portugal (10%).

Panel D analyses the correlation with the two measures of size. The money market, mixed assets and real estate funds tend to be larger in size in comparison with equity funds.

Dummies variables are used to indicate classes of assets (see table A- Appendix).

3.1.1.2. Geographical focus

Lipper assigns a geographic focus to funds, which can have a country, region or even global scope. Table 3 reports the geographical focus weights of the mutual funds using net assets values.

As we can see in this table, with the exception of the UK and Switzerland European funds show a generally low level of home bias; this may be explained by the fact that they have shared the same currency since 1st January 1999 when the Euro was introduced in the financial, monetary and foreign exchange transactions. Later, on 1st January 2002, the Euro was physically introduced into circulation in all the EU countries that adopted the currency. The two European exceptions to the low home bias are precisely the two countries that have not joined the EU (Switzerland) or not adopted the Euro (U.K). The European fund passport for mutual funds (UCITS) also contributes to this scenario as we will see. The reported average of the home bias for the European countries is 24% contrasting with 70% in the case of the Asian countries that show, in comparison, a much higher level of home bias. In some

Asian closed economies like China, Malaysia, Thailand and India this percentage reaches or approaches 100%. The exceptions are economically open countries like South Korea, Singapore and Japan. The level of home bias in the U.S. is below the average of our sample which is 45%. As expected, economies which are more open to foreign investment show a higher level of funds with regional focus, like South Korea, Italy and France, i.e. some of the courtries considerably over the 37% average. Global focus is higher in Singapore, Austria and Belgium and on average these funds account for around 17% of the NAV.

The correlation between the degree of home bias and mutual fund size shows us that funds tend to be larger when they are more domestically oriented, while smaller funds are associated to regionally oriented funds. Overall it seems investors show a preference to invest in funds in their own markets as opposed to international diversification (Home bias).

Geographical focus is represented by three dummy variables that assume value 1 whether the fund invests (1) at home, (2) in the same region or whether the fund is a (3) global fund (see table A- Appendix).

3.1.1.3. Fund Strategies

Lipper also assigns a strategy to each fund. This subsection analyses the information about fund attributes such as corporate bond funds, government bond funds, institutional funds, funds of funds (internal and external) and index tracking funds. Table 3 reports the market weights of these strategies in each country computed by net asset values.

Corporate bond funds are funds that include debt instruments issued by a company. There is a low incidence of this strategy in our sample. European countries have on average a higher weight than in Asia and the U.S.; this is particularly true of Spain which stands out among its peers and where the percentage of the net assets concentrated in corporate funds represents 22% of the total. The same trend applies to government bond funds; this is despite the higher predominance of this strategy in South Korea funds that account for 24% of the total which contributes to enhancing the average of the Asian countries. Nevertheless, the Asian countries and the U.S. are below the average in comparison with the European countries.

Institutional funds have the same structure as other collective investment schemes but they are established for the use of institutional investors and usually require higher minimum investment. This strategy has a higher weight in U.S. (27%), Switzerland (24%), India (20%) and South Korea (13%).

Funds of funds are mutual funds that invest in other mutual funds (internal or external). The fund may invest in a mutual fund run by the same group or by an unrelated group. In

some of the listed countries the difference of weights between internal and external fund of funds is almost nonexistent, e.g. in Austria, where both strategies have a significant importance; this contrasts with the U.S. where the relative percentage of assets of this type of fund is extremely low. Internal fund of funds are also important in Singapore and in Belgium. Once again the figures reveal that on average these funds have a greater importance in Europe.

An index tracking fund is a type of passively managed mutual fund that seeks to track the performance of a benchmark market index. Index tracking funds enjoy some popularity since they represent a cheaper alternative to investors looking to buy equities. Despite the low expenses of index-tracking funds, they are still not as popular as actively managed funds (Gruber, 1996). These funds assume more importance in Japan (15.39%), Switzerland (11.10%) and U.S. (9.36%).

As we can see from our sample the most developed countries are linked with institutional funds, index tracking-funds, funds-of-funds, and corporate bond mutual funds. From the whole range of fund strategies approached in our study, Institutional funds is the one with the most importance, mainly due to the high share of the U.S. funds in our sample where this type of strategy has a reasonable weight. As we can conclude from Panel D that smaller funds are more associated with institutional funds and index tracking funds.

Several dummies variables are used to represent fund strategies (see Table A- Appendix).

3.1.1.4. Other structural features of funds

Lipper makes a distinction between primary funds and sub-funds. Primary funds are also referred as umbrella fund structures, "(…) a single legal entity comprising any number of separate sub-funds (or classes). It is generally established so as to be easy and cheap for the investor to switch between sub-funds, and economies of scale mean that it is usually also cheaper for the manager to administer than a similar number of separate funds. The rules and specific limits applied to separate parts of an umbrella fund are the same as those applied to corresponding single schemes" [Turner (2004, p.83)]. In fact, in many cases funds are split in several classes. Often funds that offer multiple share classes represent ownership interests in the same portfolio, but have a different fee structure. In our sample the large majority of funds are primary (25,848 of the 39,004 funds where we have information available on this characteristic – represent around 66%). If we consider the NAV exclusively, the gap is even bigger. As stated in table 3, on average the NAV of primary funds represents almost 89% of the global value. This figure is bigger in Europe and Asia (respectively 91% and 87%) than in

the U.S. (74%). On the other hand, 10,271 funds of the 16,271 European Funds included in our sample comply with UCITS (around 63%). The countries with the biggest number of funds complying UCITS is Spain (almost 100%) followed by Austria (99%), Germany (97%) and Portugal (94%). This contrasts with Switzerland where only 1% of the funds adopted this regulation. In panel D we see that Primary funds and UCITS funds are positively correlated with mutual fund size.

Primary funds and UCITS are also indicated using dummy variables (see Table A-Appendix).

3.1.2. Fund Attributes (Quantitative)

3.1.2.1. Fund Performance

Fund performance is one of the most studied variables concerning the mutual fund industry. Many studies attempt to find the determinants of performance.

This study is interested in the relation between fund performance and size. Prior to analysing the results, we can hypothesize that fund performance might have a positive influence on mutual fund size, although some authors [Ippolito (1992), Chevalier and Ellison (1997) and Sirri and Tufano (1998)] find that the relation between fund flows and past performance is non-linear i.e. it tends to present a convex shape. They found that although investors tend to respond with inflows to positive past performance, strikingly funds with bad performance do not show significant large outflows[2]. In practice, this means that funds with good performance are likely to grow more, but simultaneously might imply that large funds may be associated also with past bad performance. Therefore the relation between size and past performance might be ambiguous.

Performance is computed through the variation of the price of each mutual fund between 2002 and 2004[3], based on the NAV for the two periods. Table 4 shows that this was a negative period in terms of fund performance for the majority of the countries in our sample. This is explained by the recessive economic environment that affected the financial markets worldwide. The exceptions to this global scenario were Thailand and India. These two countries showed a positive return of 12.3% and 1.7%, respectively. The U.S. and Taiwan had the worst performance in terms of mutual funds return. On average the funds of our sample had a negative performance of 5%, which gives us the overall picture. In terms of regions,

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[2] It has been documented that investors tend to not sell an asset when they are losing money -"loss aversion". They prefer to keep it, taking the risk that its price will fall even more [Barber and Odean (1999)].
[3] The computation of performance was limited by data availability.

Europe had a better performance than the U.S. and Asia. The correlation between fund performance and size is positive which means that performance enhances mutual fund size.

To overcome problems of "endogeneity" we use past performance since the size of a fund is usually used in studies as a determinant of performance.

3.1.2.2. Fund Fees

Mutual fund fees are the price that uninformed investors pay to managers to invest their money [Ippolito (1989)], which includes investment management, distribution and other value added services. From the perspective of fund managers, these fees represent their source of revenue. Moreover, when investing in mutual funds, investors are also paying for the benefits associated to that investment. Chordia (1996) identifies three benefits that mutual funds provide to investors. The first is diversification. Small investors do not usually have enough resources to diversify their portfolios. The second is transaction costs savings. The third is that mutual funds enable investors to share liquidity risk. Chordia (1996) noticed that open-end funds try to dissuade redemptions through front and back end load fees. Therefore it is reasonable to expect that redemption charges should have a positive effect on mutual fund size.

Concerning initial charges, Barber, Odean and Zheng (2003) document for the U.S. that investors react distinctively to different expenses. They find a negative relation between fund flows and front-end loads and no relation between operating expenses and fund flows. Therefore, we can hypothesize that initial charges might have a negative effect on fund size.

On the other hand, several studies have documented economies of scale on mutual funds [see e.g. Baumol, Goldfeld, Gordon and Koehn (1980), Barber, Odean and Zheng (2003) and Khorana, Servaes and Tufano (2006)] which means that larger funds are associated with lower charges. In fact, in the most comprehensive study on the topic, using a sample of 46,799 mutual funds offered for sale in 18 countries, KST (2006) find that larger funds and fund complexes charge lower fees. The same applies to index funds, funds of funds and funds selling cross country while funds distributed in more countries and funds domiciled in offshore locations charge higher fees. They also find that fees are negatively related with the quality of a country's judicial system, the country's GDP per capita, population's education, and age of mutual fund industry. The relation with the size of the mutual fund industry is positive which means that larger fund markets apply lower fees. Therefore, we are likely to find that larger funds have smaller fees.

There is a substantial variety of charges or fees, including administrative, management, advisory, exchange, load, redemption, and exchange. In this paper, we distinguish three different kinds of charges: annual charges (A_charge), initial charges (I_charge), and redemption charges (R_charge). As we can see in Panel A of Table 4, fund fees vary considerably across countries. For example, the range of annual charges goes from on average 0.543% in the U.S. to 1.44% in Italy. We also see that the gap between the U.S. market and the average for the whole sample is quite significant. On average European countries have the highest annual charges. Initial charges also differ considerably across countries. We find the lowest percentage in South Korea (0.034%) and Portugal (0.261%), while UK (3.827%) and Austria (3.670%) have the highest percentages. The U.S. is once again among the countries that charge fewer fees in contrast with European countries that are again at the top and well above the average (1.813%). On this, KST refer in their work about mutual fund fees around the world that European fund associations have sometimes argued that the smaller scale of fund markets in Europe can explain their higher costs. Concerning redemption charges, a considerable number of countries have very low charges e.g. South Korea, Austria and Germany, while the highest values are found in U.S. (0.928%) and Switzerland (0.849%). Redemption charges in the European countries (0.340%) are higher than in Asian countries (0.121%) but below the U.S. (0.928%) which is considerably above the average computed for our sample (0.326%).

In panel D of table 4 we see that large funds are associated with high annual and initial charges while redemptions charges have a negative impact on fund size.

3.1.2.3. Fund Age

Gregory, Matatko, and Luther (1997) show that the performance of younger mutual funds may be affected by an investment learning period. They also show that there is a relationship between fund age and fund size: younger funds also tend to be smaller than older ones. This finding is relatively easy to understand since older funds have more time to increase the value of the assets under management and to benefit from market demand. As shown in table 4 the countries with the older funds are on average the U.K. and Germany (around 10 years). This contrasts with China (1.7 years), India and South Korea (3 years). The U.S. and the European countries are clearly above the average for the entire sample (6.2 years), while the Asian countries' funds are on average 4.5 years old. In terms of correlation, older funds are also related with large funds.

3.2. Country Characteristics

The sample includes 18 countries with different specificities; therefore, it is important to examine the role of country characteristics in explaining mutual fund size. These variables are selected in accordance with their statistical relevance in previous studies. We follow KST (2005) who organized a set of variables in sub-groups and hypothesize that they have an influence on the development of the size of the fund industry around the world. The selection of the whole range of macroeconomic variables is also made through the analysis of their correlation. Wherever possible, we built indexes of variables in order to simplify the structure of the models and avoid multicollinearity issues. The result is a range of twelve different country-level variables that are classified into four sub-groups as adopted by KST (2005): legal, regulatory and governance characteristics, supply side characteristics, buyers' characteristics and trading characteristics. Panel A of Table 5 presents the figures by country while panel B reports the descriptive statistics of this set of variables. In the next sections of this paper we will analyze these variables and try to explain their relevance to our study.

We must notice that the scope of this study differs from that of KST (2005) as we focus on individual mutual fund size and they focus on the industry size. Therefore, it is not expected that country variables might have the same effect on industry size and on fund size. In fact, there are several aspects that might make the signs go in opposite directions: the level of industry competition and industry maturity. A larger industry might present a high level of competition and contestability, allowing the launching of new funds and due to that fact the industry might be simultaneously large and have many small funds. Therefore, countries with a higher level of competition might present funds with smaller average market shares. On the other hand, there is a strong trend to concentrate in the financial industry due to economies of scale. Therefore, older industries and concomitantly, larger ones, might present larger funds. Overall, it is not clear what the effect of country variables will be on individual mutual fund size.

3.2.1. Legal, Regulatory and Governance Characteristics

In their work, KST (2005) find a direct relation between the development of the industry of mutual funds and the quality of the legal environment. In fact differences in laws and regulations affect the investors' behaviour and subsequently the level of a market's financial development. Investors will be reluctant to invest in markets where their rights are not properly defended.

We use four different types of legal and regulatory variables. The first is a measure of the quality of the legal system (Investor Protection), 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 so that higher values imply a higher quality of the legal system. Our investor protection variable (I_protection) sums these five measures. As reported by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997), countries with poor investor protection have significantly smaller debt and equity markets. In this regard, it is reasonable to hypothesize that countries with less investor protection could have less demand for mutual funds and consequently that might affect not only the overall development of the industry but also the size of individual funds. In their study about fund fees, KST (2006) find that stronger investor protection is associated with lower mutual fund fees. As discussed above, this might imply larger funds. The country that offers the best investor protection in our sample is Switzerland (49.96) and the worst is Thailand (29.67). The majority of the countries in our sample present a high level of investor protection and this is confirmed by the high average (41.98).

The second variable is a dummy that identifies the origin type of the country's legal system (Common_law) that equals one if the origin is the English common law, and zero otherwise. The English common law provides better legal protection to investors than the German and French civil law system. In fact, most of the financial contracts use the English Law and the English courts for possible disputes in recognition of the reliability of the legal institutions in UK. Following the La Porta et al. (1997) classification, in our sample we have six countries based on the English common law system (U.K., U.S., Thailand, Singapore, Malaysia, and India).

The third variable (CIFAR) is an index created by the IAAT (International Accounting and Auditing Trends, Centre for Financial Analysis and Research Inc) to measure the quality of accounting standards (higher implies better standards). The quality and the disclosure of accounting standards can also influence the willingness to hold securities directly. When firm information is not trustworthy and easy to read, investors might be willing to trust in the professional skills of fund management companies. Demirguc-Kunt and Levine (1999) find that countries with poor accounting standards tend to have under developed financial systems. Accounting standards range between 56 in Portugal and 85 in the United Kingdom and as expected, in general this measure is higher in the U.S., followed by Europe and Asian countries respectively.

Like accounting standards, weak insider trading rules can also motivate the use of financial intermediaries. KST (2005) argue that a good legal system can promote investors' direct investment instead of using financial intermediaries. The authors defend that using an insider trading enforcement variable may control for this fact because investors would feel more protected if insider trading rules were enforced, and might be willing to hold more securities directly. Therefore, it is reasonable to hypothesize that the enforcement of insider trading rules can have an adverse effect on the size achieved by the mutual funds especially for equity funds. This is consistent with the view that failure to enforce these rules discourages investors from acquiring equities directly and encourages them to rely on professional intermediaries like funds. Following this insight, we use an index (IT_index) to measure the level of insider trading and legal corruption in a country (higher values imply more insider trading practices). The source of this variable is the Global Competitiveness Report of World Economic Forum. The insider trading index is higher in Asian countries (an average value of almost 4) and lower in Europe (3) and in the U.S. (2.6). Concerning this measure, the best country is UK (2.26) and the worst is Thailand with 4.73. In fact if we exclude Japan and Singapore all the other Asian countries are above 4. Table 5 reports data on country explanatory variables and descriptive statistics.

3.2.2. Supply Side Characteristics

The mutual fund industry is linked to the activity of the banking industry since banks in some cases act as portfolio managers, primary promoters and distributors of funds. Like in KST (2005), we also use a bank concentration index that measures the weight of the top 5 banks in terms of total assets (Bank_conc). The relevance of this variable is explained by the fact that in the U.S. the growth of the money market funds in particular came in part at the expense of the banking sector while in Europe banks are one of the most important promoters and distributors of funds. Bank concentration is higher in Europe where the five largest banks held 67% of the total assets in the banking system in 2003, compared with 48% in Asia and 31% in U.S., one of the lowest figures in our sample. In European countries like Switzerland, Portugal, Austria Belgium the banking system is controlled by major players that in some cases are worldwide banks operating in several financial areas. All the referred countries have a banking concentration above 80% and a lack of strong cooperative or regional banks as in Spain, Italy, France and Germany. Compared with other financial industries, Demirguc-Kunt and Levine (2000) show that bank concentration is not associated with indicators of financial development and efficiency.

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Another variable included in these sets of determinants is the number of banks per 100,000 people (N_banks) which gives us information about the development of the financial sector as well as the means that investors have at their disposal to access financial products like mutual funds, considering the assumption that banks are potential financial intermediaries by excellence. European countries are again among the banking systems with a larger number of banks (average value of 3) contrasting to Asia, where this value is below one. Austria, Switzerland and Germany are the countries with more banks per 100,000 people. Germany is typically cited as an example of an over banked market.

We have also an indicator that measures the level of difficulty in setting up a new business (New_business). This variable, drawn from the 2004 edition of Economic Freedom of the World (data refers to 2002), indicates whether administrative procedures are an important obstacle to starting a new business (higher values imply less difficulty to establish a new business and fewer barriers to entry). In countries with fewer barriers to the entrance of new firms, the financial markets tend to be more developed and the existence of several competitors contributes to increasing the offer of financial products with obvious advantages for investors who can benefit from having more information and better conditions. Therefore it should be reasonable to expect a positive association between this indicator and the mutual fund size. Strikingly, as reported in table 5, firms in the Asian countries of our sample (country average: 4.17) are in a better position to establish a new business than the U.S. (4.0) and the European countries (country average: 3.18). However, we should not forget that in the case of Asia we are considering an average that includes two countries with high values: Singapore (6.83) and Taiwan (5.17).

3.2.3. Buyers' Characteristics

We have a set of three different variables to characterize the countries from the buyers´ perspective. The first is GDP per capita (GDPpc) and it is also used by KST (2005). They find that economies with higher income per capita also have more resources and savings to invest in financial products like mutual funds. In their study it is confirmed that countries with a higher level of GDP per capita also have large and well developed fund industries. These effects are particularly pronounced for the equity funds which may require a higher level of investor sophistication as referred by KST (2005). On one hand, we also expect that countries with higher GDP per capita should have larger mutual funds, but at the same time economic developed countries are also more financially competitive, which might lead to the existence of several competing funds. Data on this variable is from the World Development Indicators

(WDI) database (2004). GDP per capita ranges from $39.731 in the U.S. to $3.072 in India. As expected, there is a significant difference between European and Asian countries that would be even larger if Japan and Singapore were not included in the sample. Despite these differences, there is an evident homogeneity in the level of development of the countries selected for this study, considering that the GDP per capita of 12 of the 18 countries is above average.

We consider two more country-level variables: the year when the first mutual was launched in the country (I_age) and the number of fixed line and mobile phone subscribers per 1000 people in 2000 (Telcom). The age of the industry is given by the year when the first open-end fund was sold in the country. Data is from KST (2005). The mutual fund industry has been one of the fastest growing types of financial intermediary in recent years. However, in a significant number of countries, it is a relatively recent financial innovation, especially when comparing these countries with the U.S. where the first mutual fund was launched in 1924[4]. This contrasts with China where this industry started in 2001 which explains the still limited offer of funds in this country (107 open-end funds at the end of 2004). The average value is 1964 and, as predictable, there is a considerable gap between U.S. and European countries (average value of 1956) on one hand and the Asian countries on another that on average established the first fund in 1974. The older the industry, the greater the investors' experience, and the more investment will be applied in mutual funds. It is logical to assume that under these circumstances the industry size will also be larger. But we can not assume it to be logical that the same can apply to fund size due to the strong competition between funds in markets with matured industries. Many authors use this variable as a determinant to explain fund performance considering that the older the industry, the more efficient the market will be which may lead to better performance. On the other hand the existence of good communications means easy access to information and suggests a more developed and informed economy which might explain more demand for financial products like mutual funds. However, in developed financial markets with a wide offer of financial products this can also be a sign of strong competition. As expected, more developed countries have better access to telecommunications and the difference between U.S. and European countries on one hand and Asian countries on another is significant. The best country for this measure in terms

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[4] In 1924, three Boston-base businessmen pooled their cash to establish the Massachusetts Investor Trust, a mutual fund launched with assets of $50.000 (invested in about 45 stocks). It was so popular that after a year it had grown in size to nearly $400,000 and had about 200 participants [Turner (2004, p. 11)]

of fixed lines and mobile phones per 1000 people is Switzerland (1369) and India holds the last position on the list (35).

3.2.4. Trading Characteristics

In this set of variables we consider the turnover ratio (Turnover), defined as the ratio of the total value of stocks traded to the average market capitalization in 2003. This variable represents a measure of the trading activity. Data on this variable is from the WDI database. Among the countries with higher turnover ratio are some Asian countries like South Korea, Taiwan, India and Thailand, the U.S. and European countries like Spain, Germany and Italy. On average the Asian countries included in our study have a higher turnover ratio than their peers.

The second variable is the country transaction costs measured in basis points (T_cost). We calculate the annual average transaction costs for 2004 using the Global Universe Data-ElkinsMcSherry database. This variable includes management fees and taxes (explicit transaction costs). Implicit transaction costs, which include market impact costs, opportunity costs of delay in trading, and bid-ask spreads are more difficult to identify and measure. There are some studies focused on the impact of these costs. For instance Chan, Faff, Gallagher, and Looi (2005) argue that trading costs are important in fund performance evaluation as they provide relevant information about the erosion effect that active trading can produce in performance. There is also a relationship between trading costs and fund size. Large funds trade necessarily larger volumes and quantities and benefit from economies of scale. KST (2005) refer that trading costs can have an impact on the development of the mutual funds industry. This impact can be approached in two different ways. If trading costs are too high this may discourage investors to apply their money in mutual funds. However, it may also have the opposite effect since individual investors would face even higher costs if they were to trade on their own. Nevertheless, they find a negative impact of trading costs on mutual fund industry size. Transaction costs can also be an indicator of financial development. In fact, countries with less developed markets are countries with higher trading costs (Thailand, South Korea, Malaysia, India and Taiwan), while more developed markets like the U.S. Japan, and most European countries have lower trading costs. We can see this difference when we compare the average value of transaction costs in the European countries and U.S with that of the Asian countries.

Considering the potential for interrelation between some of the selected explanatory variables, especially the country-level variables that are intended to measure the level of

economical / financial development and the quality of the regulatory environment, we calculate the matrix of pair wise correlations and present this information in table 6. In general multicollinearity does not seem to be a severe issue bearing in mind that we are working with a large group of variables. Correlations between fund-level variables themselves and with most of the country-level variables are in general low, with the exception of the dummies that assume the value 1 whether the fund belongs to the class of equity funds or to the class of bond funds (this correlation is particularly severe in the U.S. sub-sample which is why we exclude the first variable from the model). A few of the country-level variables have a high correlation. For better reference, we stress the part of the matrix that provides information about the correlation between the macroeconomic variables. As expected, investor protection (I_protection) is highly and negatively correlated with IT_index and I_age and, on the other hand, highly and positively correlated with GDPpc among other variables that are not as strongly correlated but are above the -/+ 0.5 measure. The commow_law variable is highly and negatively correlated with I_age and IT_index is significantly correlated with GDPpc (negative) and I_age (positive). Finally, there is also a high and negative correlation between GDPpc and I_age, which means that higher domestic income is associated with countries that launched the first mutual fund earlier on. We will take this question into consideration when building the models.

4. Empirical Findings

In this section we will try to explain which factors drive individual mutual fund size worldwide using both fund attributes and country characteristics. The first subsection presents univariate regressions for mutual fund size. The second subsection presents multivariate results. The final subsection reports the results from further multivariate regressions that take into account the geographic domicile of the mutual funds (U.S. funds vs non-U.S. funds) and the two most dominant types of funds (Equity funds vs Bond funds).

4.1. Univariate Regression Results

Table 7 shows the univariate regression results using two standardized measures of mutual fund size as described earlier in this paper. The table reports the number of observations and, for each dependent variable, the estimated coefficient and the respective t-statistic and significance. With regards the fund attributes, mutual fund size is positively related with money market (MM), real estate (R_estate) and mixed assets (M_assets) funds while funds focused on equity assets (Equity) tend to be smaller. This evidence is common for both models and the coefficients are particularly robust in the case of money market funds. The model using the relative weight of the asset class as a measure of mutual fund size (F_size/assets) show us that bond funds have a negative effect on size. This might be explicable because strategies can be differentiated more inside bond and equity funds than in other asset categories. For instance, equity funds are commonly differentiated by value and growth, small and large companies, domestically and internationally. This creates more competition between them, reducing the average size of the fund.

With regard geographical focus, we see that funds investing domestically (Focus_home) seem to be larger, revealing the existence of home bias. This is also applicable for primary funds (Primary) and for European funds complying UCITS rules (UCITS) that tend to be large. Funds focusing regionally or globally are negatively related to size. On the other hand, all the strategies with statistically relevant coefficients (Institutional funds, Fund of funds internal and external, and Index tracking) have a negative effect in mutual fund size. In this set of variables, the most robust coefficient was achieved for the strategy Institutional funds (Inst_fund), which is also the only coefficient that has relevance in the two models. It is also important to highlight that mutual funds in government bonds have a statistically positive coefficient at 10%. This result is more important for the European markets where this strategy has a greater weight.

From all the quantitative attributes only the redemption charges (R_charge) have a negative impact in size which does not confirm the evidence that this type of fees can work as a factor of dissuasion and discourage investors to redeem their investments, thus contributing to increasing the value of the net assets under management. The coefficients of the two other types of charges (annual charges and initial charges) are significant and suggest that higher charges contribute to enlarging fund size. Fund age (F_age) is statistically significant in the model where the fund size is scaled using the relative weight of the industry (F_size/total). As expected the coefficient is positive which confirms that older funds are also larger funds.

The mutual fund's performance between 2002 and 2004 (Return), measured by the comparison of the price of each fund, based on the NAV in each period, seems to be relevant to explain mutual fund size since the coefficients computed in both models are relevant. The coefficient of this variable indicates that performance has a positive effect on size and suggests that performance enhances size. Empirically, it seems reasonable to expect that investors should feel more attracted to apply their money in funds with better past performance and this can be one of the possible explanations for this result. In fact, it has become common place to say that past performance is no guarantee or indicator of future performance but it is rare to find an investor or an adviser who will not take account of a mutual fund's track record when deciding where to put the funds. However, as already mentioned, the impact of performance on size might be ambiguous due to the non-linear relation between fund flows and past performance.

All the country-level variables included in our study are significant to explain the mutual fund size. The quality of the country's legal institutions and financial reporting as well as investor protection (I_protection, Common_law and CIFAR) seems to be negatively related with size. The same applies to the insider trading index, since a higher value of this variable implies a higher incidence of this practice.

Other variables like N_banks, GDPpc and Telcom and Turnover that give us a perspective about the level of a country's economic, financial and technologic development also have negative coefficients which seems to suggest that despite the positive impact of these variables on the development of the fund industry as a whole, as shown by KST (2005), the results seem to be different when our unit of analysis is the size of each mutual fund by itself. Once again it is important to remember that the study of KST about the size of the mutual fund industry around the world has a different scope. Among the coefficients of the country-level variables that are positively related to size we highlight the coefficients of the bank concentration (Bank_conc) and the industry age (I_age) that hold some of the highest

significances in the univariate regressions. Contrasting with the result achieved for the variable measuring the age of each mutual fund (F_age), we see that the variable that indicates the year when the first open-end fund was launched in the country (I_age) is positively linked with mutual fund size meaning that the younger the mutual fund industry is, the larger the size of each fund seems to be. The New_business variable measures the effort required to set up a new business in terms of administrative procedures. The higher the level of difficulty to start a new business, the smaller the mutual fund size seems to be. Therefore the existence of fewer administrative barriers to entry leads to larger funds.

Higher costs (T_cost) contribute to larger funds which suggests that investors can be more motivated to invest in funds instead of facing directly high transaction costs by making the investments on their own. Finally, results on univariate regression show a negative impact of turnover on mutual fund size.

4.2. Multivariate Regression Results

Tables 8 through 10 contain various multivariate analyses explaining the size of mutual funds. We consider three types of specifications: Table 8 presents results using just fund features, Table 9 presents results for fund features and country dummies (this specification controls for all potential heterogeneity across countries) and Table 10 analyses fund and country features.

The models show strong evidence that money market and real estate funds have a positive effect on mutual fund size. These results are consistent in all the models stated in the tables 8 to 10. On the other hand, we find contradictory results about the impact of mixed assets and bond funds in the two standardized measures of mutual fund size. Bond mutual funds tend to have a large weight on the total industry, but bond funds have a small relative weight when we control for the class size. We confirm the results achieved in the univariate regressions about the negative relation between equity funds and mutual fund size. Equity mutual funds tend to be smaller when we analyse the relative weight of the asset class. This fact is coherent with the evidence that bond and equity funds account for more than 50% of the industry, but because there is much more diversity in strategies they tend to be smaller inside their asset class.

In the multivariate models there is no evidence that the geographical focus of a fund is linked to its size. We were particularly interested to learn more about the possible impact of home funds in size but the statistical relation between home bias and large funds is only

detected in the univariate results. Home has also no statistical relevance in the control for country features and country dummies.

Some of the models tend to indicate that funds on government bonds are inclined to be larger. The government bond funds only show us positive and relevant coefficients in the models computed with the highest number of observations, as stated in tables 9 and 10, for both specifications (country dummies and country features), but these results are not confirmed in the other measure of size (F_size/assets). In table 10, one of the coefficients seems to show some weak evidence of a positive relation between corporate funds and size. In contrast, there is strong evidence that the strategy fund of funds (external) is negatively related with fund size, which is also coherent with the previous results in the univariate regressions. To a lesser extent, the same seems to apply to the internal fund of funds strategy. We confirm that primary funds and those complying UCITS are related to larger funds. The results are particularly robust for primary funds especially when we increase the number of observations through the selection of variables with more data. These findings confirm our previous hypothesis about the possible influence of these two variables on size, bearing in mind that UCITS grant funds free and smooth access to other markets within EU and primary funds are normally associated to larger funds. Along the same line, we confirm that fund age is positively and significantly related with fund size. The coefficient of this variable shows statistical relevance in almost all the multivariate models for the entire sample. Older funds seem to be larger than younger funds.

Regarding the fund's past performance, this seems to have a positive impact on size, confirming the result achieved in the univariate regression since the respective coefficient is always positive. However, this evidence is not strong as it only shows statistical relevance in some models in tables 8 and 9 (fund features and fund features plus country dummies). The lack of a relevant statistical association between these variables might be explained by the documented non-linear relation between fund performance and fund net flows [see Ippolito (1992), Chevaliere and Ellison(1997) and Sirri and Tufano(1997)].

Initial charges have a negative and statistical sign, indicating that among classes of assets, investors compare initial charges. However, it is important to mention that when we maximize the sample to a number closer to the total observations of this specific variable, we find a positive relation between size and this type of charges, which is in line with the results from the univariate regression. In contrast, we confirm the negative impact of redemption and annual charges on size. In the case of annual charges it seems reasonable to understand that the existence of higher fees can distance the investors from buying funds. However, for

redemption charges the results do not confirm that this type of charge can encourage investors to keep their money invested in funds for a long time thereby contributing to increased size. In some of the models in tables 8, 9 and 10, we exclude the quantitative attributes that have more information missing in order to maximize the samples' size and to confirm some results in a scenario closer to the total number of funds included in our study. This selection allows us to increase the data from roughly 11,000 observations to a maximum of 37,495 observations. In general the main results remain coherent with the previous regressions.

With reference to the country-level variables and due to the high correlation among variables, we alternate the use of I_protection and GDPpc. We give preference to GDPpc because this variable shows more explanatory power in the univariate regressions and is less correlated with other variables in comparison with I_protection. In general, the macroeconomic variables have statistical relevance, especially in models with larger samples. We confirm that to a certain extent the level of economic development, measured by GDPpc, and the quality of the legal environment, measured by I_protection and CIFAR, are negatively related to mutual fund size. This finding seems consistent because the result remain unchanged in all the models where the coefficients of these variables were significant. The same does not apply, however, for IT index because the results are contradictory. Common_law is relevant in explaining mutual fund size in all the models and is positively related to it. This result is consistent with the fact that U.S. mutual funds are the largest in the sample. In the set of variables that gives us information on the supply side characteristics, the Bank_conc and New_business seem to be positively related to size. This indicates that bank concentration and fewer barriers to the launching of new business is related with larger funds.

Concerning the variables about the buyers characteristics, the impact of I_age is not totally clear because the coefficient is both negative and positive with statistic relevance despite the positive coefficients being more robust in terms of significance, as seen in table 10. Telcom is positively related to size in the multivariate regression contrasting to the univariate regression results. With regards to the trading characteristics, turnover seems to be negatively related to size despite positive coefficients in some models stated in table 10. However, this is an isolated result achieved for a smaller sample. T_cost is also negatively related to size contrasting with the results from the univariate regression.

Generally the models with the country dummies present better quality in terms of significance, measured by the adjusted R-square, in comparison to the other models without this set of dummies. Therefore, it is reasonable to conclude that the countries' specificities are relevant in explaining the mutual fund size. This result is more evident in the models with

more observations as shown in Table 9 and for the measure of size based on the industry weight (F_size/total).

The next subsection explores the possibility that some of the results may be clarified when taking the geographic style of the fund into consideration. Further, it also allows us to examine the robustness of our results for the different types of funds.

5. Additional Tests and Robustness

First we split the sample of mutual funds into three sub-samples according to mutual funds' domicile as follows: (1) U.S. funds; (2) European funds and (3) Asian funds. Our aim is to capture the potential effects of regional specificities in the results and test the robustness, especially U.S. domiciled mutual funds that represent a substantial part of our sample. Secondly, we re-estimate multivariate regressions dividing the sample into the most predominant funds by type of asset: Equity funds and Bond funds.

5.1. U.S. Mutual Funds

The average size of mutual funds differs quite significantly from country to country. U.S.-domiciled mutual funds represent more than 40% of our sample in terms of number of funds, and about 67% of our sample in terms of NAV. As previously mentioned, the average size of European funds is much smaller than the average size of the U.S. funds which has the largest industry in the world. The difference of size is even greater for the Asian countries that have recently entered this business. Thus, the U.S. can have a very strong influence on our results. The aim is to test the robustness of the results excluding U.S. mutual funds.

In table 11 we report the multivariate regression explaining the size of the U.S. mutual funds using the fund level variables. We confirm that money market funds and real estate funds are positively related with size. We highlight the significance of the money market variable that has a great explanatory power in the model that uses the relative weight on the asset class as measure of size (F_size/assets). Due to strong correlation between Equity and Bond variables in this sub-sample, the former is not included. The same happens with the dummies that give us information about the geographical focus of a fund: Focus_home and Focus_region.

We confirm that primary funds are larger and fund age is positively related with mutual fund size, despite only being statistically significant in one model. Annual charges and redemption charges have negative coefficients confirming the previous results in the multivariate regressions and that mutual funds tend to present economies of scale. The fund of funds strategies (internal and external) and institutional funds are negatively related to U.S. mutual funds size. Here the previous results are also confirmed. Only the Government bond funds show a different effect on size, but the respective coefficient is significant only in one model and this strategy is more prominent in the European countries of our sample. To maximize the sample we exclude the variables with more observations missing (Return and

R_charge). The models with a larger number of observations seem to have better results in terms of relevance of the coefficients.

5.2. Non-U.S. Mutual Funds

Since there is a reasonable gap between European and Asian mutual fund size we split the non-U.S. funds in these two subcategories and re-estimate the multivariate regressions. Additionally, and reinforcing this procedure, it is important to refer the existence of important regulatory and economic differences between the countries of these two regions. Some of the country-level variables were excluded for multicolinearity reasons.

In table 12 we report the models for the European sub-sample. Overall we confirm the previous results: money market funds and real estate funds are positively related with size, the same applying to primary funds and funds complying UCITS. In the European sub-sample the equity funds tend to be smaller. There is no evidence that the geographical focus may influence the mutual fund size, which also confirms the absence of importance of this variable in the previous multivariate regressions. This is not strange given that EU funds tend to invest substantially in other EU countries. For instance, the mutual funds of Austria, Belgium, Finland, France, Germany and Italy invest a small fraction of their assets in the home country [Ramos(2006)].

Index tracking seems to contribute to increasing the size of funds even though results are only statistically significant for one of the four models and this variable does not show relevance in any of the other multivariate regressions. Comparing to the U.S. results, there is stronger evidence that the fund age variable is positively related to large funds. On the other hand, the only significant coefficient shows us a positive relation between annual charges and size.

The level of economic/financial development as well as the quality of the regulatory environment seems to confirm our previous findings, meaning the negative influence on mutual fund size. Therefore, economic and financial development seems more related with industry competition. The results about the bond funds and initial charges seem to be inconclusive. The same applies to country-level variables: trading costs, IT index and the entry of a new business. Like in the U.S. sample, the coefficients have more significance in models with a higher number of observations.

In the Asian sub-sample, shown in table 13, the multivariate regressions confirm the positive and stronger relation between money market funds and the size of the mutual funds. This evidence can be extended, but at a lower level, to bond funds, mixed assets funds and

real estate funds. Equity seems to be negatively associated to mutual fund size confirming previous results. In the geographical focus we find a positive relationship between funds investing at home and size. This can be explained by the recent emergence of this industry in these countries that should drive fund managers to invest more domestically instead of expanding their portfolios cross-border. This should be linked to political and regulatory reasons and it is also a more prudent way to convince less informed investors to apply their money in relatively recent financial products in such markets. As a matter of fact, as we can see in table 3, more than 90% of the NAV of the funds from India, Malaysia, Taiwan and Thailand is focused in the respective domestic markets. This number is 100% in China. Like in the European countries sub-sample, we also find a positive association between the index tracking strategy and fund size, which is unique in the multivariate regressions. There is also little evidence that institutional funds may be positively related to size, which once more can be related to a more regulated market typical of economies where the government authorities maintain strong intervention in the financial system. The fund of funds strategies (internal and external) is negatively associated to size. Results on fund age show us a positive relation with size reinforcing the previous finding about the impact of this variable on size. Initial charges and redemption charges appear to have a positive influence on size, despite the weak evidence in the case of this last variable. Regarding the country-level variables we find a positive relation between the industry age and the mutual funds size, meaning that younger industries lead to larger funds. The number of banks and trading cost seem to be positively linked with fund size.

5.3. Equity Mutual Funds

Equity funds account for roughly half of the total NAV of our sample. The main reason for this is the primacy of this type of fund in the U.S. market which is alone responsible for 67% of the funds' value in our sample. The UK also contributes to this scenario but to a lesser extent. The results of the multivariate regressions considering solely the equity funds do not differ from the previous models. The relationship between funds of funds (internal and external) and mutual fund size confirms the previous results. The index tracking strategy seems to be positively related to mutual fund size for both specifications with the country-level variables and the fixed effect factors. The strong evidence that funds complying with UCITS, primary funds and older funds are associated to larger mutual funds is once again enhanced by the results. On the other hand, the lack of influence of fund performance on size is also confirmed. Annual charges seem to have a negative impact on size while initial

charges have the opposite effect. The coefficients of the country-level variables are contradictory and do not bring further developments. However, the models with larger samples seem to confirm that the level of the financial development and the quality of the regulatory environment are negatively associated to size, with the exception of the GDPpc variable. In the entire set of multivariate and univariate regressions this is the only situation where the coefficient of GDPpc is positive and statistically relevant, suggesting a relationship, albeit weak, between more developed countries and larger equity mutual funds. This finding assumes some interest since KST (2005) argue that the effect of a wealthier environment on the mutual fund industry size, measured by the GDPpc, is more visible in equity mutual funds.

5.4. Bond Mutual Funds

Bond funds are the second most representative type of fund presented in our sample. They account for around 30% of the global NAV. The main contributors are again the U.S., Austria and Japan. The results are weaker than the previous multivariate regressions if we consider the low number of coefficients with statistical relevance. This may be due to the small size of the samples. Only the results on the effect of the fund age on size remain solid. The geographical focus and strategies are irrelevant to understand the mutual fund size and, confirming the results achieved in the Equity sub-sample, we have a negative relation between annual charges and size for both models with country-level variables and country dummies. In contrast, we find that redemption charges in the specification with the country variables is positively associated to size, which is not in itself a significant development considering the previous results and the small size of the sample. Once more we verify that the coefficients of the variables show us better results where there are larger samples and the fixed effect factors. With regard to the country-level variables, one of the models shows a positive relation between the practice of insider trading and mutual fund size. The same occurs with the variable that measures the administrative obstacles to start a new business, meaning that fewer barriers to establish a new business are related to larger funds. KST (2005) found evidence that the bond fund sector has experienced more limited growth in nations where banks have greater market power, contrasting with what happens in the equity sector. The negative relation between the variable that measures the number of banks and mutual fund size may suggest competition between mutual funds and other financial products offered by banks to their retail investors, especially fixed income products that stand as a natural alternative to bond mutual funds. As in most of the multivariate regressions, the

number of fixed line and mobile phone subscribers per 1000 people (Telcom) seems to be associated to larger funds while the turnover ratio has the opposite effect on size. This last result is coherent with the univariate regressions and some of the multivariate regressions including the equity mutual funds.

6. Conclusions

This study examines the relation between mutual fund size, fund attributes, and country characteristics. Data on mutual funds is drawn from Lipper Hindsight database that covers mutual funds around the world. The final sample includes 42,699 open-end funds from 18 countries in 2004. We consider several fund attributes as potential determinants of fund size, namely: asset type, geographical focus, fund strategies, fund age, fund charges, performance among other individual features. Additionally, we try to capture the effect on size of country-level variables that measure the economic and financial development of a country as well as the investor protection. We alternate the use of these variables with country dummies in order to determine if country specificities contribute to explaining mutual fund size.

The results show that money market funds and real estate funds tend to be larger. In contrast, equity funds tend to have a small size and this is also true in the European and Asian sub-samples. Considering the results of the multivariate regressions, geographical focus is not associated to size. This seems to indicate that strategies of regional and international diversification are quite spread among funds excluding some particular cases of closed economies.

Concerning fund strategies, surprisingly, we find that funds of funds (internal and external) seem to be negatively associated with mutual fund size. On the other hand, mutual funds government bonds tend to be larger. We also find strong evidence that Primary funds, UCITS, and fund age are positively linked to mutual fund size supporting our hypothesis. The results suggest that mutual fund performance might have a positive effect on size, although the evidence is somewhat weak which may be explained by the non-linearity between fund net flows and performance. Higher redemption charges seem to be linked to smaller funds and there is also a predominant relation on the multivariate regressions suggesting that annual charges may have a negative effect on mutual fund size. Results are stronger in the US sub-sample. This is not surprising given that mutual fund fees are followed more closely by regulatory authorities and media in the US than in the rest of the world. Results on initial charges remain inconclusive. However, the evidence seems to suggest that among classes of assets, initial charges have a negative impact on size.

With regard to the set of country features the results of some variables measuring the quality of the legal and regulatory environment, e.g. investor protection and accounting standards (CIFAR), indicate a negative effect on mutual fund size. The same conclusions appear to be extended to the influence of economic and financial development, quantified by

the GDPpc (one of the variables with most explanatory power), the number of banks and the turnover ratio that are negatively linked with mutual fund size. Bank concentration is one of the few variables that show us evidence that the concentration in the banking system can be related to larger mutual funds. Despite a few contradictory coefficients in the multivariate regressions, the majority of the results seem to indicate a positive relation between industry age and mutual fund size which is confirmed in the Asian sub-sample. Indeed, countries with a younger mutual fund industry seem to have larger funds. Overall these results seem to give consistency to the idea that larger and older industries also have more competition, presenting more funds and lower market shares of funds. The effect on mutual fund size of the remaining country-level variables used in our study is inconclusive. Additionally, through the use of the country dummies we find evidence that there are specificities in the countries responsible for explaining mutual fund size.

The differences between the results of KST (2005) in their attempt to explain the size of the mutual fund industry and the results achieved in this paper on the impact of the country characteristics in the mutual fund size are evident, starting from the unit of observation that is distinctive in each study. On the other hand, the existence of a much higher number of mutual funds in the developed countries as a result of an older and growing industry may potentially account for the competition between funds contributing to the coexistence of numerous small funds with very large and old funds. The U.S. mutual fund market, that holds by far the highest number of funds in our sample, seems to fit this description considering the highest standard deviation of the size average. The higher predominance of primary funds in Europe and Asian countries compared to U.S. may also contribute to this fact bearing in mind that our results support the hypothesis that primary funds are larger. It goes without saying that further research will surely bring more contributions to some of the results presented throughout this paper.

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Variables Description

A. Fund Level Variables[5]

Variable	Description
Dependent Variable-Fund Size:	Net assets values (measured in million of EUR)
F_size/total	Ratio of the size of each mutual fund to the total size of the funds domiciled in the same country
F_size/assets	Ratio of the size of each mutual fund to the total size of the funds domiciled in the same country and with the same asset type
Asset Type:	**The primary asset type of a fund**
Equity	Dummy variable that assumes value 1 if the fund is an equity fund
Bond	Dummy variable that assumes value 1 if the fund is a bond fund
M_assets	Dummy variable that assumes value 1 if the fund is a mixed asset fund
MM	Dummy variable that assumes value 1 if the fund is a money market fund
R_estate	Dummy variable that assumes value 1 if the fund is a real estate fund
Geographical Focus:	**The primary geographical investment area of a fund**
Focus_home	Dummy variable that assumes the value 1 if the fund invests at home
Focus_region	Dummy variable that equals 1 if the fund invests in the same region
Focus_global	Dummy variable that assumes the value 1 if the fund is a global fund
Themes or Strategies:	**Strategy adopted by the fund**
Corp_bond	Corporate Bond: Funds that include debt instrument issued by a company (= 1 if Yes)
Gov_bond	Government Bond: Funds that include debt instrument issued by a city or state (= 1 if Yes)
Inst_fund	Institutional Fund: A mutual fund targeting high value investors with low fees, but high minimum requirements (= 1 if Yes)
F_funds_ext	Mutual fund that invest in external mutual funds (= 1 if Yes)
F_funds_int	Mutual fund that invest in internal mutual funds (= 1 if Yes)
Index_tracking	Fund that is weighted the same as a stock-exchange index in order to mirror its performance (= 1 if Yes)
Other features:	
Primary	Dummy variable that assumes the value 1 if the fund is primary
UCITS	Mutual fund that comply UCITS EU regulation[6] (= 1 if Yes)

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[5] Source: Lipper Hindsight (Reuters)

[6] Set of regulations adopted by the EU Commission governing funds domiciled in the EU member states. Most of the funds established under the UCITS I regulations in the EU member states, including Germany, France, Luxembourg, Ireland and the UK, will need to comply with the new regulations under UCITS III. Currently, many of the SFC authorised UCITS funds which are domiciled in the EU member states are from these jurisdictions.

Variable	Description
Quantitative attributes:	
Return	Price NAV (2004)/Price NAV (2002) – 1 (measured in percentage)
F_age	Difference between the last quoted price date (2004) and the launch date of the fund (measured in years)
A_charge	Annual Charge: Includes management fee, deposit fee and other charges (measured in percentage)
I_charge	Initial Charge: subscription fee (measured in percentage)
R_charge	Redemption Charge: Charge to be paid when the investor wishes to redeem his investment in the fund (measured in percentage)

B. Country Level Variables

Variables	Description	Source
Legal Regulatory and Governance Characteristics		
I_protection	The sum of efficiency of legal system, rule of law, corruption, risk of expropriation and risk of contract repudiation of LLSV (1998). All these values are scaled between 1 and 10. A higher number represents a better judicial system, less corruption and a lower risk of expropriation and repudiation. See KST (2005)	LLSV (1998)
Common_law	Dummy variable that equals 1 if the origin type of the country's legal system is English common law.	CIA Factbook
CIFAR	Index created by IAAT to analyze the inclusion and omission of accounting items (higher implies better standards)	International Accounting and Auditing Trends, Centre for Financial Analysis and Research Inc (IAAT)
IT_index	Insider Trading Index. A higher number implies more insider trading or legal corruption.	Global Competitiveness Report of World Economic Forum
Supply Side Characteristics		
Bank_conc	Bank Concentration Index (2003): Percentage of total banking assets held by the top 5 banks	Beck, Demirgüç-Kunt and Levine (2000)
New_business	Administrative conditions and new businesses: administrative procedures are an important obstacle to starting a new business	Economic Freedom of the World: 2004 Annual Report Index Free the World, 5 Cii (2002)
N_banks	Number of banks per 100,000 people	Barth, Caprio and Levine (2001)
Buyers Characteristics		
GDPpc	Gross Domestic Product per capita (USD) - 2004	World Bank Database
I_age	Industry age: Year when the first fund was launched	Khorana, Servaes and Tufano (2005)
Telcom	Fixed line and mobile phone subscribers (per 1000 people) – 2000	World Bank Database

Variables	Description	Source
Trading Characteristics		
Turnover	Stock market turnover ratio (2003): Frequency of trading (annualized)	WDI database
T_cost	Trading costs measured in basis points (2004): Management fee and taxes	Global Universe Data-ElkinsMcSherry database

Table 1: Mutual Fund Industry around the world: number of funds and net asset value

The table below presents the number of funds in our sample, their total size and average size and respective standard deviation (total net assets values measured in millions of EUR) discriminated by country, reporting data at the end of 2004 (Panel A) The sample is drawn from Lipper Hindsight database and is solely limited to open-end fund whenever we have information available about the size. Panel B presents descriptive statistics and in Panel C the figures are aggregated by region (Europe and Asia).

	Sample			
Panel A: Countries	**Number of Funds**	**Total Size (€mio)**	**Average Size (€mio)**	**Stand. Deviation (€mio)**
Austria	1,410	63,761.57	45.22	95.19
Belgium	1,221	85,571.64	70.08	178.19
China	107	23,204.70	216.87	234.75
France	5,659	705,789.09	124.72	447.96
Germany	1,115	303,506.80	272.20	884.99
India	1,232	39,718.42	32.24	69.37
Italy	1,103	368,640.51	334.22	969.76
Japan	2,372	217,321.22	91.62	597.73
South Korea	3,104	94,635.56	30.49	115.50
Malaysia	311	7,782.57	25.02	39.06
Portugal	234	25,901.44	110.69	254.34
Singapure	540	14,679.81	27.18	55.64
Spain	2,508	226,680.82	90.38	292.62
Switzerland	699	94,378.34	135.02	276.11
Taiwan	452	63,005.63	139.39	268.01
Thailand	354	5,917.84	16.72	42.09
UK	2,322	416,697.65	179.46	382.85
USA	17,956	5,729,700.24	319.10	1,671.51
Total	42,699	8,486,893.85	-	-
Panel B: Descriptive statistics				
Mean	2,372.17	471,494.10	125.59	381.98
SD	4,121.86	1,325,378.16	101.62	421.10
Max	17,956	5,729,700.24	334.22	1,671.51
Min	107.00	5,917.84	16.72	39.06
Median	1,168.00	89,974.99	101.15	261.17
Panel C: Data by regions				
Europe	16,271	2,290,927.86	140.80	420.22
Asia	8,472	466,265.75	55.04	177.77

Table 2: Weight of asset classes: breakdown by country

This table reports the relative weight of each asset class (Bond, Equity, Mixed Assets, Money Market, Other and Real Estate) by country (Panel A). Weights are computed using net assets. Panel B reports descriptive statistics and in Panel C we present the relative average weight by region for each asset class. Panel D reports the correlation between the dependent variable and the asset classes variables.

	Asset Classes					
Panel A: Countries	**Bond**	**Equity**	**Mixed Assets**	**Money Market**	**Other**	**Real Estate**
Austria	53.87%	18.83%	15.78%	10.07%	0.86%	0.59%
Belgium	11.34%	20.57%	28.34%	3.00%	36.69%	0.06%
China	3.88%	8.33%	64.53%	17.40%	5.86%	0.00%
France	11.60%	20.00%	9.48%	48.15%	10.76%	0.00%
Germany	20.92%	31.74%	6.67%	11.58%	0.68%	28.42%
India	36.88%	14.63%	4.68%	43.82%	0.00%	0.00%
Italy	36.13%	18.93%	18.19%	26.75%	0.00%	0.00%
Japan	48.41%	40.86%	3.34%	0.27%	5.26%	1.86%
South Korea	12.60%	3.96%	7.40%	28.16%	47.87%	0.00%
Malaysia	16.61%	59.99%	14.44%	7.11%	1.85%	0.00%
Portugal	31.79%	6.42%	14.17%	34.47%	3.46%	9.69%
Singapure	11.56%	41.34%	26.32%	1.69%	19.09%	0.00%
Spain	18.92%	8.62%	15.18%	31.54%	24.00%	1.73%
Switzerland	27.30%	37.01%	18.49%	11.39%	5.68%	0.13%
Taiwan	77.34%	13.43%	9.16%	0.00%	0.07%	0.00%
Thailand	35.30%	27.36%	23.91%	13.43%	0.00%	0.00%
UK	15.47%	69.60%	12.04%	0.67%	0.14%	2.08%
USA	34.53%	63.81%	0.01%	0.01%	0.00%	1.64%
Total	30.96%	52.57%	3.98%	7.39%	2.74%	2.36%
Panel B: Descriptive statistics						
Mean	28.18%	28.08%	16.23%	16.08%	9.02%	2.57%
SD	18.01%	20.23%	14.36%	15.69%	14.02%	6.85%
Max	77.34%	69.60%	64.53%	48.15%	47.87%	28.42%
Min	3.88%	3.96%	0.01%	0.00%	0.00%	0.00%
Median	24.11%	20.29%	14.31%	11.49%	2.66%	0.03%
Panel C: Data by region						
Europe (average)	25.26%	25.75%	15.37%	19.74%	9.14%	4.74%
Asia (average)	29.39%	27.90%	21.30%	9.72%	11.43%	0.27%
Panel D: Correlations						
F_size/total	0.004	-0.079	0.036	0.126	-0.010	0.042
F_size/assets	-0.026	-0.078	0.037	0.098	0.021	0.140

Table 3: Geographical Focus and Types of Mutual Funds

This table reports the geographical focus and strategies of the mutual funds. In panel A weights are computed using net assets. Panel B presents the descriptive statistics and Panel C reports weights aggregated by regions (all data is in percentage). Panel D reports the correlation between the dependent variables and fund attributes. Variables are described in Appendix A

					Fund Attributes						
Panel A: Countries	**Focus Home**	**Focus Region**	**Focus Global**	**Corporate Bond**	**Government Bond**	**Inst. Fund**	**Fund of Funds Ext.**	**Fund of Funds Int.**	**Index Tracking**	**Primary**	**UCITS**
Austria	11.98%	49.28%	38.74%	4.99%	24.07%	1.31%	13.81%	13.79%	1.42%	70.69%	99.50%
Belgium	11.15%	50.47%	38.29%	0.56%	1.07%	5.52%	4.00%	8.17%	1.51%	90.27%	43.24%
China	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.83%	100.00%	0.00%
France	11.97%	72.44%	15.57%	1.42%	4.14%	5.05%	6.25%	3.07%	6.11%	91.01%	50.42%
Germany	18.99%	58.02%	22.99%	0.39%	0.26%	2.93%	2.28%	2.72%	2.61%	99.31%	97.58%
Índia	99.97%	0.00%	0.03%	0.07%	2.46%	20.25%	0.05%	0.67%	0.20%	46.67%	0.00%
Italy	3.69%	73.50%	22.81%	2.09%	15.57%	1.56%	2.28%	1.85%	0.06%	95.58%	97.65%
Japan	53.11%	15.79%	29.06%	0.00%	0.00%	0.00%	3.97%	1.13%	15.39%	96.25%	0.00%
South Korea	0.00%	98.93%	1.07%	0.01%	23.59%	13.44%	1.34%	1.10%	0.00%	80.29%	0.00%
Malaysia	99.95%	0.03%	0.02%	0.00%	0.00%	4.17%	0.00%	0.67%	2.64%	n.a.	0.00%
Portugal	23.81%	62.66%	13.52%	6.97%	0.00%	2.77%	3.84%	5.10%	0.01%	99.34%	92.87%
Singapore	15.50%	36.23%	48.27%	0.00%	0.00%	0.62%	7.00%	21.83%	0.70%	97.36%	0.00%
Spain	24.99%	50.16%	24.84%	22.33%	0.04%	4.48%	8.12%	4.97%	0.86%	97.60%	100.00%
Switzerland	45.40%	32.26%	22.32%	0.52%	0.21%	24.23%	6.00%	1.66%	11.10%	88.47%	0.69%
Taiwan	93.71%	1.91%	4.38%	0.00%	0.00%	0.00%	1.41%	0.01%	1.75%	99.68%	0.00%
Thailand	97.44%	0.31%	2.24%	0.00%	0.00%	1.32%	0.48%	0.00%	0.00%	n.a.	0.00%
UK	60.99%	20.25%	18.12%	8.42%	1.13%	11.82%	3.76%	5.29%	5.28%	90.34%	82.51%
USA	39.69%	48.19%	8.03%	1.17%	2.78%	27.43%	0.09%	1.94%	9.36%	74.25%	0.00%
Panel B: Descriptive statistics											
Mean	45.13%	37.25%	17.24%	2.72%	4.18%	7.05%	3.59%	4.11%	3.60%	88.57%	36.91%
SD	37.57%	30.28%	14.95%	5.52%	8.03%	8.72%	3.62%	5.63%	4.44%	14.41%	44.90%
Max	100.00%	98.93%	48.27%	22.33%	24.07%	27.43%	13.81%	21.83%	15.39%	100.00%	100.00%
Min	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	46.67%	0.00%
Median	32.34%	42.21%	16.84%	0.45%	0.23%	3.55%	3.02%	1.90%	1.63%	93.29%	0.35%
Panel C: Data by region											
Europe (average)	23.66%	52.11%	24.13%	5.30%	5.17%	6.63%	5.59%	5.18%	3.22%	91.40%	73.83%
Asia (average)	69.96%	19.15%	10.63%	0.01%	3.26%	4.97%	1.78%	3.18%	3.31%	86.71%	0.00%
Panel D: Correlations											
F_size/total	0.0388	-0.0263	-0.0124	0.0026	0.0036	-0.0265	-0.0141	-0.0071	-0.0043	0.1143	0.0307
F_size/assets	0.0389	-0.0402	0.0045	-0.0020	-0.0049	-0.0271	0.0004	0.0017	-0.0110	0.0716	0.0385

Table 4: Quantitative features: Fund performance, Fund age and Fund charges

This table (Panel A) presents the average by country of the following fund attributes: fund charges (annual charges, initial charges and redemption charges measured in percentage), fund return (measured in percentage) and fund age (measured in years). Panel B reports descriptive statistics and in Panel C data is aggregated by region. Panel D reports the correlation between the dependent variable.

	Return	F_age	A_charge	I_charge	R_charge
Panel A: Countries					
Austria	-5.294	5.885	1.036	3.670	0.004
Belgium	-1.888	5.335	0.985	2.476	0.357
China	-11.83	1.710	1.231	1.093	0.311
France	-2.597	8.136	1.306	2.536	0.497
Germany	-5.858	9.936	1.012	3.512	0.003
India	1.727	3.102	1.056	0.411	0.197
Italy	-3.685	7.422	1.44	1.215	0.332
Japan	-4.654	7.162	1.167	1.245	0.119
South Korea	-10.09	3.146	1.263	0.034	0.000
Malaysia	-12.84	5.984	1.366	n.a.	n.a.
Portugal	-1.519	7.335	1.257	0.261	0.692
Singapure	-8.106	5.041	0.99	3.537	0.058
Spain	-0.410	6.979	1.39	0.529	0.669
Switzerland	n.a.	7.094	1.022	3.177	0.849
Taiwan	-14.48	5.538	1.045	0.994	0.04
Thailand	12.32	4.588	0.926	n.a.	n.a.
UK	-6.826	10.23	1.170	3.827	0.164
USA	-14.17	8.169	0.543	0.490	0.928
Panel B: Descriptive Statistics					
Mean	-5.306	6.266	1.131	1.813	0.326
SD	6.609	2.265	0.339	1.432	0.313
Max	12.32	10.23	1.440	3.827	0.928
Min	-14.48	1.710	0.543	0.034	0.000
Median	-5.294	6.4815	1.167	1.230	0.254
Panel C: Data by regions					
Europe (average)	-3.510	7.657	1.230	2.253	0.340
Asia (average)	-5.994	4.534	1.131	1.219	0.121
Panel D: Correlations					
F_size/total	0.059	0.038	0.022	0.049	-0.052
F_size/assets	0.051	0.003	0.023	0.031	-0.023

Table 5: Country determinants of fund size

Panel A presents data of country-level explanatory variables. Variables are described in Appendix A. Panel B reports descriptive statistics and Panel C aggregates data by region.

					Country characteristics							
Panel A: Countries	**I_protection**	**Common_law**	**CIFAR**	**IT_index**	**Bank_conc**	**New_business**	**N_banks**	**GDP pc**	**I_age**	**Telcom**	**Turnover**	**T_cost**
Austria	47.36	0	62	3.19	0.80	4.50	11.90	31,264.50	1956	1,245.17	0.25	16.82
Belgium	47.36	0	68	2.80	0.83	1.83	1.20	30,509.45	1947	1,065.04	0.25	19.87
China	n.a.	0	n.a.	4.62	0.61	3.83	n.a.	5.559.15	2001	177.63	0.83	n.a.
France	44.87	0	78	3.07	0.47	1.83	0.60	28,636.90	1964	1,070.41	0.85	18.15
Germany	46.83	0	67	2.48	0.64	3.67	3.90	28,654.26	1949	1,196.48	1.29	18.27
India	30.61	1	61	4.53	0.40	2.50	0.00	3,072.39	1964	35.57	1.39	39.45
Italy	39.73	0	66	3.87	0.41	2.33	1.60	27,692.20	1983	1,211.19	1.21	17.64
Japan	46.86	0	71	2.84	0.33	3.00	0.20	29,391.68	1965	1,111.94	0.87	12.90
South Korea	33.55	0	68	4.09	0.48	3.67	0.00	19,018.93	1992	1.060.08	2,6	41.26
Malasya	38.54	1	79	4.47	0.43	4.33	0.20	9.572.91	1959	419.26	0.34	40.27
Portugal	39.03	0	56	3.56	0.84	3.00	0.60	17,859.17	1986	1,095.31	0.42	19.16
Singapore	44.95	1	79	2.44	0.96	6.83	3.90	27,315.86	1959	1,168.31	0.71	26.88
Spain	39.35	0	72	3.45	0.73	2.83	0.80	23,241.86	1958	1,031.08	1.57	17.62
Switzerland	49.96	0	80	3.02	0.90	5.33	5.50	33,635.99	1931	1,369.71	0.89	18.20
Taiwan	40.40	0	58	4.70	0.27	5.17	n.a.	25,168.16	1984	n.a.	1.86	37.40
Thailand	29.67	1	66	4.73	0.52	3.67	0.00	8,176.23	1995	142.67	1.17	43.45
UK	47.01	1	85	2.26	0.43	3.33	0.80	29,483.29	1934	1,316.47	1.00	39.34
USA	47.61	1	76	2.62	0.31	4.00	3.90	39,731.65	1924	1,053.51	1.21	19.39
Panel B: Descriptive Statistics												
Mean	41.98	0.33	70.12	3.49	0.58	3.65	2.19	23,221.37	1964	927.64	1.03	26.24
SD	11.62	0.49	18.42	0.86	0.22	1.28	3.02	10,438.95	23	475.83	0.56	12.33
Max	49.96	1.00	85.00	4.73	0.96	6.83	11.90	39,731.65	2001	1.369.71	2.36	43.45
Min	29.67	0.00	56.00	2.26	0.27	1.83	0.00	3,072.39	1924	35.57	0.25	12.90
Median	44.87	0.00	68.00	3.32	0.50	3.67	0.80	27,504.03	1962	1,070.41	0.95	19.39
Panel C: Data by regions												
Europe (average)	44.61	0.11	70.44	3.08	0.67	3.18	2.99	27,886.40	1956	1,177.87	0.86	20.56
Asia (average)	37.80	0.57	68.86	3.97	0.48	4.17	0.72	17,388.02	1974	656.31	1.24	34.52

Table 6: Correlations Matrix

This table presents correlation between explanatory variables. Variables are described in Appendix A

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Equity	1	1.00																																
Bond	2	-0.57	1.00																															
M_assets	3	-0.33	-0.21	1.00																														
MM	4	-0.20	-0.13	-0.07	1.00																													
R_estate	5	-0.08	-0.05	-0.03	-0.02	1.00																												
Focus_home	6	0.09	0.07	-0.11	-0.02	0.02	1.00																											
Focus_region	7	0.00	0.01	-0.12	0.09	-0.01	-0.65	1.00																										
Focus_global	8	-0.10	-0.10	0.28	-0.08	-0.02	-0.35	-0.48	1.00																									
Corp_bond	9	-0.06	0.11	-0.03	0.02	0.00	0.06	-0.03	-0.03	1.00																								
Gov_bond	10	-0.09	0.13	-0.03	0.03	-0.01	0.10	-0.04	-0.06	-0.02	1.00																							
Inst_fund	11	0.08	0.09	-0.12	-0.04	0.01	0.05	0.01	-0.08	0.00	0.00	1.00																						
F_funds_ext	12	-0.09	-0.12	0.28	-0.03	0.02	-0.15	-0.13	0.33	-0.03	-0.03	-0.08	1.00																					
F_funds_int	13	-0.02	-0.04	0.16	-0.04	-0.01	-0.13	-0.01	0.16	-0.03	-0.02	-0.01	0.25	1.00																				
Index_tracking	14	0.10	-0.02	-0.06	-0.03	0.00	-0.03	0.07	-0.05	-0.03	-0.01	0.09	-0.04	-0.02	1.00																			
Primary	15	-0.14	-0.13	0.19	0.06	-0.01	-0.10	-0.03	0.15	0.00	-0.02	-0.21	0.14	0.00	0.01	1.00																		
UCITS	16	-0.05	-0.07	0.14	0.09	-0.01	-0.14	-0.02	0.19	0.09	0.04	-0.18	0.09	0.06	-0.01	0.27	1.00																	
Return	17	-0.13	-0.04	0.11	0.15	-0.02	-0.05	-0.01	0.07	0.03	0.00	-0.10	0.06	0.01	-0.04	0.20	0.21	1.00																
F_age	18	0.04	0.13	-0.06	0.01	-0.02	0.06	0.00	-0.06	0.01	0.01	0.01	-0.10	-0.04	0.00	0.00	0.10	0.04	1.00															
A_charge	19	0.04	-0.21	0.23	-0.07	-0.02	-0.20	0.05	0.18	-0.03	-0.11	-0.29	0.12	-0.01	-0.13	0.32	0.31	0.26	-0.04	1.00														
I_charge	20	0.02	-0.16	0.13	-0.10	0.00	-0.11	-0.10	0.25	-0.01	-0.04	-0.24	0.24	0.10	-0.05	0.27	0.32	0.13	0.02	0.24	1.00													
R_charge	21	0.00	-0.03	-0.13	-0.11	0.01	0.01	-0.02	0.01	-0.02	-0.05	0.11	-0.04	-0.06	0.03	-0.15	-0.10	-0.07	-0.05	-0.08	0.02	1.00												
I_protection	22	0.24	0.06	-0.16	-0.14	0.04	-0.02	-0.06	0.10	0.01	-0.02	0.20	0.01	0.06	0.08	-0.23	-0.08	-0.21	0.20	-0.35	0.17	0.15	1.00											
Common_law	23	0.28	0.17	-0.27	-0.15	0.03	0.26	-0.07	-0.21	-0.01	-0.01	0.30	-0.20	0.00	0.05	-0.50	-0.42	-0.30	0.09	-0.45	-0.26	0.16	0.34	1.00										
CIFAR	24	0.18	-0.02	-0.11	-0.05	0.00	0.01	0.02	-0.03	0.03	-0.06	0.16	-0.01	-0.04	0.07	-0.13	-0.14	-0.14	0.18	-0.21	0.13	0.17	0.56	0.42	1.00									
IT_index	25	-0.25	-0.05	0.18	0.14	-0.05	0.04	0.01	-0.06	-0.02	0.04	-0.20	0.02	-0.06	-0.08	0.23	0.06	0.20	-0.21	0.34	-0.15	-0.13	-0.91	-0.46	-0.68	1.00								
Bank_conc	26	-0.22	-0.14	0.22	0.10	-0.03	-0.21	-0.02	0.26	0.04	0.01	-0.21	0.20	0.12	-0.05	0.35	0.51	0.26	-0.08	0.33	0.37	-0.08	-0.20	-0.59	-0.29	0.23	1.00							
New_business	27	0.18	0.09	-0.12	-0.18	0.03	0.08	0.00	-0.09	-0.02	0.00	0.18	-0.11	0.10	0.02	-0.27	-0.30	-0.28	0.00	-0.28	-0.13	-0.01	0.24	0.52	0.03	-0.22	-0.08	1.00						
N_banks	28	0.15	0.12	-0.10	-0.12	0.02	-0.05	-0.01	0.07	0.02	0.09	0.17	0.05	0.17	0.03	-0.31	0.03	-0.20	0.05	-0.29	0.06	0.03	0.53	0.31	-0.09	-0.40	0.07	0.63	1.00					
GDPpc	29	0.27	0.10	-0.23	-0.18	0.04	-0.07	0.08	-0.02	0.01	-0.01	0.27	-0.08	0.03	0.08	-0.37	-0.24	-0.30	0.18	-0.44	-0.12	0.24	0.88	0.49	0.51	-0.83	-0.42	0.37	0.56	1.00				
I_age	30	-0.29	-0.15	0.27	0.16	-0.04	-0.13	0.05	0.08	-0.02	0.02	-0.32	0.12	-0.02	-0.08	0.48	0.24	0.29	-0.17	0.47	0.13	-0.27	-0.77	-0.78	-0.55	0.80	0.40	-0.42	-0.53	-0.82	1.00			
Telcom	31	0.08	-0.09	0.03	-0.10	0.02	-0.31	0.14	0.18	0.04	-0.02	0.01	0.11	0.08	0.02	0.16	0.26	-0.07	0.13	0.01	0.29	0.00	0.58	-0.22	0.39	-0.59	0.15	0.15	0.27	0.55	-0.19	1.00		
Turnover	32	-0.06	-0.01	0.00	-0.01	-0.01	-0.04	0.23	-0.24	-0.01	-0.02	0.01	-0.15	-0.11	-0.04	0.00	-0.19	-0.10	-0.10	0.09	-0.43	-0.03	-0.59	0.02	-0.18	0.42	-0.26	0.17	-0.33	-0.23	0.26	-0.14	1.00	
T_cost	33	-0.07	-0.06	0.08	0.04	-0.03	0.09	0.04	-0.15	-0.03	0.01	-0.08	-0.06	-0.04	-0.06	0.09	-0.08	0.01	-0.13	0.20	0.03	-0.19	-0.66	0.11	-0.12	0.50	0.00	0.11	-0.38	-0.60	0.38	-0.33	0.51	1.00

This table displays the results of the univariate regressions on the explanatory variables. Dependent variables are: the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country (F_size/total) and the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country and with the same asset type (F_size/assets). Explanatory variables are described in Appendix A. All regressions are run with an intercept. Columns present the number of observations (N), coefficients, T-statistics and significance. The coefficients that denote statistical significance at 5% level are highlighted in bold.

		F_size/total			F_size/assets		
	N	Coeff	t-stat	sign	Coeff	t-stat	sign
Fund Attributes (Dummies)							
Asset Type							
Equity	42,641	**-0.079**	-16.401	0.000	**-0.078**	-16.145	0.000
Bond	42,641	0.004	0.871	0.384	**-0.026**	-5.276	0.000
M_assets	42,641	**0.036**	7.406	0.000	**0.037**	7.653	0.000
MM	42,641	**0.126**	26.246	0.000	**0.098**	20.289	0.000
R_estate	42,641	**0.042**	8.772	0.000	**0.140**	29.160	0.000
Geographical Focus							
Focus_home	40,551	**0.062**	12.518	0.000	**0.043**	8.621	0.000
Focus_region	40,551	**-0.042**	-8.542	0.000	**-0.044**	-8.868	0.000
Focus_global	40,551	**-0.019**	-3.899	0.000	0.005	0.998	0.318
Strategies							
Corp_bond	42,698	0.007	1.355	0.175	-0.001	-0.225	0.822
Gov_bond	42,698	0.009	1.866	0.062	-0.004	-0.819	0.413
Inst_fund	42,698	**-0.046**	-9.487	0.000	**-0.032**	-6.545	0.000
F_funds_ext	42,698	**-0.024**	-4.914	0.000	0.002	0.445	0.656
F_funds_int	42,698	**-0.011**	-2.248	0.025	0.003	0.661	0.509
Index_tracking	42,698	-0.006	-1.197	0.231	**-0.010**	-2.164	0.030
Other Features							
Primary	39,003	**0.114**	22.730	0.000	**0.072**	14.168	0.000
UCITS	42,698	**0.064**	13.313	0.000	**0.046**	9.560	0.000
Fund Attributes (Quantitative)							
Return	25,663	**0.059**	9.419	0.000	**0.051**	8.132	0.000
F_age	42,616	**0.038**	7.905	0.000	0.003	0.552	0.581
A_charge	33,841	**0.022**	4.114	0.000	**0.023**	4.167	0.000
I_charge	38,949	**0.049**	9.751	0.000	**0.031**	6.191	0.000
R_charge	26,618	**-0.052**	-8.554	0.000	**-0.023**	-3.746	0.000
Country Characteristics							
Legal. regulatory and governance characteristics							
I_protection	42,591	**-0.113**	-23.416	0.000	**-0.056**	-11.560	0.000
Common_law	42,698	**-0.085**	-17.643	0.000	**-0.064**	-13.151	0.000
CIFAR	42,591	**-0.136**	-28.352	0.000	**-0.081**	-16.700	0.000
IT_index	42,698	**0.169**	35.506	0.000	**0.092**	19.120	0.000
Supply side characteristics							
Bank_conc	42,698	**0.159**	33.342	0.000	**0.119**	24.862	0.000
New_business	42,698	**0.044**	9.041	0.000	**0.028**	5.750	0.000
N_banks	42,139	**-0.032**	-6.656	0.000	**-0.013**	-2.767	0.006
Buyers characteristics							
GDPpc	42,698	**-0.193**	-40.748	0.000	**-0.117**	-24.373	0.000
I_age	42,698	**0.158**	33.137	0.000	**0.095**	19.719	0.000
Telcom	42,246	**-0.114**	-23.579	0.000	**-0.054**	-11.166	0.000
Trading characteristics							
Turnover	42,698	**-0.068**	-14.046	0.000	**-0.056**	-11.515	0.000
T_cost	42,591	**0.094**	19.427	0.000	**0.046**	9.562	0.000

Table 8: Multivariate Regressions of Mutual Fund Size using Fund Features

This table reports multivariate OLS regressions explaining the size of the mutual funds across countries using solely the fund level variables. The dependent variable is the fund size standardized in two different ways: the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country (**F_size/total**) and the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country and with the same asset type (**F_size/assets**). The explanatory variables are described in Appendix A. Columns present the coefficients and the respective significance. The coefficients that denote statistical significance at 5% level are highlighted in bold. In the last row of the table we report the adjusted R-square of the regression and the number of observations used in the model (N).

| | F_size/total | | | | | | | | F_size/assets | | | | | | | |
| Model | (1) | | (2) | | (3) | | (4) | | (1) | | (2) | | (3) | | (4) | |
	Coeff	sign	Coeff	sign	Coeff	sign	Coeff	sign	Coeff	sign	Coeff	sign	Coeff	sign	Coeff	sign
Constant	0.000	0.697	-0.001	0.540	0.000	0.767	0.000	0.994	0.001	0.621	-0.001	0.904	-0.001	0.863	0.002	0.866
Equity	**-0.030**	0.002	**0.042**	0.008	**-0.039**	0.002	0.010	0.652	**-0.079**	0.000	**-0.048**	0.002	**-0.085**	0.000	**-0.075**	0.000
Bond	**0.021**	0.026	**0.086**	0.000	**0.040**	0.001	**0.082**	0.000	**-0.049**	0.000	-0.024	0.111	**-0.038**	0.001	-0.031	0.124
M_assets	**0.034**	0.000	**0.045**	0.000	**0.032**	0.003	0.032	0.061	0.001	0.906	**0.031**	0.004	-0.015	0.154	0.004	0.823
MM	**0.126**	0.000	**0.134**	0.000	**0.148**	0.000	**0.146**	0.000	**0.064**	0.000	**0.089**	0.000	**0.096**	0.000	**0.124**	0.000
R_estate	**0.056**	0.000	**0.068**	0.000	**0.079**	0.000	**0.106**	0.000	**0.152**	0.000	**0.109**	0.000	**0.220**	0.000	**0.130**	0.000
Focus_home	0.005	0.952	0.107	0.646	0.063	0.459	0.021	0.961	0.048	0.554	0.085	0.716	0.092	0.275	0.005	0.990
Focus_region	-0.052	0.550	0.069	0.777	0.015	0.868	-0.008	0.988	0.001	0.994	0.046	0.851	0.043	0.638	-0.043	0.929
Focus_global	-0.042	0.559	0.060	0.753	0.004	0.965	-0.013	0.977	0.016	0.823	0.042	0.829	0.055	0.505	-0.031	0.942
Corp_bond	-0.004	0.464	-0.007	0.290	-0.005	0.477	-0.010	0.292	-0.006	0.277	-0.008	0.222	-0.007	0.349	-0.015	0.125
Gov_bond	0.001	0.915	-0.008	0.200	0.013	0.066	0.005	0.592	-0.007	0.146	-0.008	0.228	-0.001	0.936	0.005	0.625
Inst_fund	**-0.016**	0.002	**-0.029**	0.000	0.000	0.980	**-0.021**	0.036	-0.007	0.174	**-0.016**	0.018	-0.001	0.913	-0.008	0.415
F_funds_ext	**-0.038**	0.000	**-0.026**	0.000	**-0.037**	0.000	**-0.028**	0.008	**-0.020**	0.000	**-0.024**	0.001	**-0.024**	0.002	**-0.022**	0.044
F_funds_int	0.007	0.215	0.006	0.346	0.006	0.445	-0.003	0.803	**0.012**	0.026	0.004	0.536	**0.019**	0.017	-0.001	0.933
Index_tracking	0.010	0.058	0.007	0.261	0.006	0.367	-0.011	0.237	0.004	0.451	-0.002	0.794	0.007	0.309	-0.006	0.505
Primary	**0.093**	0.000	**0.083**	0.000	**0.086**	0.000	**0.074**	0.000	**0.044**	0.000	**0.043**	0.000	**0.049**	0.000	**0.033**	0.002
UCITS	**0.045**	0.000	**0.075**	0.000	-0.002	0.786	**0.027**	0.012	**0.035**	0.000	**0.076**	0.000	0.008	0.272	**0.039**	0.000
F_age	**0.039**	0.000	**0.040**	0.000	**0.078**	0.000	**0.065**	0.000	**0.013**	0.014	**0.026**	0.000	**0.037**	0.000	0.013	0.192
Return			**0.015**	0.025			0.015	0.119			0.010	0.136			**0.048**	**0.000**
A_charge					**-0.029**	0.000	**-0.053**	0.000					-0.002	0.834	-0.007	0.507
I_charge					**0.052**	0.000	**0.056**	0.000					**0.021**	0.006	**0.033**	0.002
R_charge					**-0.020**	0.006	**-0.059**	0.000					-0.004	0.555	**-0.026**	0.015
Country Dummies	No		No		No		No		No		No		No		No	
Adjusted R²	4.28%		4.38%		5.52%		6.59%		4.36%		4.24%		7.57%		5.73%	
N	37,495		23,330		19,450		11,009		37,495		23,330		19,450		11,009	

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Table 9: Multivariate Regressions of Mutual Fund Size using Fund Features and Country Dummies

The table reports multivariate OLS regressions explaining the size of the mutual funds across countries using the fund level variables and the country dummies. The dependent variable is the fund size standardized in two different ways: the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country (**F_size/total**) and the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country and with the same asset type (**F_size/assets**). The explanatory variables are described in Appendix A. Columns present the coefficients and the respective significance. The coefficients that denote statistical significance at 5% level are highlighted in bold. In the last row of the table we report the presence of the countries dummies. the adjusted R-square of the regression and the number of observations used in the model (N).

Model	F_size/total (1) Coeff	sign	(2) Coeff	sign	(3) Coeff	sign	(4) Coeff	sign	F_size/assets (1) Coeff	sign	(2) Coeff	sign	(3) Coeff	sign	(4) Coeff	sign
Constant																
Equity	**-0.022**	0.031	-0.001	0.908	0.020	0.228	-0.013	0.580	**-0.080**	0.000	**-0.101**	0.000	**-0.081**	0.000	**-0.131**	0.000
Bond	**0.021**	0.031	0.023	0.048	**0.077**	0.000	**0.051**	0.015	**-0.055**	0.000	**-0.077**	0.000	**-0.049**	0.003	**-0.080**	0.000
M_assets	-0.003	0.678	-0.007	0.374	**0.025**	0.018	0.008	0.646	**-0.023**	0.002	**-0.043**	0.000	0.013	0.230	-0.027	0.136
MM	**0.125**	0.000	**0.127**	0.000	**0.142**	0.000	**0.134**	0.000	**0.059**	0.000	**0.076**	0.000	**0.087**	0.000	**0.107**	0.000
R_estate	**0.051**	0.000	**0.056**	0.000	**0.063**	0.000	**0.102**	0.000	**0.144**	0.000	**0.146**	0.000	**0.097**	0.000	**0.120**	0.000
Focus_home	-0.031	0.681					0.055	0.895	0.018	0.816					0.074	0.861
Focus_region	-0.037	0.650					0.066	0.886	-0.003	0.976					0.034	0.943
Focus_global	-0.057	0.388					0.045	0.913	-0.003	0.963					0.030	0.943
Corp_bond	0.009	0.069	0.007	0.184	0.005	0.393	0.002	0.808	0.001	0.852	0.000	1.000	0.002	0.690	-0.003	0.777
Gov_bond	**0.012**	0.016	**0.012**	0.024	0.001	0.897	0.006	0.551	-0.002	0.700	0.001	0.792	-0.001	0.881	0.005	0.601
Inst_fund	**0.011**	0.034	0.000	0.989	-0.001	0.902	-0.002	0.834	0.001	0.822	0.001	0.929	-0.005	0.488	-0.005	0.580
F_funds_ext	**-0.017**	0.002	**-0.025**	0.000	**-0.024**	0.001	-0.013	0.211	-0.007	0.211	-0.010	0.110	**-0.017**	0.019	-0.003	0.757
F_funds_int	**-0.014**	0.005	**-0.021**	0.000	**-0.031**	0.000	**-0.036**	0.001	-0.002	0.636	-0.007	0.249	**-0.027**	0.000	**-0.032**	0.003
Index_tracking	0.005	0.262	0.002	0.767	0.004	0.489	-0.003	0.706	0.002	0.731	0.001	0.840	-0.003	0.601	-0.002	0.854
Primary	**0.038**	0.000	**0.040**	0.000	**0.038**	0.000	**0.030**	0.008	**0.018**	0.004	**0.017**	0.013	**0.023**	0.002	0.021	0.076
UCITS	**0.026**	0.005	0.026	0.057	**0.038**	0.004	0.030	0.237	**0.019**	0.049	-0.006	0.689	**0.061**	0.000	**0.067**	0.011
F_age	**0.074**	0.000	**0.078**	0.000			**0.082**	0.000	**0.030**	0.000	**0.033**	0.000			**0.052**	0.000
Return					0.008	0.221	**0.019**	0.048					0.006	0.396	0.017	0.090
A_charge			**-0.063**	0.000			**-0.051**	0.000			-0.008	0.255			0.024	0.058
I_charge	**0.028**	0.000			0.006	0.519	0.017	0.238	-0.010	0.187			**-0.019**	0.034	**-0.045**	0.002
R_charge							-0.012	0.357							0.006	0.633
Country Dummies	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Adjusted R²	17.24%		18.20%		13.30%		15.00%		9.17%		9.97%		8.20%		9.65%	
N	37,443		30,875		24,271		11,009		37,443		30,875		24,271		11,009	

Table 10: Multivariate Regressions of Mutual Fund Size using Fund Features and Country Features

The table reports multivariate OLS regressions explaining the size of the mutual funds across countries using the fund level variables and the country level variables. The dependent variable is the fund size standardized in two different ways: the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country (**F_size/total**) - as stated in panel A - and the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country and with the same asset type (**F_size/assets**) – as stated in panel B. The explanatory variables are described in Appendix A. Columns present the coefficients and the respective significance. The coefficients that denote statistical significance at 5% level are highlighted in bold. In the last row of the table we report the adjusted R-square of the regression and the number of observations used in the model (N).

	Panel A							
	F_size/total							
Model	(1)		(2)		(3)		(4)	
	Coeff	sign	Coeff	sign	Coeff	sign	Coeff	sign
Constant	0.012	0.000	0.033	0.000	-0.104	0.000	-0.008	0.705
Equity	0.005	0.656	0.011	0.409	**0.033**	0.051	-0.011	0.628
Bond	**0.034**	0.001	**0.028**	0.021	**0.064**	0.000	0.028	0.193
M_assets	**0.018**	0.015	0.006	0.475	**0.035**	0.001	0.013	0.455
MM	**0.152**	0.000	**0.144**	0.000	**0.156**	0.000	**0.148**	0.000
R_estate	**0.066**	0.000	**0.067**	0.000	**0.069**	0.000	**0.109**	0.000
Focus_home	-0.002	0.984					0.040	0.924
Focus_region	0.009	0.912					0.064	0.892
Focus_global	-0.029	0.678					0.032	0.939
Corp_bond	**0.010**	0.049	0.007	0.198	0.009	0.143	0.007	0.451
Gov_bond	**0.017**	0.001	**0.015**	0.006	0.003	0.599	0.012	0.197
Inst_fund	**0.022**	0.000	0.006	0.337	0.001	0.835	0.001	0.956
F_funds_ext	**-0.016**	0.004	**-0.028**	0.000	**-0.027**	0.000	-0.018	0.104
F_funds_int	**-0.020**	0.000	**-0.025**	0.000	**-0.034**	0.000	**-0.040**	0.000
Index_tracking	0.007	0.186	0.004	0.503	0.004	0.551	-0.002	0.845
Primary	**0.034**	0.000	**0.040**	0.000	**0.037**	0.000	**0.027**	0.018
UCITS	**0.023**	0.019	0.008	0.556	**0.034**	0.010	-0.024	0.330
F_age	**0.089**	0.000	**0.092**	0.000			**0.091**	0.000
Return					0.005	0.484	0.015	0.119
A_charge			**-0.058**	0.000			**-0.026**	0.043
I_charge	**0.052**	0.000			0.000	0.978	0.004	0.778
R_charge							0.002	0.903
I_protection							**-0.685**	0.000
Common_law	**0.193**	0.000	**0.158**	0.000	**0.945**	0.000	**0.352**	0.000
CIFAR	**-0.216**	0.000	**-0.292**	0.000	**-0.301**	0.000	**-0.308**	0.000
IT_index	**0.198**	0.000	**0.214**	0.000	**-0.393**	0.000	**-0.555**	0.000
Bank_conc	**0.102**	0.000	**0.098**	0.000	**0.255**	0.000	0.056	0.215
New_business	**0.230**	0.000	**0.203**	0.000	**-0.238**	0.000	-0.028	0.568
N_banks	**-0.309**	0.000	**-0.345**	0.000	0.005	0.859	-0.064	0.218
GDPpc	**-0.070**	0.024	**-0.140**	0.000	**-0.083**	0.030		
I_age	**-0.075**	0.001	**-0.191**	0.000	**0.758**	0.000	0.176	0.057
Telcom	**0.207**	0.000	**0.295**	0.000	**0.104**	0.000	**0.203**	0.000
Turnover	**-0.216**	0.000	**-0.239**	0.000	**0.053**	0.012	**-0.256**	0.000
T_cost	**-0.051**	0.001	-0.018	0.318	**-0.149**	0.000	**-0.120**	0.000
Adjusted R²	10.80%		11.57%		10.78%		12.14%	
N	36,901		30,466		23,993		10,849	

	Panel B							
	F_size/assets							
Model	(1)		(2)		(3)		(4)	
	Coeff	sign	Coeff	Sign	Coeff	sign	Coeff	sign
Constant	0.099	0.000	0.295	0.000	-0.628	0.000	-0.384	0.007
Equity	**-0.049**	0.000	**-0.074**	0.000	**-0.076**	0.000	**-0.126**	0.000
Bond	**-0.027**	0.010	**-0.052**	0.000	**-0.049**	0.003	**-0.079**	0.000
M_assets	0.013	0.080	-0.008	0.348	0.015	0.158	-0.024	0.180
MM	**0.082**	0.000	**0.096**	0.000	**0.090**	0.000	**0.111**	0.000
R_estate	**0.172**	0.000	**0.174**	0.000	**0.099**	0.000	**0.122**	0.000
Focus_home	0.056	0.480					0.062	0.883
Focus_region	0.039	0.649					0.027	0.954
Focus_global	0.018	0.794					0.019	0.964
Corp_bond	-0.001	0.817	-0.002	0.779	0.004	0.573	-0.003	0.791
Gov_bond	-0.002	0.714	0.002	0.790	-0.001	0.854	0.005	0.615
Inst_fund	0.009	0.116	0.004	0.487	-0.004	0.516	-0.005	0.582
F_funds_ext	-0.007	0.263	**-0.013**	0.043	**-0.016**	0.024	-0.004	0.711
F_funds_int	-0.006	0.262	-0.011	0.063	**-0.027**	0.000	**-0.033**	0.002
Index_tracking	-0.001	0.804	-0.003	0.632	-0.003	0.600	-0.002	0.841
Primary	**0.014**	0.029	**0.016**	0.018	**0.021**	0.005	0.018	0.117
UCITS	0.014	0.166	-0.024	0.085	**0.056**	0.000	0.029	0.231
F_age	**0.038**	0.000	**0.041**	0.000			**0.053**	0.000
Return					0.003	0.622	0.014	0.155
A_charge			-0.007	0.321			**0.027**	0.037
I_charge	0.004	0.579			**-0.028**	0.002	**-0.056**	0.000
R_charge							0.017	0.191
I_protection							-0.147	0.434
Common_law	**0.088**	0.001	**0.108**	0.000	**0.782**	0.000	**0.466**	0.000
CIFAR	**-0.130**	0.000	**-0.237**	0.000	**-0.237**	0.000	**-0.286**	0.000
IT_index	**0.110**	0.000	**0.135**	0.000	**-0.436**	0.000	**-0.423**	0.000
Bank_conc	**0.072**	0.000	**0.084**	0.000	**0.210**	0.000	**0.148**	0.001
New_business	**0.140**	0.000	**0.114**	0.000	**-0.226**	0.000	-0.087	0.082
N_banks	**-0.178**	0.000	**-0.235**	0.000	0.051	0.052	-0.030	0.575
GDPpc	-0.050	0.110	**-0.102**	0.011	-0.049	0.213		
I_age	**-0.078**	0.001	**-0.213**	0.000	**0.710**	0.000	**0.363**	0.000
Telcom	**0.140**	0.000	**0.242**	0.000	0.026	0.210	**0.093**	0.004
Turnover	**-0.140**	0.000	**-0.156**	0.000	**0.094**	0.000	-0.030	0.638
T_cost	-0.010	0.486	0.003	0.881	**-0.104**	0.000	**-0.053**	0.045
Adjusted R^2	7.50%		8.63%		7.66%		9.37%	
N	36,901		30,466		23,993		10,849	

Table 11: Multivariate Regressions of the USA Mutual Fund Size

The table reports multivariate OLS regressions explaining the size of the USA mutual funds using the fund level variables, excluding Equity, Regional focus (Focus_region) - due to their high correlation with Bond and Focus_home, respectively - and UCITS – not applicable to U.S. market. The dependent variable is the fund size standardized in two different ways: the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country (**F_size/total**) and the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country and with the same asset type (**F_size/assets**). The explanatory variables are described in Appendix A. Columns present the coefficients and the respective significance. The coefficients that denote statistical significance at 5% level are highlighted in bold. In the last row of the table we report the adjusted R-square of the regression and the number of observations used in the model (N).

	F_size/total				F_size/assets			
Model	**(1)**		**(2)**		**(1)**		**(2)**	
	Coeff	**sign**	**Coeff**	**sign**	**Coeff**	**sign**	**Coeff**	**sign**
Constant	0.000	0.000	0.000	0.000	0.000	0.571	0.000	0.104
Equity								
Bond	-0.020	0.245	-0.008	0.316	0.001	0.950	0.003	0.686
M_assets			-0.001	0.867			**0.416**	0.000
MM	0.003	0.847	-0.001	0.880	**0.726**	0.000	**0.416**	0.000
R_estate	0.000	0.990	0.008	0.328	**0.047**	0.000	**0.075**	0.000
Focus_home	-0.024	0.276	**-0.079**	0.000	0.003	0.855	-0.005	0.579
Focus_region								
Focus_global	0.014	0.443	0.002	0.820	0.024	0.068	0.011	0.122
Corp_bond	-0.011	0.540	-0.011	0.174	0.002	0.891	-0.003	0.649
Gov_bond	-0.021	0.239	**-0.021**	0.014	-0.014	0.276	-0.004	0.554
Inst_fund	-0.022	0.230	**-0.036**	0.000	**-0.025**	0.052	0.001	0.885
F_funds_ext	-0.019	0.266	**-0.023**	0.005	-0.002	0.894	**-0.014**	0.040
F_funds_int	-0.031	0.079	**-0.055**	0.000	-0.001	0.929	-0.007	0.304
Index_tracking	-0.004	0.839	-0.010	0.241	0.000	0.972	-0.011	0.129
Primary	**0.179**	0.000	**0.168**	0.000	0.013	0.295	**0.017**	0.015
UCITS								
Return	0.022	0.252			0.009	0.494		
F_age	-0.023	0.195	-0.003	0.689	**0.024**	0.054	0.008	0.238
A_charge	**-0.113**	0.000	**-0.161**	0.000	-0.010	0.536	**-0.026**	0.004
I_charge	0.012	0.528	-0.012	0.159	-0.009	0.502	0.003	0.685
R_charge	**-0.041**	0.022			-0.005	0.666		
Adjusted R²	4.34%		4.44%		52.79%		35.02%	
N	3,182		13,940		3,182		13,940	

Table 12: Multivariate Regressions of the European Mutual Funds Size

This table reports multivariate OLS regressions explaining the size of the European mutual funds using the fund level variables and country level variables, excluding the Investor protection (I_protection) Common law (Common_law), Industry Age (I_age) and Fixed lines and mobile phone subscribers per 1000 people (Telcom) due to multicollinearity reasons. The dependent variable is the fund size standardized in two different ways: the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country (**F_size/total**) and the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country and with the same asset type (**F_size/assets**). The explanatory variables are described in Appendix A. Columns present the coefficients and the respective significance. The coefficients that denote statistical significance at 5% level are highlighted in bold. In the last row of the table we report the adjusted R-square of the regression and the number of observations used in the model (N).

	F_size/total				F_size/assets			
Model	(1)		(2)		(1)		(2)	
	Coeff	sign	Coeff	sign	Coeff	sign	Coeff	sign
Constant	0.020	0.000	0.006	0.000	0.116	0.000	0.028	0.000
Equity	**-0.072**	0.020	**-0.039**	0.002	**-0.193**	0.000	**-0.080**	0.000
Bond	-0.003	0.927	**0.031**	0.013	**-0.119**	0.000	**-0.040**	0.001
M_assets	-0.026	0.324	0.000	0.968	**-0.102**	0.000	**-0.030**	0.008
MM	**0.152**	0.000	**0.140**	0.000	**0.047**	0.025	**0.048**	0.000
R_estate	**0.227**	0.000	**0.140**	0.000	**0.234**	0.000	**0.317**	0.000
Focus_home	0.017	0.964			0.045	0.908		
Focus_region	0.050	0.910			0.020	0.966		
Focus_global	0.014	0.974			0.001	0.998		
Corp_bond	0.004	0.771	0.015	0.062	0.000	0.984	0.006	0.458
Gov_bond	0.023	0.103	0.006	0.493	0.002	0.895	-0.008	0.324
Inst_fund	0.006	0.666	0.015	0.058	0.013	0.355	0.010	0.188
F_funds_ext	0.001	0.959	-0.006	0.456	0.008	0.649	0.000	0.990
F_funds_int	-0.020	0.216	-0.016	0.057	-0.009	0.595	0.006	0.489
Index_tracking	0.009	0.517	**0.020**	0.010	0.004	0.783	0.001	0.947
Primary	**0.032**	0.027	**0.034**	0.000	0.026	0.085	**0.022**	0.006
UCITS	0.016	0.307	**0.022**	0.038	**0.040**	0.016	**0.025**	0.017
Return	0.009	0.499			0.004	0.777		
F_age	**0.149**	0.000	**0.151**	0.000	**0.059**	0.000	**0.053**	0.000
A_charge	-0.022	0.181			**0.041**	0.016		
I_charge	0.000	0.999	**0.044**	0.000	**-0.066**	0.002	-0.018	0.069
R_charge	-0.016	0.301			-0.023	0.158		
I_protection								
Common_law								
CIFAR	**-0.366**	0.000	**-0.262**	0.000	**-0.292**	0.000	**-0.115**	0.000
IT_index	**-0.121**	0.000	**0.074**	0.000	**-0.177**	0.000	**0.031**	0.031
Bank_conc	**-0.121**	0.000	**-0.115**	0.000	**-0.115**	0.000	**-0.073**	0.000
New_business	**-0.061**	0.004	**0.628**	0.000	**-0.045**	0.044	**0.391**	0.000
N_banks			**-0.637**	0.000			**-0.366**	0.000
GDPpc	**-0.283**	0.000	**-0.060**	0.000	**-0.178**	0.000	-0.028	0.074
I_age								
Telcom								
Turnover	**-0.215**	0.000	**-0.362**	0.000	**-0.160**	0.000	**-0.230**	0.000
T_cost	**0.199**	0.000	**-0.096**	0.000	**0.128**	0.001	**-0.073**	0.000
Adjusted R^2	19.00%		14.58%		12.39%		14.95%	
N	4,985		15,191		4,985		15,191	

Table 13: Multivariate Regressions of the Asian Mutual Funds Size

This table reports multivariate OLS regressions explaining the size of the Asian mutual funds using the fund level variables, excluding Focus Region (Focus_region) and UCITS variables, and some of the country level variables. The dependent variable is the fund size standardized in two different ways: the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country (**F_size/total**) and the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country and with the same asset type (**F_size/assets**). The explanatory variables are described in Appendix A. Columns present the coefficients and the respective significance. The coefficients that denote statistical significance at 5% level are highlighted in bold. In the last row of the table we report the adjusted R-square of the regression and the number of observations used in the model (N).

	F_size/total				F_size/assets			
Model	(1)		(2)		(1)		(2)	
	Coeff	**sign**	**Coeff**	**sign**	**Coeff**	**sign**	**Coeff**	**sign**
Constant	-0.001	0.111	-0.077	0.000	-0.009	0.002	-0.299	0.000
Equity	-0.029	0.469	**-0.051**	0.008	-0.045	0.250	**-0.066**	0.001
Bond	**0.082**	0.013	**0.149**	0.000	0.046	0.154	0.032	0.097
M_assets	0.028	0.383	**0.051**	0.001	**0.087**	0.005	0.017	0.292
MM	**0.107**	0.000	**0.154**	0.000	**0.165**	0.000	**0.090**	0.000
R_estate			0.001	0.925			**0.075**	0.000
Focus_home	0.040	0.280			**0.173**	0.000		
Focus_region								
Focus_global	0.040	0.191			0.064	0.029		
Corp_bond	-0.008	0.678	-0.002	0.847	-0.009	0.606	-0.001	0.944
Gov_bond	-0.016	0.441	0.001	0.934	-0.010	0.630	-0.002	0.878
Inst_fund	0.009	0.628	**0.048**	0.000	0.001	0.942	-0.007	0.581
F_funds_ext	**-0.054**	0.008	**-0.041**	0.002	**-0.070**	0.000	-0.024	0.080
F_funds_int	**-0.067**	0.003	-0.018	0.147	**-0.116**	0.000	-0.013	0.325
Index_tracking	0.026	0.208	**0.054**	0.000	-0.023	0.245	**0.050**	0.000
Primary	0.042	0.082	0.015	0.306	**0.051**	0.030	0.007	0.632
UCITS								
Return	-0.012	0.604			0.030	0.173		
F_age	**0.049**	0.014	**0.045**	0.000	**0.040**	0.040	0.002	0.858
A_charge	0.029	0.264			0.010	0.673		
I_charge	**0.138**	0.000	**0.247**	0.000	-0.064	0.080	**0.151**	0.000
R_charge	0.034	0.096			**0.086**	0.000		
I_protection								
Common_law								
CIFAR								
IT_index								
Bank_conc								
New_business								
N_banks	**0.162**	0.000			**0.382**	0.000		
GDPpc								
I_age			**0.175**	0.000			**0.104**	0.000
Telcom	-0.048	0.234			0.037	0.337		
Turnover								
T_cost	0.054	0.197			**0.106**	0.008		
Adjusted R²	6.41%		5.94%		12.22%		2.68%	
N	2,680		6,529		2,680		6,529	

Table 14: Multivariate Regressions of the Equity Mutual Funds Size

The table reports multivariate OLS regressions explaining the size of the equity mutual funds across countries using the fund level variables, excluding the fund asset dummies and the corporate bond (Corp_bond) and government bond (Gov_bond), the country level variables, excluding Investor protection (I_protection) and CIFAR variables, and the country dummies. The dependent variable is the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country (**F_size/total**). The explanatory variables are described in Appendix A. Columns present the coefficients and the respective significance. The coefficients that denote statistical significance at 5% level are highlighted in bold. In the last row of the table we report the presence of country dummies the adjusted R-square of the regression and the number of observations used in the model (N).

Model	F_size/total							
	(1)		**(2)**		**(3)**		**(4)**	
	Coeff	**sign**	**Coeff**	**sign**	**Coeff**	**sign**	**Coeff**	**sign**
Constant	-0.068	0.000			0.008	0.002		
Equity								
Bond								
M_assets								
MM								
R_estate								
Focus_home	-0.042	0.921	0.005	0.990				
Focus_region	-0.080	0.863	-0.029	0.950				
Focus_global	-0.070	0.861	-0.031	0.938				
Corp_bond								
Gov_bond								
Inst_fund	0.000	0.995	-0.001	0.963	0.007	0.371	0.001	0.870
F_funds_ext	**-0.045**	0.002	**-0.038**	0.008	**-0.062**	0.000	**-0.051**	0.000
F_funds_int	**-0.062**	0.000	**-0.061**	0.000	**-0.036**	0.000	**-0.033**	0.000
Index_tracking	0.011	0.415	0.017	0.200	**0.016**	0.039	**0.019**	0.014
Primary	**0.037**	0.020	**0.038**	0.018	**0.068**	0.000	**0.067**	0.000
UCITS	**0.117**	0.001	0.068	0.058	**0.107**	0.000	**0.072**	0.000
Return	0.018	0.244	0.017	0.276				
F_age	**0.150**	0.000	**0.149**	0.000	**0.124**	0.000	**0.112**	0.000
A_charge	0.001	0.975	0.017	0.469	**-0.070**	0.000	**-0.048**	0.000
I_charge	**0.049**	0.023	0.039	0.073	**0.083**	0.000	**0.041**	0.001
R_charge	-0.021	0.253	-0.008	0.693				
I_protection								
Common_law	**0.460**	0.000			-0.082	0.039		
CIFAR								
IT_index	**-0.379**	0.000			**0.184**	0.000		
Bank_conc	**0.247**	0.000			**0.068**	0.002		
New_business	-0.046	0.570			**0.346**	0.000		
N_banks	0.084	0.187			**-0.263**	0.000		
GDPpc	**0.146**	0.040			-0.066	0.155		
I_age	**0.756**	0.000			**-0.114**	0.000		
Telcom	**-0.195**	0.000			0.006	0.821		
Turnover	0.021	0.656			**-0.201**	0.000		
T_cost	-0.077	0.063			0.000	0.997		
Country Dummies	No		Yes		No		Yes	
Adjusted R²	15.14%		15.66%		15.10%		21.10%	
N	5,323		5,397		15,164		15,260	

Table 15: Multivariate Regressions of the Bond Mutual Funds Size

The table reports multivariate OLS regressions explaining the size of the bond mutual funds across countries using the fund level variables, excluding the fund asset dummies and the Index tracking (Index_tracking), the country level variables, excluding Investor protection (I_protection) and CIFAR variables, and the country dummies. The dependent variable is the ratio of the size of each mutual fund to the total size of the funds domiciled in the same country (**F_size/total**). The explanatory variables are described in Appendix A. Columns present the coefficients and the respective significance. The coefficients that denote statistical significance at 5% level are highlighted in bold. In the last row of the table we report the presence of country dummies, the adjusted R-square of the regression and the number of observations used in the model (N).

Model	F_size/total							
	(1)		**(2)**		**(3)**		**(4)**	
	Coeff	**sign**	**Coeff**	**sign**	**Coeff**	**sign**	**Coeff**	**sign**
Constant	-0.032	0.052			-0.020	0.049		
Equity								
Bond								
M_assets								
MM								
R_estate								
Focus_home			-0.022	0.298				
Focus_region	0.046	0.076						
Focus_global	0.001	0.981	-0.026	0.171				
Corp_bond	-0.010	0.617	0.002	0.920	-0.011	0.314	0.003	0.760
Gov_bond	0.006	0.783	0.014	0.453	-0.007	0.517	0.003	0.774
Inst_fund	0.006	0.774	0.006	0.727	0.000	0.973	0.001	0.896
F_funds_ext	-0.004	0.858	-0.003	0.860	-0.015	0.160	-0.004	0.694
F_funds_int	-0.034	0.106	-0.020	0.310	-0.015	0.156	-0.008	0.421
Index_tracking								
Primary	0.028	0.218	0.026	0.211	**0.044**	0.000	**0.041**	0.000
UCITS	0.062	0.361	0.031	0.622	0.055	0.093	0.015	0.626
Return	0.014	0.581	0.013	0.552				
F_age	**0.070**	0.000	**0.064**	0.000	**0.080**	0.000	**0.073**	0.000
A_charge	-0.026	0.241	-0.011	0.577	**-0.039**	0.001	**-0.030**	0.008
I_charge	-0.025	0.334	0.000	0.984	-0.022	0.105	0.000	0.991
R_charge	**0.082**	0.011	0.007	0.816				
I_protection								
Common_law	0.066	0.688			0.098	0.136		
CIFAR								
IT_index	0.017	0.905			**0.218**	0.000		
Bank_conc	0.001	0.986			0.041	0.246		
New_business	0.169	0.147			**0.176**	0.000		
N_banks	-0.134	0.244			**-0.201**	0.000		
GDPpc	-0.223	0.157			-0.115	0.294		
I_age	0.117	0.546			0.088	0.085		
Telcom	0.098	0.397			**0.155**	0.045		
Turnover	**-0.205**	0.004			**-0.230**	0.000		
T_cost	-0.035	0.583			-0.063	0.126		
Country Dummies	No		Yes		No		Yes	
Adjusted R^2	5.11%		19.73%		7.56%		18.40%	
N	2,750		2,812		8,868		8,970	

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